

Restricted Chemicals Test Results

Device - TPS54618CQRTERQ1

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Table Of Contents

TI Report Number	Component	Analysis Type	Test Date
73864618	Semiconductor Device	RoHS 10 & Halogens	05/28/2024
72443074	Lead Frame Plating	RoHS 10 & Halogens	04/17/2024
72443072	Lead Frame Plating	RoHS 10 & Halogens	03/26/2024
65979231	Lead Frame Plating	RoHS 10 & Halogens	12/28/2023
66095909	Die Attach Adhesive	RoHS 10 & Halogens	12/05/2023
65095111	Bond Wire 2	Other-ROHS	11/08/2023
65095109	Bond Wire 2	Other-ROHS Be Test	11/08/2023
65095107	Bond Wire 2	Other-REACH SVHC	11/08/2023
64162438	Lead Frame	RoHS 10 & Halogens	10/31/2023
64073907	Mold Compound	RoHS 10 & Halogens	08/06/2023
61462730	Bond Wire	RoHS 10 & Halogens	06/04/2023



TI Report Number: 73864618

Component : Semiconductor Device

Analysis Type: RoHS 10 & Halogens

Analysis Date: 05/28/2024



Test Report No. Date: May 28, 2024 Page 1 of 10



This report supersedes all previous documents bearing the test report number

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description: Standard TI Wafer

Sample Received Date: 05/16/2024

Testing Period: **05/16/2024 – 05/28/2024**

Revision Date : 05/28/2024

Revision Summary : Typo on Testing Period section revised from "06/16/2024 - 05/28/2024"

to "05/16/2024 - 05/28/2024".

Test Requested : Please refer to the result summary.

Test Method & Results : Please refer to next page(s).

Result Summary :

Test(s)	Requested	Conclusion
1.	RoHS Directive (EU) 2015/863 Amending Annex II to Directive 2011/65/EU	PASS
2.	Halogen Content	See Test Results
3.	Element Content (As Requested by Client)	See Test Results



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Test Report No. Page 2 of 10

1. RoHS Directive (EU) 2015/863 Amending Annex II to Directive 2011/65/EU

Test Item(s):	Unit	Test Method	Result 1	MDL	Limit
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013	ND	2	100
Lead (Pb)	mg/kg	(Determination of Cd and Pb by ICP-OES and /or ICP-MS)	ND	2	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013+A1:2017 (Determination of Hg by ICP-OES and/ or ICP-MS)	ND	2	1000
Hexavalent Chromium (CrVI) #	mg/kg	With reference to IEC 62321-7-2:2017 (Determination of CrVI by UV-VIS)	ND*	8	
Sum of PBBs	mg/kg		ND	-	1000
Monobromobiphenyl	mg/kg		ND	5	-
Dibromobiphenyl	mg/kg		ND	5	-
Tribromobiphenyl	mg/kg		ND	5	-
Tetrabromobiphenyl	mg/kg		ND	5	-
Pentabromobiphenyl	mg/kg		ND	5	-
Hexabromobiphenyl	mg/kg		ND	5	-
Heptabromobiphenyl	mg/kg		ND	5	-
Octabromobiphenyl	mg/kg		ND	5	-
Nonabromobiphenyl	mg/kg	With reference to IEC	ND	5	-
Decabromobiphenyl	mg/kg	62321-6:2015	ND	5	-
Sum of PBDEs	mg/kg	(Determination of PBB and	ND	-	1000
Monobromodiphenyl ether	mg/kg	PBDE by GC-MS)	ND	5	-
Dibromodiphenyl ether	mg/kg		ND	5	-
Tribromodiphenyl ether	mg/kg		ND	5	-
Tetrabromodiphenyl ether	mg/kg		ND	5	-
Pentabromodiphenyl ether	mg/kg		ND	5	-
Hexabromodiphenyl ether	mg/kg		ND	5	-
Heptabromodiphenyl ether	mg/kg		ND	5	-
Octabromodiphenyl ether	mg/kg		ND	5	-
Nonabromodiphenyl ether	mg/kg		ND	5	-
Decabromodiphenyl ether	mg/kg		ND	5	-
Bis (2-ethylhexyl) Phthalate (DEHP)	mg/kg	IEC 62321-8:2017	ND	50	1000
Butyl Benzyl Phthalate (BBP)	mg/kg	(Determination of DEHP, BBP, DBP and DIBP by	ND	50	1000
Dibutyl Phthalate (DBP)	mg/kg	GC-MS)	ND	50	1000
Diisobutyl Phthalate (DIBP)	mg/kg	30 W3)	ND	50	1000
Conclusion	/	/	PASS	/	/

Sample Description:

1. Standard TI Wafer

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Test Report Date: May 28, 2024 Page 3 of 10

Note:

- (a) mg/kg = ppm; 0.1wt% = 1000ppm
- (b) ND= not detected
- (c) MDL = Method Detection Limit
- (d) # =
- The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm2. The sample coating is considered to contain CrVI
- The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm2). The b. coating is considered a non-CrVI based coating.
- The result between 0.10 µg/cm2 and 0.13 µg/cm2 is considered to be inconclusive unavoidable coating variations may influence the determination.
- d. For corrosion protection coatings on metals: Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing represent status of the sample at the time of
- (e) = not regulated
- * = Total Chromium analysis by ICP-MS and/or ICP-OES was not detected in submitted sample. Therefore, Hexavalent Chromium determination using UV-Visible Spectroscopy was not
- (g) IEC 62321 series is equivalent to EN 62321 series http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::::FSP ORG ID,FSP LANG ID:



Test Report Date: May 28, 2024 Page 4 of 10

2. Halogen Content

Test Method(s): With reference to IEC 62321-3-2:2020 "Determination of certain substances in electrotechnical products - Part 3-2: Screening - Fluorine, bromine and chlorine in polymer and electronics by combustion-ion chromatography (C-IC), and/or with reference to BS EN 14582:2016 - Analysis was performed by ion chromatography.

Test Item(s):	Unit	Results (ppm)	Reporting Limit (ppm)
Chlorine (CI)	mg/kg	ND	50
Bromine (Br)	mg/kg	ND	50
Fluorine (F)	mg/kg	ND	50

Sample Description:

1. Standard TI Wafer

Note: 1. ppm = parts per million

2. mg/kg = ppm

3. 1% = 10000 ppm (mg/kg)

4. ND = Not Detected, reported when the reading is less than the reporting limit value.

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Test Report Date: May 28, 2024 Page 5 of 10

3. Element Content (As Requested by Client)

Test Method: With reference to US EPA Method 3050B followed by analysis using ICP-MS.

Test Item		Result (mg/kg)	Reporting
rest item	rest item		Limit (mg/kg)
Arsenic	(As)	ND	5
Beryllium	(Be)	ND	5
Antimony	(Sb)	ND	5

Sample Description:

1. Standard TI Wafer

Note: 1. ppm = parts per million

2. mg/kg = ppm

3. 1% = 10000 ppm (mg/kg)

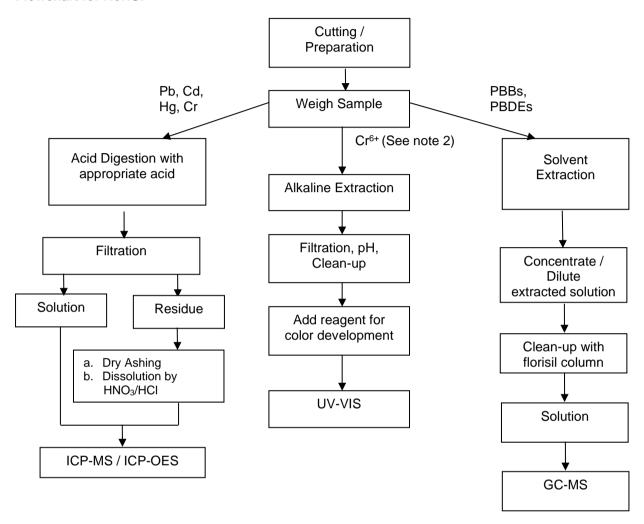
4. ND = Not Detected, reported when the reading is less than the reporting limit value.

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Test Report No. Date: May 28, 2024 Page 6 of 10

Flowchart for RoHS:



Note: 1. The Cr, Cd, Pb and Hg contents test on polymeric samples were dissolved totally by preconditioning method according to above flow chart.

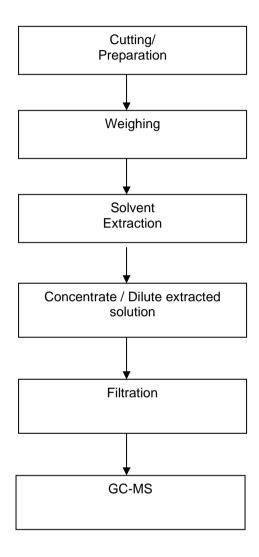
2. Cr⁶⁺ is performed only when total Cr is detected

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Test Report Date: May 28, 2024 Page 7 of 10

Flowchart for Phthalates:

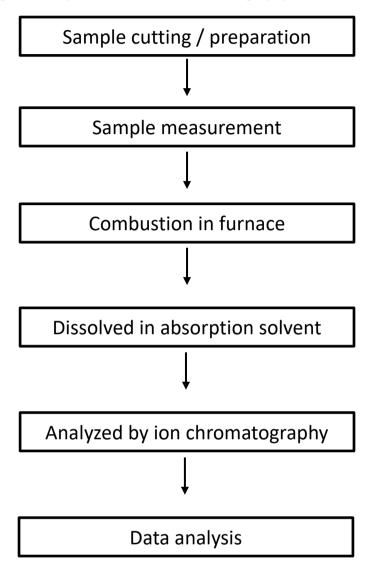


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Test Report Date: May 28, 2024 Page 8 of 10

Flow Chart of Halogen Test by Combustion Ion Chromatography:

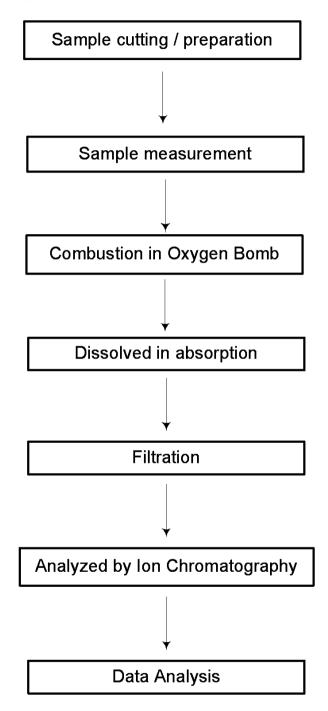


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Test Report No. Page 9 of 10

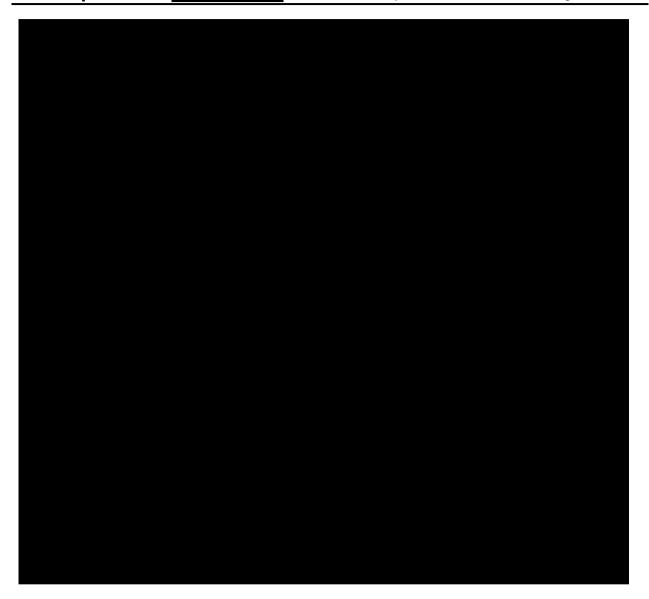
Halogen Testing Flow Chart (EN 14582):



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Test Report Date: May 28, 2024 Page 10 of 10



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TI Report Number: 72443074

Component : Lead Frame Plating

Analysis Type: RoHS 10 & Halogens

Analysis Date: 04/17/2024



日期(Date): 17-Apr-2024 頁數(Page): 1 of 52

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by the applicant as):

送樣廠商(Sample Submitted By)

樣品名稱(Sample Name)

其他(Other Info.)

收件日(Sample Receiving Date) : 10-Apr-2024

測試期間(Testing Period) : 10-Apr-2024 to 17-Apr-2024

號碼(No.):|

測試需求(Test Requested) : (1) 依據客戶指定,參考RoHS 2011/65/EU Annex II及其修訂指令(EU) 2015/863測試

鎘、鉛、汞、六價鉻、多溴聯苯 、多溴聯苯醚, DBP, BBP, DEHP, DIBP。 (As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs,

PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)

(2) 其他測試項目請見下一頁。 (Please refer to next pages for the other item(s).)

(2) 共祀測試與日朝兒下一貝。 (Please refer to next pages for the other item(s).)

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages.)

诘 論(Conclusion) : (1) 根據客戶所提供的樣品,其鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP,

BBP, DEHP, DIBP的測試結果符合RoHS 2011/65/EU Annex II暨其修訂指令(EU) 2015/863之限值要求。 (Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863

amending Annex II to Directive 2011/65/EU.)



:碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 2 of 52

測試部位敘述 (Test Part Description)

No.1 : 金色金屬 (GOLDEN COLORED METAL)

測試結果 (Test Results)

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013 · 以感應耦合電漿	mg/kg	2	n.d.	100
	發射光譜儀分析。(With reference to IEC				
鉛 (Pb) (Lead (Pb))	62321-5: 2013, analysis was performed	mg/kg	2	n.d.	1000
	by ICP-OES.)				
汞 (Hg) (Mercury (Hg))	參考IEC 62321-4: 2013+ AMD1: 2017,	mg/kg	2	n.d.	1000
	以感應耦合電漿發射光譜儀分析。(With				
	reference to IEC 62321-4: 2013+ AMD1:				
	2017, analysis was performed by ICP-				
) (F) (1) 1 (1) (1	OES.)	, ,			
六價鉻 (Hexavalent Chromium) Cr(VI)	參考IEC 62321-7-1: 2015 · 以紫外光-可見	μg/cm²	0.1	n.d.	-
(#2)	光分光光度計分析。(With reference to				
	IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)				
 一溴聯苯 (Monobromobiphenyl)	performed by 0v-vis.)	ma /lea	5	n d	_
1 31	-	mg/kg		n.d.	
二溴聯苯 (Dibromobiphenyl)		mg/kg	5	n.d.	-
三溴聯苯 (Tribromobiphenyl)	-	mg/kg	5	n.d.	-
四溴聯苯 (Tetrabromobiphenyl)	參考IEC 62321-6: 2015,以氣相層析儀/質	mg/kg	5	n.d.	-
五溴聯苯 (Pentabromobiphenyl)	普儀分析。(With reference to IEC 62321-	mg/kg	5	n.d.	-
六溴聯苯 (Hexabromobiphenyl)	6: 2015, analysis was performed by	mg/kg	5	n.d.	-
七溴聯苯 (Heptabromobiphenyl)	GC/MS.)	mg/kg	5	n.d.	-
八溴聯苯 (Octabromobiphenyl)	,,	mg/kg	5	n.d.	=
九溴聯苯 (Nonabromobiphenyl)		mg/kg	5	n.d.	-
十溴聯苯 (Decabromobiphenyl)		mg/kg	5	n.d.	-
多溴聯苯總和 (Sum of PBBs)		mg/kg	-	n.d.	1000



碼(Νo	.):	日期(Date): 17-Apr-2024	頁數(Page): 3 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
		mg/kg	5	n.d.	_
二溴聯苯醚 (Dibromodiphenyl ether)		mg/kg	5	n.d.	
三溴聯苯醚 (Tribromodiphenyl ether)			5	n.d.	
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.	_
五溴聯苯醚 (Pentabromodiphenyl ether)	參考IEC 62321-6: 2015,以氣相層析儀/質	mg/kg	5		
六溴聯苯醚 (Hexabromodiphenyl ether)	譜儀分析。(With reference to IEC 62321-	mg/kg	5	n.d.	-
七溴聯苯醚 (Heptabromodiphenyl ether)	6: 2015, analysis was performed by	mg/kg		n.d.	-
	GC/MS.)	mg/kg	5	n.d.	_
八溴聯苯醚 (Octabromodiphenyl ether)		mg/kg	5	n.d.	-
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.	_
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.	-
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.	1000
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP))	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP))	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-



嗎(No.):	日期(Date): 17-Apr-2024	頁數(Page): 4 of 52
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result) No.1	(Limit)
鄰苯二甲酸二異癸酯 (DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40- 0, 68515-49-1)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)	參考IEC 62321-8: 2017 · 以氣相層析儀/質 譜儀分析。(With reference to IEC 62321- 8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二正戊酯 (DNPP) (Di-n-pentyl phthalate (DNPP)) (CAS No.: 131-18-0)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二正己酯 (DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.: 84-75-3)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二庚酯 (DHpP) (Diheptyl phthalate (DHpP)) (CAS No.: 3648-21-3)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二(2-甲氧基乙基)酯 (DMEP) (Bis(2-methoxyethyl) phthalate (DMEP)) (CAS No.: 117-82-8)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二(C7-11支鏈與直鏈)烷基酯 (DHNUP) (1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)) (CAS No.: 68515- 42-4)	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二 (C6-8支鏈)烷基酯·富C7 (DIHP) (1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)) (CAS No.: 71888-89-6)	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-



碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 5 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-8)	參考BS EN 14582: 2016 · 以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	-
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537- 15-1)	參考BS EN 14582: 2016 · 以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	-
溴 (Br) (Bromine (Br)) (CAS No.: 10097- 32-2)	參考BS EN 14582: 2016 · 以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	-
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)	參考BS EN 14582: 2016 · 以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	-
全氟辛酸 (PFOA)及其鹽類 (Perfluorooctanoic acid (PFOA) and it's salt) (CAS No.: 335-67-1 and its salts)	參考CEN/TS 15968: 2010 · 以液相層析串 聯質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.	-
全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	參考CEN/TS 15968: 2010 · 以液相層析串 聯質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.	-
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-36-0)	參考US EPA 3052: 1996.以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-
三氧化二銻(Sb ₂ O ₃) (Antimony trioxide (Sb ₂ O ₃)) (CAS No.: 1309-64-4)	由銻結果計算得之。(Calculated from the result of Antimony.)	mg/kg	2▲	n.d.	-



	號碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 6 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
多氯聯苯 (PCBs) (Polychlorinated biphenyls (PCBs))	參考US EPA 3550C: 2007·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	0.5	n.d.	-
多氯奈 (PCNs) (Polychlorinated naphthalene (PCNs))	參考US EPA 3550C: 2007·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
多氯三聯苯 (PCTs) (Polychlorinated terphenyls (PCTs))	參考US EPA 3550C: 2007·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	0.5	n.d.	-
短鏈氯化石蠟(C10-C13) (SCCP) (Short Chain Chlorinated Paraffins(C10-C13) (SCCP)) (CAS No.: 85535-84-8)	參考ISO 18219-1: 2021‧以氣相層析儀/ 質譜儀分析。(With reference to ISO 18219-1: 2021, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
三丁基錫 (TBT) (Tributyl tin (TBT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
氧化雙三丁基錫 (TBTO) (Bis(tributyltin) oxide (TBTO)) (CAS No.: 56-35-9)	由三丁基錫測試結果計算得之。 (Calculated from the result of Tributyl Tin (TBT).)	mg/kg	0.03 🛦	n.d.	-
三苯基錫 (TPT) (Triphenyl tin (TPT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
二辛基錫 (DOT) (Dioctyl tin (DOT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-



に碼	(No.)	:	日期(Date): 17-Apr-2024	頁數(Page): 7 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
二丁基錫 (DBT) (Dibutyl tin (DBT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
石綿 (Asbestos)					
陽起石綿 (Actinolite) (CAS No.: 77536-66-4)		-	-	Negative	-
褐石綿/鐵石綿 (Amosite) (CAS No.: 12172-73-5)	参考EPA 600/R-93/116: 1993 , 以立體顯微鏡(SM)與分散染色式偏光顯微鏡(DS-	-	-	Negative	-
斜方角閃石綿 (Anthophyllite) (CAS No.: 77536-67-5)	PLM)及X光繞射光譜分析法(XRD)分析。 (With reference to EPA 600/R-93/116:	-	-	Negative	-
白石綿/溫石綿 (Chrysotile) (CAS No.: 12001-29-5)	1993, analysis was performed by Stereo Microscope (SM), Dispersion Staining Polarized Light Microscope (DS-PLM)	-	-	Negative	-
青石綿 (Crocidolite) (CAS No.: 12001- 28-4)	and X-ray Diffraction Spectrometer (XRD).)	-	=	Negative	-
透閃石綿 (Tremolite) (CAS No.: 77536- 68-6)	(XIXD).)	-	-	Negative	-
偶氮染料 (AZO Dyes)					
對-胺基聯苯 (4-Aminobiphenyl) (CAS No.: 92-67-1)	參考EN ISO 14362-1: 2017‧以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
聯苯胺 (Benzidine) (CAS No.: 92-87-5)	參考EN ISO 14362-1: 2017‧以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 8 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
4-氯鄰甲苯胺 (4-chloro-o-toluidine) (CAS No.: 95-69-2)	參考EN ISO 14362-1: 2017‧以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2-萘胺 (2-Naphthylamine) (CAS No.: 91-59-8)	參考EN ISO 14362-1: 2017‧以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
鄰-胺基偶氮甲苯 (o-Aminoazotoluene) (CAS No.: 97-56-3)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
5-硝基-鄰-甲苯胺 (5-Nitro-o-toluidine) (CAS No.: 99-55-8)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4-氯苯胺 (4-Chloroaniline) (CAS No.: 106-47-8)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4-甲氧基-間-苯二胺 / 2,4-二胺基苯甲醚 (4-Methoxy-m-phenylenediamine / 2,4-Diaminoanisole) (CAS No.: 615-05- 4)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 9 of 52
	= 7/3(Date): 17 7(p: 202)	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
4,4'-二胺基二苯甲烷 (4,4'- Diaminodiphenylmethane) (CAS No.: 101-77-9)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
3,3'-二氯聯苯胺 (3,3'- Dichlorobenzidine) (CAS No.: 91-94-1)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	З	n.d.	-
3,3'-二甲氧基聯苯胺 (3,3'- Dimethoxybenzidine) (CAS No.: 119- 90-4)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
3,3'-二甲基聯苯胺 (3,3'- Dimethylbenzidine) (CAS No.: 119-93- 7)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-亞甲基二-鄰-苯胺 (4,4'- Methylenedi-o-toluidine) (CAS No.: 838-88-0)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
6-甲氧基-間-甲苯胺 (6-Methoxy-m-toluidine) (CAS No.: 120-71-8)	參考EN ISO 14362-1: 2017·以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 10 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
4,4'-亞甲基-雙(2-氯苯胺) (4,4'- Methylene-bis-(2-chloro-Aniline)) (CAS No.: 101-14-4)	參考EN ISO 14362-1: 2017‧以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-二胺基二苯醚 (4,4'-Oxydianiline) (CAS No.: 101-80-4)	參考EN ISO 14362-1: 2017‧以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-硫代雙苯胺 (4,4'-Thiodianiline) (CAS No.: 139-65-1)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	
鄰-甲苯胺 (o-Toluidine) (CAS No.: 95-53-4)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2,4-二氨基甲苯 (2,4-Diaminotoluene) (CAS No.: 95-80-7)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2,4,5-三甲基苯胺 (2,4,5- Trimethylaniline) (CAS No.: 137-17-7)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



虎碼	(No.);	日期(Date): 17-Apr-2024	頁數(Page): 11 of 52

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
鄰-甲氧基苯胺 (2-Methoxyaniline) (CAS	參考EN ISO 14362-1: 2017,以氣相層析	mg/kg	3	n.d.	-
No.: 90-04-0)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
4-胺基偶氮苯 (4-Aminoazobenzene)	參考EN ISO 14362-1: 2017 and EN ISO	mg/kg	3	n.d.	-
(CAS No.: 60-09-3)	14362-3: 2017·以氣相層析質譜儀及高效				
	液相層析儀/二極體陣列偵測器分析。(With				
	reference to EN ISO 14362-1: 2017 and				
	EN ISO 14362-3: 2017, analysis was				
	performed by GC/MS and HPLC/DAD.)				
2,4-二甲基苯胺 (2,4-Xylidine) (CAS No.:	參考EN ISO 14362-1: 2017,以氣相層析	mg/kg	3	n.d.	=
95-68-1)	質譜儀及高效液相層析儀/二極體陣列偵測	J. J			
,	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
2,6-二甲基苯胺 (2,6-Xylidine) (CAS No.:	參考EN ISO 14362-1: 2017,以氣相層析	mg/kg	3	n.d.	-
87-62-7)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-	參考US EPA 3052: 1996,以感應耦合電漿	mg/kg	2	n.d.	-
41-7)	發射光譜儀分析。(With reference to US				
	EPA 3052: 1996, analysis was performed				
	by ICP-OES.)				
氧化鈹 (BeO) (Beryllium oxide (BeO))	由鈹結果計算得之。(Calculated from the	mg/kg	2▲	n.d.	-
(CAS No.: 1304-56-9)	result of Beryllium.)				
聚氯乙烯 (Polyvinyl chloride) (PVC)	參考ASTM E1252: 2021 · 以傅立葉轉換紅	**	-	Negative	-
	外線光譜儀及焰色法分析。(With				
	reference to ASTM E1252: 2021, analysis				
	was performed by FT-IR and Flame Test.)				



虎碼	(No.):	日期(Date): 17-Apr-2024	頁數(Page): 12 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氟氯碳化物 (Chlorofluorocarbons) (CFCs)					
CFC-11 (CAS No.: 75-69-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-12 (CAS No.: 75-71-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-13 (CAS No.: 75-72-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-111 (CAS No.: 354-56-3)	參考US EPA 5021A: 2014,以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-112 (CAS No.: 76-12-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-113 (CAS No.: 76-13-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-114 (CAS No.: 76-14-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



琵碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 13 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
CFC-115 (CAS No.: 76-15-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-211 (CAS No.: 422-78-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-212 (CAS No.: 3182-26-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-213 (CAS No.: 2354-06-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
CFC-214 (CAS No.: 29255-31-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-215 (CAS No.: 4259-43-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-216 (CAS No.: 661-97-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-217 (CAS No.: 422-86-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



虎碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 14 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氟氯氫烷碳化物 (Hydrochlorofluorocarbons) (HCFCs)					
HCFC-21 (CAS No.: 75-43-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-22 (CAS No.: 75-45-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-31 (CAS No.: 593-70-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-121 (CAS No.: 354-14-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-122 (CAS No.: 354-21-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-123 (CAS No.: 306-83-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-124 (CAS No.: 2837-89-0)	參考US EPA 5021A: 2014·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



虎碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 15 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
1		•		No.1	
HCFC-131 (CAS No.: 359-28-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-141b (CAS No.: 1717-00-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-221 (CAS No.: 422-26-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-222 (CAS No.: 422-49-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-223 (CAS No.: 422-52-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-224 (CAS No.: 422-54-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-225ca (CAS No.: 422-56-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-225cb (CAS No.: 507-55-1)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



虎碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 16 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
HCFC-226 (CAS No.: 431-87-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-231 (CAS No.: 421-94-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-232 (CAS No.: 460-89-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-233 (CAS No.: 7125-84-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-234 (CAS No.: 425-94-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-235 (CAS No.: 460-92-4)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-241 (CAS No.: 666-27-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-242 (CAS No.: 460-63-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



語碼(No.): 日期(Date): 17-Apr-2024 頁數(Page)	: 1/	ot	52	2
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-243 (CAS No.: 460-69-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
HCFC-244	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-251 (CAS No.: 421-41-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
HCFC-252 (CAS No.: 819-00-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-253 (CAS No.: 460-35-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-261 (CAS No.: 420-97-3)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
HCFC-262 (CAS No.: 421-02-03)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-271 (CAS No.: 430-55-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



虎碼	(No.):	日期(Date): 17-Apr-2024	頁數(Page): 18 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
HCFC-133a (CAS No.: 75-88-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	No.1 n.d.	-
HCFC-142b (CAS No.: 75-68-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-132b (CAS No.: 1649-08-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-141	參考US EPA 5021A: 2014,以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-142	參考US EPA 5021A: 2014,以氣相層析儀/質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-151	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-225	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
海龍 (Halons)					
Halon-1211 (CAS No.: 353-59-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



琵碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 19 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
Halon-1301 (CAS No.: 75-63-8)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
海龍-2402 (Halon-2402) (CAS No.: 124-73-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
溴甲烷 (Bromomethane) (CAS No.: 74-83-9)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
不完全鹵化氟溴化物 (Hydrobromofluorocarbons) (HBFCs)					
HBFC-121B4 (C2HFBr4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-122B3 (C2HF2Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-123B2 (C2HF3Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-124B1 (C2HF4Br)	參考US EPA 5021A: 2014·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 20 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-131B3 (C2H2FBr3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
HBFC-132B2 (C2H2F2Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-133B1 (C2H2F3Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-141B2 (C2H3FBr2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-142B1 (C2H3F2Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-151B1 (C2H4FBr)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-21B2 (CHFBr2) (CAS No.: 1868- 53-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-221B6 (C3HFBr6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	<u>-</u>



記碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 21 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
HBFC-222B5 (C3HF2Br5)	参考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	No.1 n.d.	_
	質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	3, 3			
HBFC-223B4 (C3HF3Br4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-224B3 (C3HF4Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-225B2 (C3HF5Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-226B1 (C3HF6Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-22B1 (CHF2Br) (CAS No.: 1511-62-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-231B5 (C3H2FBr5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-232B4 (C3H2F2Br4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



記碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 22 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
HBFC-233B3 (C3H2F3Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-234B2 (C3H2F4Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-235B1 (C3H2F5Br)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-241B4 (C3H3FBr4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-242B3 (C3H3F2Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-243B2 (C3H3F3Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-244B1 (C3H3F4Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-251B3 (C3H4FBr3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



·碼(No.): 日期(Date): 17-Apr-2024 頁數(Page):	: 23	Of 5∠
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result) No.1	(Limit)
HBFC-252B2 (C3H4F2Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-253B1 (C3H4F3Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-261B2 (C3H5FBr2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-262B1 (C3H5F2Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-271B1 (C3H6FBr)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-31B1 (CH2FBr) (CAS No.: 373-52- 4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氫氟碳化合物 (Hydrofluorocarbon) (HFCs)					
HFC-125 (C2HF5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-134 (C2H2F4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



記碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 24 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HFC-134a (CH2FCF3) (CAS No.: 811- 97-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-143 (C2H3F3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-143a (C2H3F3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-152a (C2H4F2) (CAS No.: 75-37-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
HFC-227ea (C3HF7) (CAS No.: 431-89- 0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-23 (CHF3) (CAS No.: 75-46-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-236ea (C3H2F6) (CAS No.: 431-63- 0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-236fa (CAS No.: 431-63-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 25 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HFC-245ca (C3H3F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-245fa (C3H3F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-32 (CH2F2) (CAS No.: 75-10-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-365mfc (C4H5F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-43-10mee (C5H2F10)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-41 (CH3F) (CAS No.: 593-53-3)	參考US EPA 5021A: 2014·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟化碳 (Perfluorocarbon) (PFCs) 六氟乙烷 (Fluorocarbon 116) (CAS No.: 76-16-4)	参考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA	mg/kg	1	n.d.	=
,	5021A: 2014, analysis was performed by GC/MS.)				
1,4-二氫八氟丁烷 (1,4- dihydrooctafluorobutane) (CAS No.: 377-36-6)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 26 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
2-全氟甲基戊烷 (2- Perfluoromethylpentane) (CAS No.:	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA	mg/kg	1	n.d.	-
355-04-4)	5021A: 2014, analysis was performed by GC/MS.)				
十氟丁烷 (Decafluorobutane) (CAS No.: 355-25-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
四氟甲烷 (Freon 14) (CAS No.: 75-73-0)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
八氟丙烷 (Freon 218) (CAS No.: 76-19-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
2-全氟甲基丁烷 (Nonafluor-2- (trifluoromethyl)butane) (CAS No.: 594- 91-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟-1-丁烯 (Perfluor-1-butene) (CAS No.: 357-26-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟異丁烯 (Perfluorisobutene) (CAS No.: 382-21-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟己烷 (Perfluorohexane) (CAS No.: 355-42-0)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 27 of 52

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
全氟戊烷 (Perfluoro-n-pentane) (CAS No.: 678-26-2)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
八氟環丁烷 (Freon C318) (CAS No.: 115- 25-3)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氯碳氫化物 (Chlorinate hydrocarbon) (CHCs)					
四氯甲烷 (四氯化碳) (Carbon tetrachloride) (CAS No.: 56-23-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,1-三氯乙烷 (1,1,1-Trichloroethane) (CAS No.: 71-55-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,1,2-四氯乙烷 (1,1,1,2- Tetrachloroethane) (CAS No.: 630-20- 6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,2,2-四氯乙烷 (1,1,2,2- Tetrachloroethane) (CAS No.: 79-34-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,2-三氯乙烷 (1,1,2-Trichloroethane) (CAS No.: 79-00-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



;嗨(NO.):	:碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 28 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
1,1-二氯乙烷 (1,1-Dichloroethane) (CAS No.: 75-34-3)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1-二氯乙烯 (1,1-Dichloroethylene) (CAS No.: 75-35-4)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1-二氯丙烯 (1,1-Dichloropropene) (CAS No.: 563-58-6)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
1,2,3-三氯丙烷 (1,2,3-Trichloropropane) (CAS No.: 96-18-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,2-二氯乙烷 (1,2-Dichloroethane) (CAS No.: 107-06-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,2-二氯丙烷 (1,2-Dichloropropane) (CAS No.: 78-87-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,3-二氯丙烷 (1,3-Dichloropropane) (CAS No.: 142-28-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
2,2-二氯丙烷 (2,2-Dichloropropane) (CAS No.: 594-20-7)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



	に碼	(No.)		日期(Date): 17-Apr-2024	頁數(Page): 29 of 52
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氯仿 (Chloroform) (CAS No.: 67-66-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氯甲烷 (Chloromethane) (CAS No.: 74-87-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
順-1,2-二氯乙烯 (cis-1,2- Dichloroethene) (CAS No.: 156-59-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
順-1,3-二氯丙烯 (cis-1,3- Dichloropropene) (CAS No.: 10061-01- 5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
二氯甲烷 (Dichloromethane) (CAS No.: 75-09-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
四氯乙烯 (Tetrachloroethene) (CAS No.: 127-18-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
反-1,2-二氯乙烯 (trans-1,2- Dichloroethene) (CAS No.: 156-60-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
反-1,3-二氯丙烯 (trans-1,3- Dichloropropene) (CAS No.: 10061-02- 6)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



語碼(No.): 日期(Date): 17-Apr-2024 頁數(Page): 3	30 c	of 5	5	Ź	2
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
三氯乙烯 (Trichloroethylene) (CAS No.: 79-01-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氯乙烷 (Chloroethane) (CAS No.: 75-00-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
六氯-1,3-丁二烯 (Hexachlorobutadiene) (CAS No.: 87-68-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
溴氯甲烷 (Bromochloromethane) (CAS No.: 74-97-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
六氟化硫 (SF6) (Sulphur hexafluoride (SF6)) (CAS No.: 2551-62-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
2-[2-羥基-3',5'-二-叔-丁基苯基]-苯並三唑 (紫外線吸收劑320) (2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)) (CAS No.: 3846-71-7)	參考US EPA 3550C: 2007·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
四溴雙酚 A (TBBP-A) (Tetrabromobisphenol A (TBBP-A)) (CAS No.: 79-94-7)	參考RSTS-E&E-121·以液相層析儀/質譜 儀分析。(With reference to RSTS-E&E- 121, analysis was performed by LC/MS.)	mg/kg	10	n.d.	-
富馬酸二甲酯 (DMFu) (Dimethyl fumarate (DMFu)) (CAS No.: 624-49-7)	參考US EPA 3550C: 2007·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	0.1	n.d.	-



:碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 31 of 52

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
六溴環十二烷及所有主要被辨別出的異構物(HBCDD) (α - HBCDD, β - HBCDD, γ - HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β - HBCDD, γ - HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	參考IEC 62321: 2008·以氣相層析儀/質譜儀分析。(With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
磷 (P) (Phosphorus (P)) (CAS No.: 7723-14-0)	參考US EPA 3052: 1996.以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-
砷 (As) (Arsenic (As)) (CAS No.: 7440-38-2)	參考US EPA 3052: 1996.以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-
紅磷 (Red Phosphorus)	以熱裂解-氣相層析儀/質譜儀分析。 (Analysis was performed by Pyrolyzer- GC/MS.)	**	-	Negative	-
甲醛 (Formaldehyde) (CAS No.: 50-00-0)	參考ISO 17226-1: 2021·以液相層析儀/ 二極體陣列偵測器分析。(With reference to ISO 17226-1: 2021, analysis was performed by LC/DAD.)	mg/kg	3	n.d.	-

備註(Note):

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit (方法偵測極限值)
- 3. n.d. = Not Detected (未檢出); 小於MDL / Less than MDL
- 4. "-" = Not Regulated (無規格值)
- 5. **= Qualitative analysis (No Unit) 定性分析(無單位)
- 6. Negative = Undetectable 陰性(未偵測到/未檢出); Positive = Detectable 陽性(已偵測到/檢出)



R碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 32 of 52

- 7. 石綿定性分析試驗範圍: <0.1%~100%,石綿鑑定的判定基準是以檢出含有石綿纖維為『Positive』,未檢出石綿纖維為『Negative』。(Testing range of asbestos qualitative analysis is from less than 0.1% to 100%. The judgment criterion: asbestos fibers being found is shown as "Positive"; asbestos fibers not being found is shown as "Negative".)
- 8. (#2) =
 - a. 當六價鉻結果大於 $0.13~\mu g/cm^2$ ·表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than $0.13~\mu g/cm^2$. The sample coating is considered to contain Cr(VI).) b. 當六價鉻結果為n.d. (濃度小於 $0.10~\mu g/cm^2$)·表示表層不含六價鉻。(The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than $0.10~\mu g/cm^2$). The coating is considered a non-Cr(VI) based coating) c. 當六價鉻結果介於0.10~D0.13 $\mu g/cm^2$ 6 is considered to be inconclusive unavoidable coating variations may influence the determination.)
- 9. ▲: MDL是針對元素/測試化合物之評估。(The MDL was evaluated for element / tested substance.) 換算公式 (Conversion Formula): AX = A × F

AX	Α	F
氧化鈹 (Beryllium oxide) (BeO)	鈹 (Beryllium)	2.7753
氧化雙三丁基錫 (Bis(tributyltin)oxide) (TBTO)	三丁基錫 (Tributyl Tin) (TBT)	1.0276
三氧化二銻 (Antimony trioxide) (Sb ₂ O ₃)	銻 (Antimony)	1.1971

參數換算表 (Parameter Conversion Table):

https://eecloud.sgs.com/Region_TW/DocDownload.aspx?name=Others

10. 除非另有說明,參照ILAC-G8:09/2019,採用簡單二元(w=0)允收規則進行符合性判定;根據此規則,符合性結果之判定係以測試結果與限值做比較。(Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.)



碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 33 of 52

PFAS Remark:

現有PFAS定量技術是分析PFAS物質的特定結構,但同碳數族群之PFAS酸及鹽類物質,其可被辨識的特定結構相同,因此無法區別所分析的特定結構是來自酸或者鹽類,故測試結果為同碳數族群之PFAS之酸及鹽類物質的濃度總合。下表PFAS物質濃度皆已包含在測試結果中,相關資訊請參見下表:(下表列舉PFAS物質僅為範例,並不包含所有同碳數族群之PFAS鹽類。)

(The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.))

群組名稱	物質名稱	CAS No.
(Group Name)	(Substance Name)	
	全氟辛烷磺酸 (Perfluorooctane sulfonates) (PFOS)	1763-23-1
	全氟辛基磺酸鉀 (PFOS-K)	2795-39-3
	Potassium perfluorooctanesulfonate (PFOS-K)	
	全氟辛基磺酸鋰 (PFOS-Li)	29457-72-5
	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	
	全氟辛基磺酸銨 (PFOS-NH ₄)	29081-56-9
	Perfluorooctanesulfonic acid, ammonium salt (PFOS-	
DEOC 五甘酶的公什物	全氟辛基磺酸二乙醇銨 (PFOS-NH(OH) ₂)	70225-14-8
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	Perfluorooctane sulfonate diethanolamine salt (PFOS-	
(FTO3, its saits & derivatives)	NH(OH) ₂)	
	全氟辛基磺酸四乙基銨 (PFOS-N(C ₂ H ₅) ₄)	56773-42-3
	Perfluorooctanesulfonic acid, tetraethylammonium salt	
	(PFOS-N(C2H5)4)	
	全氟辛基磺酸二癸二甲基銨 (PFOS-DDA)	251099-16-8
	N-decyl-N,N-dimethyldecan-1-aminium	
	1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane-1-	
	sulfonate (PFOS-DDA)	



號碼(No.): 日期(Date): 17-Apr-2024 頁數(Page): 34 of 52

群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
	全氟辛基磺醯氟 (POSF) Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
	全氟辛基磺酸鎂 (PFOS-Mg) Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	全氟辛基磺酸鈉 (PFOS-Na) Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
	全氟辛烷磺酸哌啶 Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptadecafluorooctanesulfonate	71463-74-6
	全氟辛酸 (Perfluorooctanoic acid) (PFOA)	335-67-1
	全氟辛酸鈉 (PFOA-Na) Sodium perfluorooctanoate (PFOA-Na)	335-95-5
	全氟辛酸鉀 (PFOA-K) Potassium perfluorooctanoate (PFOA-K)	2395-00-8
PFOA, 及其鹽&衍生物	全氟辛酸銀 (PFOA-Ag) Silver perfluorooctanote (PFOA-Ag)	335-93-3
(PFOA, its salts & derivatives)	全氟辛氟 (PFOA-F) Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	全氟辛酸銨 (APFO) Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	全氟辛酸鋰 (PFOA-Li) Lithium perfluorooctanoate (PFOA-Li)	17125-58-5

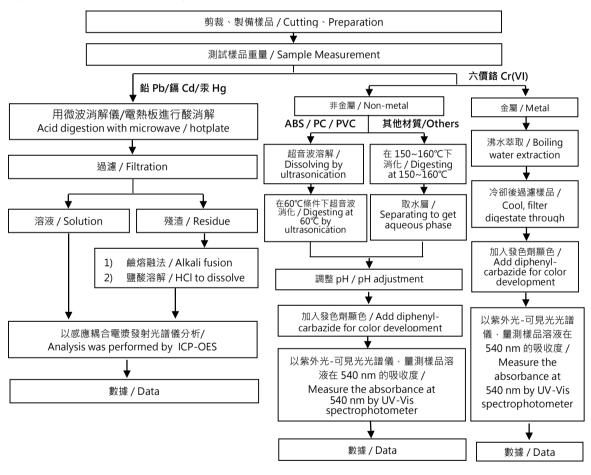


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重金屬流程圖 / Analytical flow chart of Heavy Metal

根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外)

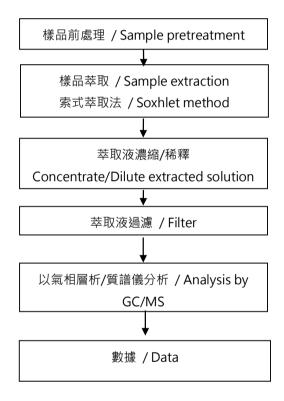
These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)





碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 36 of 52
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多溴聯苯/多溴聯苯醚 分析流程圖 / PBB/PBDE analytical FLOW CHART

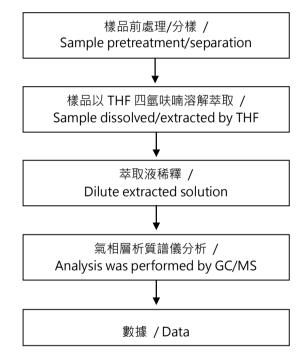




碼(No.): 日期(Date): 17-Apr-2024	頁數(Page): 37 of 52
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可塑劑分析流程圖 / Analytical flow chart of phthalate content

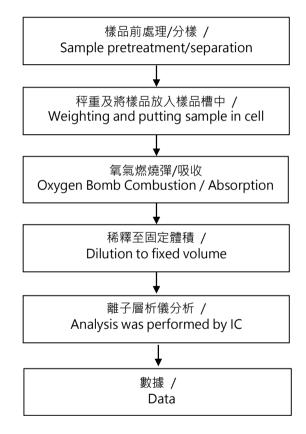
【測試方法/Test method: IEC 62321-8】





號碼(No.): 日期(Date): 17-Apr-2024 頁數(Page): 38 of 52

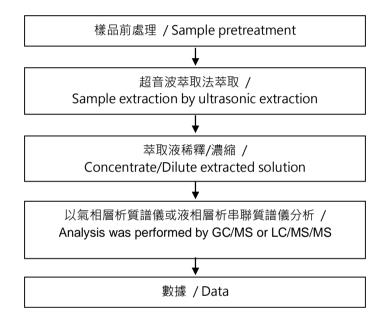
鹵素分析流程圖 / Analytical flow chart of Halogen





碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 39 of 52
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全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)





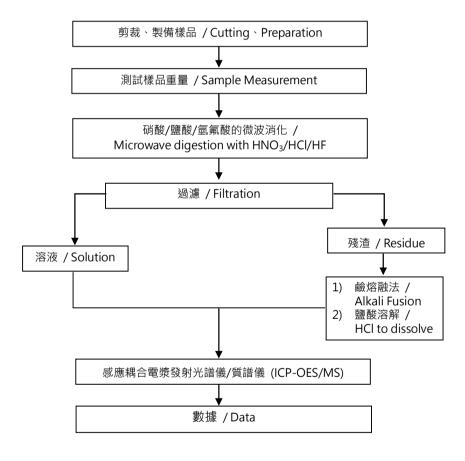
碼(No.):	日期(Date): 17-Apr-2024

元素(含重金屬)分析流程圖 / Analytical flow chart of Elements (Heavy metal included)

根據以下的流程圖之條件,樣品已完全溶解。

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【参考方法/Reference method: US EPA 3051、US EPA 3052】



* US EPA 3051 方法未添加氫氟酸 / US EPA 3051 method does not add HF.

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頁數(Page): 40 of 52

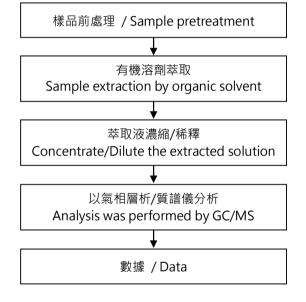


號碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 41 of 52
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分析流程圖 / Analytical flow chart

【適用於:多氯聯苯、多氯奈、多氯三聯苯、滅蟻靈、氯化石蠟、DBBT】

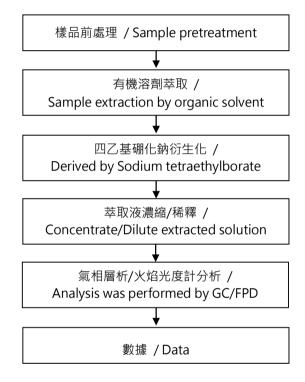
*Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT





號碼(No.): 日期(Date): 17-Apr-2024 頁數(Page): 42 of 52

有機錫分析流程圖 / Analytical flow chart - Organic-Tin

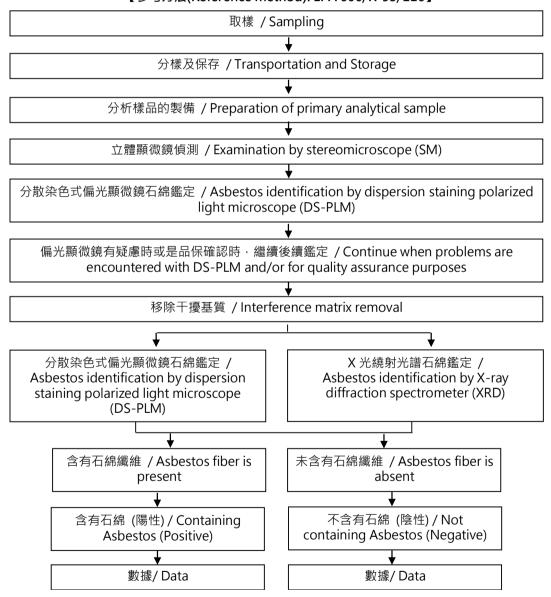




號碼(No.): 日期(Date): 17-Apr-2024

頁數(Page): 43 of 52

石綿鑑定分析流程圖 / Analysis flow chart for determination of Asbestos 【參考方法(Reference method): EPA 600/R-93/116】

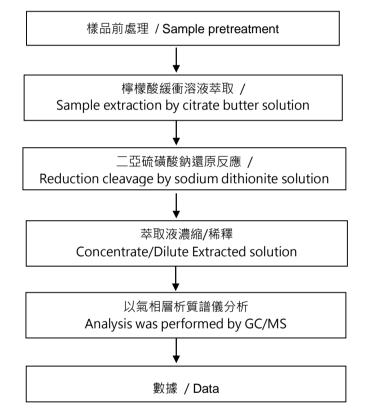




號碼(No.): 日期(Date): 17-Apr-2024 頁數(Page): 44 of 52

偶氮分析流程圖 / Analytical flow chart of Azo dyes

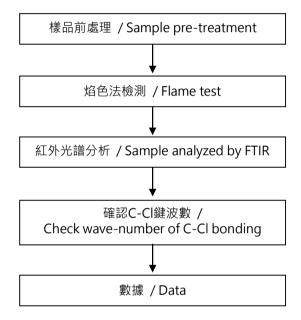
【測試方法/Test method: ISO 14362-1】





碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 45 of 52
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聚氯乙烯物質判定分析流程圖 / Analysis flow chart - PVC

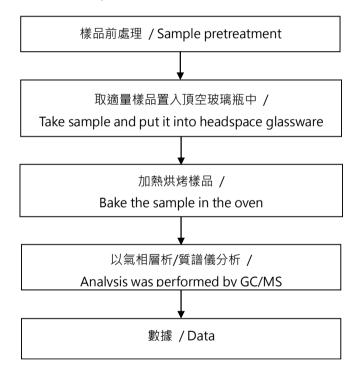




號碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 46 of 52
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揮發性有機化合物分析流程圖 / Analytical flow chart of volatile organic compounds (VOCs)

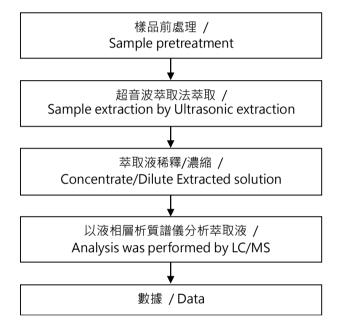
【參考方法/Reference method: US EPA 5021A】





號碼(No.): 日期(Date): 17-Apr-2024 頁數(Page): 47 of 52

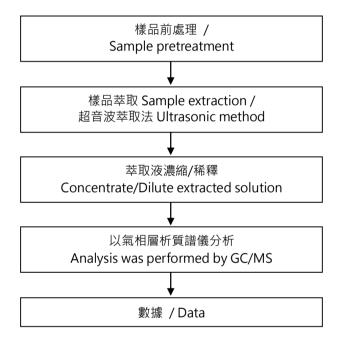
四溴雙酚-A分析流程圖 / TBBP-A analytical flow chart





號碼(No.):	日期(Date): 17-Apr-2024	頁數(Page): 48 of 52
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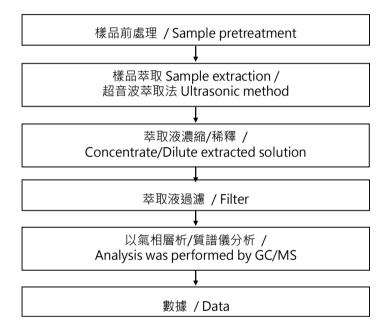
富馬酸二甲酯分析流程圖 / Analytical flow chart of Dimethyl Fumarate content





號碼(No.): 日期(Date): 17-Apr-2024 頁數(Page): 49 of 52

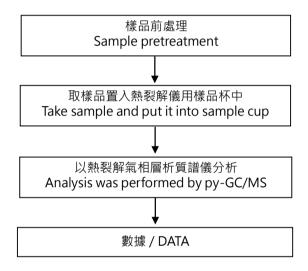
六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD





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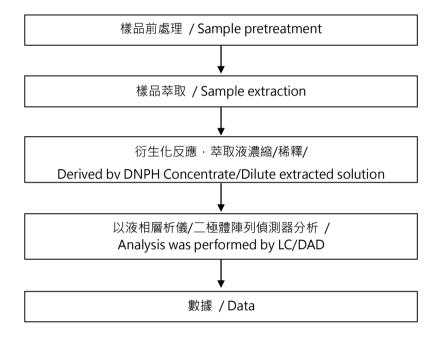
紅磷分析流程 / Analytical flow chart - Red phosphorus





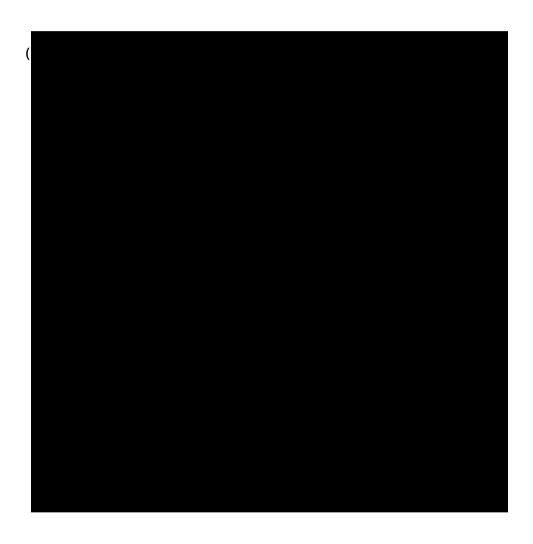
碼(No	.):	日期(Date): 17-Apr-2024	頁數(Page): 51 of 52
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甲醛分析流程圖 / Analytical flow chart - Formaldehyde





號碼(No.): 日期(Date): 17-Apr-2024 頁數(Page): 52 of 52





TI Report Number: 72443072

Component : Lead Frame Plating

Analysis Type: RoHS 10 & Halogens

Analysis Date: 03/26/2024



日期(Date): 26-Mar-2024 頁數(Page): 1 of 53

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by the applicant as):

送樣廠商(Sample Submitted By)

樣品名稱(Sample Name) 樣品型號(Style/Item No.) : Ni PLATING

號碼(No.):

Ni PLATING

收件日(Sample Receiving Date)

: 15-Mar-2024

測試期間(Testing Period)

: 15-Mar-2024 to 26-Mar-2024

測試需求(Test Requested)

(1) 依據客戶指定、參考RoHS 2011/65/EU Annex II及其修訂指令(EU) 2015/863測試 鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP。 (As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)

(2) 其他測試項目請見下一頁。 (Please refer to next pages for the other item(s).)

測試結果(Test Results)

結 論(Conclusion)

請參閱下一頁 (Please refer to following pages.)
(1) 根據客戶所提供的樣品,其編、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP的測試結果符合RoHS 2011/65/EU Annex II暨其修訂指令(EU)

2015/863之限值要求。 (Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863

amending Annex II to Directive 2011/65/EU.)





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測試部位敘述 (Test Part Description)

No.1 : 銀色金屬 (SILVER COLORED METAL)

測試結果 (Test Results)

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013 · 以感應耦合電漿	mg/kg	2	n.d.	100
	發射光譜儀分析。(With reference to IEC				
鉛 (Pb) (Lead (Pb))	62321-5: 2013, analysis was performed	mg/kg	2	n.d.	1000
	by ICP-OES.)				
汞 (Hg) (Mercury (Hg))	參考IEC 62321-4: 2013+ AMD1: 2017	mg/kg	2	n.d.	1000
	以感應耦合電漿發射光譜儀分析。(With				
	reference to IEC 62321-4: 2013+ AMD1:				
	2017, analysis was performed by ICP-				
	OES.)				
六價鉻 (Hexavalent Chromium) Cr(VI)	參考IEC 62321-7-1: 2015 · 以紫外光-可見	μg/cm²	0.1	n.d.	-
(#2)	光分光光度計分析。(With reference to				
	IEC 62321-7-1: 2015, analysis was				
	performed by UV-VIS.)				
一溴聯苯 (Monobromobiphenyl)		mg/kg	5	n.d.	-
二溴聯苯 (Dibromobiphenyl)		mg/kg	5	n.d.	-
三溴聯苯 (Tribromobiphenyl)		mg/kg	5	n.d.	-
四溴聯苯 (Tetrabromobiphenyl)		mg/kg	5	n.d.	-
五溴聯苯 (Pentabromobiphenyl)	参考IEC 62321-6: 2015 · 以氣相層析儀/質 ・	mg/kg	5	n.d.	-
六溴聯苯 (Hexabromobiphenyl)	6: 2015, analysis was performed by	mg/kg	5	n.d.	-
七溴聯苯 (Heptabromobiphenyl)	GC/MS.)	mg/kg	5	n.d.	-
八溴聯苯 (Octabromobiphenyl)	36,1413.,	mg/kg	5	n.d.	-
九溴聯苯 (Nonabromobiphenyl)		mg/kg	5	n.d.	_
十溴聯苯 (Decabromobiphenyl)		mg/kg	5	n.d.	-
多溴聯苯總和 (Sum of PBBs)		mg/kg	-	n.d.	1000



碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 3 of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
一溴聯苯醚 (Monobromodiphenyl ether)		mg/kg	5	n.d.	_
二溴聯苯醚 (Dibromodiphenyl ether)		mg/kg	5	n.d.	_
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.	_
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.	_
五溴聯苯醚 (Pentabromodiphenyl ether)	參考IEC 62321-6: 2015,以氣相層析儀/質	mg/kg	5	n.d.	_
六溴聯苯醚 (Hexabromodiphenyl ether)	譜儀分析。(With reference to IEC 62321-	mg/kg	5	n.d.	-
七溴聯苯醚 (Heptabromodiphenyl ether)	6: 2015, analysis was performed by	mg/kg	5	n.d.	_
八溴聯苯醚 (Octabromodiphenyl ether)	GC/MS.)	mg/kg	5	n.d.	-
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.	-
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.	=
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	=	n.d.	1000
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP))	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di- (2-ethylhexyl) phthalate (DEHP))	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1000
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-



號碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 4 of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
鄰苯二甲酸二異癸酯 (DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40-0, 68515-49-1)	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	1
鄰苯二甲酸二正戊酯 (DNPP) (Di-n-pentyl phthalate (DNPP)) (CAS No.: 131-18-0)	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二正己酯 (DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.: 84-75-3)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二庚酯 (DHpP) (Diheptyl phthalate (DHpP)) (CAS No.: 3648-21-3)	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二(2-甲氧基乙基)酯 (DMEP) (Bis(2-methoxyethyl) phthalate (DMEP)) (CAS No.: 117-82-8)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二(C7-11支鏈與直鏈)烷基酯 (DHNUP) (1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)) (CAS No.: 68515-42-4)	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二 (C6-8支鏈)烷基酯·富C7 (DIHP) (1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)) (CAS No.: 71888-89-6)	參考IEC 62321-8: 2017·以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-



碼(No.): 日期(Date): 26-Mar-2024 東婁	效(Page):	5 01	53
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-	參考BS EN 14582: 2016 · 以離子層析儀分	mg/kg	50	n.d.	=
8)	析。(With reference to BS EN 14582:				
	2016, analysis was performed by IC.)				
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537-	参考BS EN 14582: 2016,以離子層析儀分	mg/kg	50	n.d.	_
15-1)	析。(With reference to BS EN 14582:	ilig/kg	30	11.0.	
	2016, analysis was performed by IC.)				
	2010, unalysis was performed by ie.,				
溴 (Br) (Bromine (Br)) (CAS No.: 10097-	參考BS EN 14582: 2016 · 以離子層析儀分	mg/kg	50	n.d.	-
32-2)	析。(With reference to BS EN 14582:				
	2016, analysis was performed by IC.)				
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)	 參考BS EN 14582: 2016 · 以離子層析儀分	mg/kg	50	n.d.	-
	析。(With reference to BS EN 14582:	J. J			
	2016, analysis was performed by IC.)				
全氟辛酸 (PFOA)及其鹽類	參考CEN/TS 15968: 2010 · 以液相層析串	mg/kg	0.01	n.d.	_
(Perfluorooctanoic acid (PFOA) and it's	聯質譜儀分析。(With reference to				
salt) (CAS No.: 335-67-1 and its salts)	CEN/TS 15968: 2010, analysis was				
	performed by LC/MS/MS.)				
全氟辛烷磺酸及其鹽類 (PFOS and its	參考CEN/TS 15968: 2010 · 以液相層析串	mg/kg	0.01	n.d.	-
salts) (CAS No.: 1763-23-1 and its salts)	聯質譜儀分析。(With reference to				
	CEN/TS 15968: 2010, analysis was				
A (CL) (A L' (CL)) (CACAL 7440	performed by LC/MS/MS.)		2		
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-	参考US EPA 3052: 1996・以感應耦合電漿	mg/kg	2	n.d.	-
36-0)	發射光譜儀分析。(With reference to US				
	EPA 3052: 1996, analysis was performed by ICP-OES.)				
 三氧化二銻(Sb₂O₃) (Antimony trioxide	由銻結果計算得之。(Calculated from the	mg/kg	2▲	n.d.	_
(Sb ₂ O ₃)) (CAS No.: 1309-64-4)	result of Antimony.)	1119/119	4	11.0.	
(55253)) (6/15/16/15/15/15/15/15/15/15/15/15/15/15/15/15/	1. 33 3.1. 3.1. 11 11 11 11 11 11 11 11 11 11 11 11				



號碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 6 of 53
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-	參考US EPA 3052: 1996,以感應耦合電漿	mg/kg	2	n.d.	-
41-7)	發射光譜儀分析。(With reference to US				
	EPA 3052: 1996, analysis was performed				
	by ICP-OES.)				
氧化鈹 (BeO) (Beryllium oxide (BeO))	由鈹結果計算得之。(Calculated from the	mg/kg	2▲	n.d.	-
(CAS No.: 1304-56-9)	result of Beryllium.)				
砷 (As) (Arsenic (As)) (CAS No.: 7440-	參考US EPA 3052: 1996,以感應耦合電漿	mg/kg	2	n.d.	-
38-2)	發射光譜儀分析。(With reference to US				
	EPA 3052: 1996, analysis was performed				
	by ICP-OES.)				
磷 (P) (Phosphorus (P)) (CAS No.: 7723-	參考US EPA 3052: 1996,以感應耦合電漿	mg/kg	2	n.d.	-
14-0)	發射光譜儀分析。(With reference to US				
	EPA 3052: 1996, analysis was performed				
	by ICP-OES.)				
多氯聯苯 (PCBs) (Polychlorinated	參考US EPA 3550C: 2007,以氣相層析儀/	mg/kg	0.5	n.d.	-
biphenyls (PCBs))	質譜儀分析。(With reference to US EPA				
	3550C: 2007, analysis was performed by				
	GC/MS.)				
多氯奈 (PCNs) (Polychlorinated	參考US EPA 3550C: 2007,以氣相層析儀/	mg/kg	5	n.d.	-
naphthalene (PCNs))	質譜儀分析。(With reference to US EPA				
	3550C: 2007, analysis was performed by				
	GC/MS.)				
多氯三聯苯 (PCTs) (Polychlorinated	參考US EPA 3550C: 2007,以氣相層析儀/	mg/kg	0.5	n.d.	-
terphenyls (PCTs))	質譜儀分析。(With reference to US EPA				
	3550C: 2007, analysis was performed by				
	GC/MS.)				
短鏈氯化石蠟(C10-C13) (SCCP) (Short	參考ISO 18219-1: 2021,以氣相層析儀/	mg/kg	50	n.d.	-
Chain Chlorinated Paraffins(C10-C13)	質譜儀分析。(With reference to ISO				
(SCCP)) (CAS No.: 85535-84-8)	18219-1: 2021, analysis was performed				
	by GC/MS.)				



『碼(No.): 日期(Date): 26-Mar-2024 東婁	數(Page): 7	OT 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
三丁基錫 (TBT) (Tributyl tin (TBT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
氧化雙三丁基錫 (TBTO) (Bis(tributyltin) oxide (TBTO)) (CAS No.: 56-35-9)	由三丁基錫測試結果計算得之。 (Calculated from the result of Tributyl Tin (TBT).)	mg/kg	0.03▲	n.d.	-
三苯基錫 (TPT) (Triphenyl tin (TPT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
二辛基錫 (DOT) (Dioctyl tin (DOT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
二丁基錫 (DBT) (Dibutyl tin (DBT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
石綿 (Asbestos)					
陽起石綿 (Actinolite) (CAS No.: 77536- 66-4)	6 ±/FD • 600 / D • 00 / d • 6 • 100 0	-	-	Negative	-
褐石綿/鐵石綿 (Amosite) (CAS No.: 12172-73-5)	参考EPA 600/R-93/116: 1993 · 以立體顯微鏡(SM)與分散染色式偏光顯微鏡(DS-	-	-	Negative	-
斜方角閃石綿 (Anthophyllite) (CAS No.: 77536-67-5)	PLM)及X光繞射光譜分析法(XRD)分析。 (With reference to EPA 600/R-93/116: 1993, analysis was performed by Stereo Microscope (SM), Dispersion Staining Polarized Light Microscope (DS-PLM) and X-ray Diffraction Spectrometer (XRD).)	-	-	Negative	-
白石綿/溫石綿 (Chrysotile) (CAS No.: 12001-29-5)		-	-	Negative	-
青石綿 (Crocidolite) (CAS No.: 12001- 28-4)		-	-	Negative	-
透閃石綿 (Tremolite) (CAS No.: 77536- 68-6)	(A.C.)	-	-	Negative	-



1/01/Date). 2021	號碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 8 of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
聚氯乙烯 (Polyvinyl chloride) (PVC)	參考ASTM E1252: 2021 · 以傅立葉轉換紅外線光譜儀及焰色法分析。(With reference to ASTM E1252: 2021, analysis was performed by FT-IR and Flame Test.)	**	-	Negative	-
2-[2-羥基-3',5'-二-叔-丁基苯基]-苯並三唑 (紫外線吸收劑320) (2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)) (CAS No.: 3846-71-7)	參考US EPA 3550C: 2007·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
四溴雙酚 A (TBBP-A) (Tetrabromobisphenol A (TBBP-A)) (CAS No.: 79-94-7)	參考RSTS-E&E-121 · 以液相層析儀/質譜 儀分析。(With reference to RSTS-E&E- 121, analysis was performed by LC/MS.)	mg/kg	10	n.d.	-
中鏈氯化石蠟(C14-C17) (MCCP) (Medium Chain Chlorinated Paraffins(C14-C17) (MCCP)) (CAS No.: 85535-85-9)	參考ISO 18219-2: 2021·以氣相層析儀/ 質譜儀分析。(With reference to ISO 18219-2: 2021, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
富馬酸二甲酯 (DMFu) (Dimethyl fumarate (DMFu)) (CAS No.: 624-49-7)	參考US EPA 3550C: 2007‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	0.1	n.d.	-
六溴環十二烷及所有主要被辨別出的異構物(HBCDD) (α - HBCDD, β - HBCDD, γ - HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β - HBCDD, γ - HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	參考IEC 62321: 2008·以氣相層析儀/質譜儀分析。(With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-



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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
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甲醛 (Formaldehyde) (CAS No.: 50-00-0)	參考ISO 17226-1: 2021.以液相層析儀/ 二極體陣列偵測器分析。(With reference to ISO 17226-1: 2021, analysis was performed by LC/DAD.)	mg/kg	3	n.d.	-
紅磷 (Red Phosphorus)	以熱裂解-氣相層析儀/質譜儀分析。 (Analysis was performed by Pyrolyzer- GC/MS.)	**	-	Negative	-
雙酚A (Bisphenol A) (CAS No.: 80-05-7)	參考RSTS-CHEM-239-1 · 以液相層析串聯質譜儀分析。(With reference to RSTS-CHEM-239-1, analysis was performed by LC/MS/MS.)	mg/kg	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbons)					
CFC-11 (CAS No.: 75-69-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-12 (CAS No.: 75-71-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-13 (CAS No.: 75-72-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-111 (CAS No.: 354-56-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-112 (CAS No.: 76-12-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 10 of 53

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
CFC-113 (CAS No.: 76-13-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-114 (CAS No.: 76-14-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-115 (CAS No.: 76-15-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
CFC-211 (CAS No.: 422-78-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
CFC-212 (CAS No.: 3182-26-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-213 (CAS No.: 2354-06-5)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-214 (CAS No.: 29255-31-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-215 (CAS No.: 4259-43-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



^{虎碼(No.):}	日期(Date): 26-Mar-2024	頁數(Page): 11 of 53

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
CFC-216 (CAS No.: 661-97-2)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	_
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
CFC-217 (CAS No.: 422-86-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
氟氯氫烷碳化物					
(Hydrochlorofluorocarbons) (HCFCs)					
HCFC-21 (CAS No.: 75-43-4)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-22 (CAS No.: 75-45-6)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-31 (CAS No.: 593-70-4)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-121 (CAS No.: 354-14-3)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-122 (CAS No.: 354-21-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



	碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 12 of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
HCFC-123 (CAS No.: 306-83-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-124 (CAS No.: 2837-89-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-131 (CAS No.: 359-28-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-141b (CAS No.: 1717-00-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-221 (CAS No.: 422-26-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-222 (CAS No.: 422-49-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-223 (CAS No.: 422-52-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-224 (CAS No.: 422-54-8)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page):
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-225ca (CAS No.: 422-56-0)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-225cb (CAS No.: 507-55-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-226 (CAS No.: 431-87-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-231 (CAS No.: 421-94-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-232 (CAS No.: 460-89-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-233 (CAS No.: 7125-84-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-234 (CAS No.: 425-94-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-235 (CAS No.: 460-92-4)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 14 of	: 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-241 (CAS No.: 666-27-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-242 (CAS No.: 460-63-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-243 (CAS No.: 460-69-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-244	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-251 (CAS No.: 421-41-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-252 (CAS No.: 819-00-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-253 (CAS No.: 460-35-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-261 (CAS No.: 420-97-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.): 日期(Date): 26-Ma	r-2024 頁數(Page): 15 of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-262 (CAS No.: 421-02-03)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-271 (CAS No.: 430-55-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-133a (CAS No.: 75-88-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
HCFC-142b (CAS No.: 75-68-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-132b (CAS No.: 1649-08-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-141	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-142	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-151	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



:碼(No.):		日期(Date): 26-Mar-2024	頁數(Page): 16 of	53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-225	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
海龍 (Halons)					
Halon-1211 (CAS No.: 353-59-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
Halon-1301 (CAS No.: 75-63-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
海龍-2402 (Halon-2402) (CAS No.: 124-73-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
溴甲烷 (Bromomethane) (CAS No.: 74-83-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
不完全鹵化氟溴化物 (Hydrobromofluorocarbons) (HBFCs)					
HBFC-121B4 (C2HFBr4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-122B3 (C2HF2Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



:碼(I	No.):		日期(Date): 26-Mar-2024	頁數(Page): 17 of	53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-123B2 (C2HF3Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
HBFC-124B1 (C2HF4Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
HBFC-131B3 (C2H2FBr3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
HBFC-132B2 (C2H2F2Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-133B1 (C2H2F3Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-141B2 (C2H3FBr2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-142B1 (C2H3F2Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-151B1 (C2H4FBr)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



:碼(1	No.	:	日期(Date): 26-Mar-2024	頁數(Page): 18 of	53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
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HBFC-21B2 (CHFBr2) (CAS No.: 1868- 53-7)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-221B6 (C3HFBr6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-222B5 (C3HF2Br5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-223B4 (C3HF3Br4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-224B3 (C3HF4Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-225B2 (C3HF5Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-226B1 (C3HF6Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-22B1 (CHF2Br) (CAS No.: 1511-62-2)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



號碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 19 of	53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
HBFC-231B5 (C3H2FBr5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-232B4 (C3H2F2Br4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-233B3 (C3H2F3Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-234B2 (C3H2F4Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-235B1 (C3H2F5Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-241B4 (C3H3FBr4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-242B3 (C3H3F2Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-243B2 (C3H3F3Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



:碼(No.): 日期(D	ıte): 26-Mar-2024 頁數(Page): 20 o	f 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-244B1 (C3H3F4Br)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-251B3 (C3H4FBr3)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-252B2 (C3H4F2Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-253B1 (C3H4F3Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-261B2 (C3H5FBr2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-262B1 (C3H5F2Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-271B1 (C3H6FBr)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-31B1 (CH2FBr) (CAS No.: 373-52-4)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



:碼(N	No.):		日期(Date): 26-Mar-2024	頁數(Page): 21 of	f 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氫氟碳化合物 (Hydrofluorocarbon)					
HFC-125 (C2HF5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-134 (C2H2F4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-134a (CH2FCF3) (CAS No.: 811- 97-2)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-143 (C2H3F3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-143a (C2H3F3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-152a (C2H4F2) (CAS No.: 75-37-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-227ea (C3HF7) (CAS No.: 431-89- 0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-23 (CHF3) (CAS No.: 75-46-7)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.): 日期(Date): 26-Mar-2024 頁數(Pa	'age):∠	.2 of :	53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HFC-236ea (C3H2F6) (CAS No.: 431-63- 0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-236fa (CAS No.: 431-63-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-245ca (C3H3F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-245fa (C3H3F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-32 (CH2F2) (CAS No.: 75-10-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-365mfc (C4H5F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	ı
HFC-43-10mee (C5H2F10)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-41 (CH3F) (CAS No.: 593-53-3)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



福((No.)):	日期(Date): 26-Mar-2024	頁數(Page): 23 of	53
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
全氟化碳 (Perfluorocarbon) (PFCs)					
六氟乙烷 (Fluorocarbon 116) (CAS No.:	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
76-16-4)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
1,4-二氫八氟丁烷 (1,4-	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
dihydrooctafluorobutane) (CAS No.:	質譜儀分析。(With reference to US EPA				
377-36-6)	5021A: 2014, analysis was performed by				
	GC/MS.)				
2-全氟甲基戊烷 (2-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	=
Perfluoromethylpentane) (CAS No.:	質譜儀分析。(With reference to US EPA				
355-04-4)	5021A: 2014, analysis was performed by				
	GC/MS.)				
十氟丁烷 (Decafluorobutane) (CAS No.:	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
355-25-9)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
四氟甲烷 (Freon 14) (CAS No.: 75-73-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
八氟丙烷 (Freon 218) (CAS No.: 76-19-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
7)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
2-全氟甲基丁烷 (Nonafluor-2-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
(trifluoromethyl)butane) (CAS No.: 594-	質譜儀分析。(With reference to US EPA				
91-2)	5021A: 2014, analysis was performed by				
	GC/MS.)				
全氟-1-丁烯 (Perfluor-1-butene) (CAS	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	- 7
No.: 357-26-6)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 24 of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
全氟異丁烯 (Perfluorisobutene) (CAS No.: 382-21-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟己烷 (Perfluorohexane) (CAS No.: 355-42-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟戊烷 (Perfluoro-n-pentane) (CAS No.: 678-26-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
八氟環丁烷 (Freon C318) (CAS No.: 115- 25-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氯碳氫化物 (Chlorinate hydrocarbon) (CHCs)					
四氯甲烷 (四氯化碳) (Carbon tetrachloride) (CAS No.: 56-23-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,1-三氯乙烷 (1,1,1-Trichloroethane) (CAS No.: 71-55-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,1,2-四氯乙烷 (1,1,1,2- Tetrachloroethane) (CAS No.: 630-20- 6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.):		日期(Date): 26-Mar-2024	頁數(Page): 25 of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
1,1,2,2-四氯乙烷 (1,1,2,2- Tetrachloroethane) (CAS No.: 79-34-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,2-三氯乙烷 (1,1,2-Trichloroethane) (CAS No.: 79-00-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1-二氯乙烷 (1,1-Dichloroethane) (CAS No.: 75-34-3)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1-二氯乙烯 (1,1-Dichloroethylene) (CAS No.: 75-35-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	
1,1-二氯丙烯 (1,1-Dichloropropene) (CAS No.: 563-58-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,2,3-三氯丙烷 (1,2,3-Trichloropropane) (CAS No.: 96-18-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,2-二氯乙烷 (1,2-Dichloroethane) (CAS No.: 107-06-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,2-二氯丙烷 (1,2-Dichloropropane) (CAS No.: 78-87-5)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 26	age): 26 of 53
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result) No.1	(Limit)
1,3-二氯丙烷 (1,3-Dichloropropane) (CAS No.: 142-28-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
2,2-二氯丙烷 (2,2-Dichloropropane) (CAS No.: 594-20-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氯仿 (Chloroform) (CAS No.: 67-66-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氯甲烷 (Chloromethane) (CAS No.: 74-87-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
順-1,2-二氯乙烯 (cis-1,2- Dichloroethene) (CAS No.: 156-59-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
順-1,3-二氯丙烯 (cis-1,3- Dichloropropene) (CAS No.: 10061-01- 5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
二氯甲烷 (Dichloromethane) (CAS No.: 75-09-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
四氯乙烯 (Tetrachloroethene) (CAS No.: 127-18-4)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 27 of 53
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
反-1,2-二氯乙烯 (trans-1,2-	参考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
Dichloroethene) (CAS No.: 156-60-5)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
反-1,3-二氯丙烯 (trans-1,3-	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
Dichloropropene) (CAS No.: 10061-02-	質譜儀分析。(With reference to US EPA				
6)	5021A: 2014, analysis was performed by				
	GC/MS.)				
三氯乙烯 (Trichloroethylene) (CAS No.:	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
79-01-6)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
氯乙烷 (Chloroethane) (CAS No.: 75-00-	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
3)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
<u> </u>	GC/MS.)		1		
六氯-1,3-丁二烯 (Hexachlorobutadiene)	参考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
(CAS No.: 87-68-3)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by GC/MS.)				
溴氯甲烷 (Bromochloromethane) (CAS		mg/kg	1	n.d.	
No.: 74-97-5)	参考US EFA SUZIA. 2014 ・ 以報相層が	mg/kg	1	11.0.	-
100 74 37 3)	5021A: 2014, analysis was performed by				
	GC/MS.)				
六氟化硫 (SF6) (Sulphur hexafluoride	参考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	
(SF6)) (CAS No.: 2551-62-4)	質譜儀分析。(With reference to US EPA	,,,,g	-	11.0.	
(5. 5)) (5. 15.115 2551 52 1)	5021A: 2014, analysis was performed by				
	GC/MS.)				
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號碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 28 of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
偶氮染料 (AZO Dyes) 對-胺基聯苯 (4-Aminobiphenyl) (CAS No.: 92-67-1)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	1
聯苯胺 (Benzidine) (CAS No.: 92-87-5)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4-氯鄰甲苯胺 (4-chloro-o-toluidine) (CAS No.: 95-69-2)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2-萘胺 (2-Naphthylamine) (CAS No.: 91-59-8)	参考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
鄰-胺基偶氮甲苯 (o-Aminoazotoluene) (CAS No.: 97-56-3)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
5-硝基-鄰-甲苯胺 (5-Nitro-o-toluidine) (CAS No.: 99-55-8)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



嗎(No.): 日期(Date): 26-Mar-2024 頁數(Page	je): 29 d	of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
4-氯苯胺 (4-Chloroaniline) (CAS No.: 106-47-8)	參考EN ISO 14362-1: 2017‧以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	З	n.d.	-
4-甲氧基-間-苯二胺 / 2,4-二胺基苯甲醚 (4-Methoxy-m-phenylenediamine / 2,4-Diaminoanisole) (CAS No.: 615-05- 4)	參考EN ISO 14362-1: 2017‧以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-二胺基二苯甲烷 (4,4'-Diaminodiphenylmethane) (CAS No.: 101-77-9)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
3,3'-二氯聯苯胺 (3,3'- Dichlorobenzidine) (CAS No.: 91-94-1)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
3,3'-二甲氧基聯苯胺 (3,3'- Dimethoxybenzidine) (CAS No.: 119- 90-4)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
3,3'-二甲基聯苯胺 (3,3'- Dimethylbenzidine) (CAS No.: 119-93- 7)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



瑪(No.):	日期(Date): 26-Mar-2024	頁數(Page): 30 of 53

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
4,4'-亞甲基二-鄰-苯胺 (4,4'- Methylenedi-o-toluidine) (CAS No.: 838-88-0)	參考EN ISO 14362-1: 2017.以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
6-甲氧基-間-甲苯胺 (6-Methoxy-m-toluidine) (CAS No.: 120-71-8)	參考EN ISO 14362-1: 2017‧以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-亞甲基-雙(2-氯苯胺) (4,4'- Methylene-bis-(2-chloro-Aniline)) (CAS No.: 101-14-4)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-二胺基二苯醚 (4,4'-Oxydianiline) (CAS No.: 101-80-4)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-硫代雙苯胺 (4,4'-Thiodianiline) (CAS No.: 139-65-1)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
鄰-甲苯胺 (o-Toluidine) (CAS No.: 95-53-4)	參考EN ISO 14362-1: 2017,以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



	碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 31 of 53
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
2,4-二氨基甲苯 (2,4-Diaminotoluene) (CAS No.: 95-80-7)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2,4,5-三甲基苯胺 (2,4,5- Trimethylaniline) (CAS No.: 137-17-7)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
鄰-甲氧基苯胺 (2-Methoxyaniline) (CAS No.: 90-04-0)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4-胺基偶氮苯 (4-Aminoazobenzene) (CAS No.: 60-09-3)	參考EN ISO 14362-1: 2017 and EN ISO 14362-3: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017 and EN ISO 14362-3: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2,4-二甲基苯胺 (2,4-Xylidine) (CAS No.: 95-68-1)	參考EN ISO 14362-1: 2017·以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2,6-二甲基苯胺 (2,6-Xylidine) (CAS No.: 87-62-7)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



No.): 日期(Date): 26-Mar-2024	頁數(Page): 32 of 53
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備註(Note):

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit (方法偵測極限值)
- 3. n.d. = Not Detected (未檢出); 小於MDL / Less than MDL

號碼(

- 4. "-" = Not Regulated (無規格值)
- 5. **= Qualitative analysis (No Unit) 定性分析(無單位)
- 6. Negative = Undetectable 陰性(未偵測到/未檢出); Positive = Detectable 陽性(已偵測到/檢出)
- 7. 石綿定性分析試驗範圍: <0.1%~100%,石綿鑑定的判定基準是以檢出含有石綿纖維為『Positive』,未檢出石綿纖維為『Negative』。(Testing range of asbestos qualitative analysis is from less than 0.1% to 100%. The judgment criterion: asbestos fibers being found is shown as "Positive"; asbestos fibers not being found is shown as "Negative".)
- 8. (#2) =
 - a. 當六價鉻結果大於 $0.13~\mu g/cm^2$ ·表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than $0.13~\mu g/cm^2$. The sample coating is considered to contain Cr(VI).)
 - b. 當六價鉻結果為n.d. (濃度小於 $0.10~\mu g/cm^2$)·表示表層不含六價鉻。(The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than $0.10~\mu g/cm^2$). The coating is considered a non-Cr(VI) based coating)
 - c. 當六價鉻結果介於 0.10 及 0.13 $\mu g/cm^2$ 時,無法確定塗層是否含有六價鉻。(The result between 0.10 $\mu g/cm^2$ and 0.13 $\mu g/cm^2$ is considered to be inconclusive unavoidable coating variations may influence the determination.)
- 9. ▲: MDL是針對元素/測試化合物之評估。(The MDL was evaluated for element / tested substance.) 換算公式 (Conversion Formula): AX = A × F

AX	Α	F
氧化鈹 (Beryllium oxide) (BeO)	鈹 (Beryllium)	2.7753
氧化雙三丁基錫 (Bis(tributyltin)oxide) (TBTO)	三丁基錫 (Tributyl Tin) (TBT)	1.0276
三氧化二銻 (Antimony trioxide) (Sb ₂ O ₃)	銻 (Antimony)	1.1971

參數換算表 (Parameter Conversion Table):

https://eecloud.sgs.com/Region TW/DocDownload.aspx?name=Others

10. 除非另有說明·參照ILAC-G8:09/2019·採用簡單二元(w=0)允收規則進行符合性判定;根據此規則·符合性結果之判定係以測試結果與限值做比較。(Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.)



虎碼(No.): █████	日期(Date): 26-Mar-2024	頁數(Page): 33 of 53
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PFAS Remark:

現有PFAS定量技術是分析PFAS物質的特定結構,但同碳數族群之PFAS酸及鹽類物質,其可被辨識的特定結構相同,因此無法區別所分析的特定結構是來自酸或者鹽類,故測試結果為同碳數族群之PFAS之酸及鹽類物質的濃度總合。下表PFAS物質濃度皆已包含在測試結果中,相關資訊請參見下表:(下表列舉PFAS物質僅為範例,並不包含所有同碳數族群之PFAS鹽類。)

(The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.))

物質名稱	CAS No.
(Substance Name)	
全氟辛烷磺酸 (Perfluorooctane sulfonates) (PFOS)	1763-23-1
全氟辛基磺酸鉀 (PFOS-K)	2795-39-3
Potassium perfluorooctanesulfonate (PFOS-K)	
全氟辛基磺酸鋰 (PFOS-Li)	29457-72-5
Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	
全氟辛基磺酸銨 (PFOS-NH ₄)	29081-56-9
Perfluorooctanesulfonic acid, ammonium salt (PFOS-	
全氟辛基磺酸二乙醇銨 (PFOS-NH(OH) ₂)	70225-14-8
Perfluorooctane sulfonate diethanolamine salt (PFOS-	
NH(OH) ₂)	
全氟辛基磺酸四乙基銨 (PFOS-N(C ₂ H ₅) ₄)	56773-42-3
Perfluorooctanesulfonic acid, tetraethylammonium salt	
(PFOS-N(C2H5)4)	
全氟辛基磺酸二癸二甲基銨 (PFOS-DDA)	251099-16-8
N-decyl-N,N-dimethyldecan-1-aminium	
· ·	
sulfonate (PFOS-DDA)	
	(Substance Name) 全氟辛烷磺酸 (Perfluorooctane sulfonates) (PFOS) 全氟辛基磺酸鉀 (PFOS-K) Potassium perfluorooctanesulfonate (PFOS-K) 全氟辛基磺酸鋰 (PFOS-Li) Perfluorooctanesulfonic acid, lithium salt (PFOS-Li) 全氟辛基磺酸銨 (PFOS-NH4) Perfluorooctanesulfonic acid, ammonium salt (PFOS-全氟辛基磺酸二乙醇銨 (PFOS-NH(OH)2) Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH)2) Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-NH(OH)2) 全氟辛基磺酸四乙基銨 (PFOS-N(C2H5)4) Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-N(C2H5)4)



號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 34 of 53

群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
	全氟辛基磺醯氟 (POSF) Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
	全氟辛基磺酸鎂 (PFOS-Mg) Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	全氟辛基磺酸鈉 (PFOS-Na) Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
	全氟辛烷磺酸哌啶 Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptadecafluorooctanesulfonate	71463-74-6
	全氟辛酸 (Perfluorooctanoic acid) (PFOA)	335-67-1
PFOA, 及其鹽&衍生物 (PFOA, its salts & derivatives)	全氟辛酸鈉 (PFOA-Na) Sodium perfluorooctanoate (PFOA-Na)	335-95-5
	全氟辛酸鉀 (PFOA-K) Potassium perfluorooctanoate (PFOA-K)	2395-00-8
	全氟辛酸銀 (PFOA-Ag) Silver perfluorooctanote (PFOA-Ag)	335-93-3
	全氟辛氟 (PFOA-F) Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	全氟辛酸銨 (APFO) Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	全氟辛酸鋰 (PFOA-Li) Lithium perfluorooctanoate (PFOA-Li)	17125-58-5

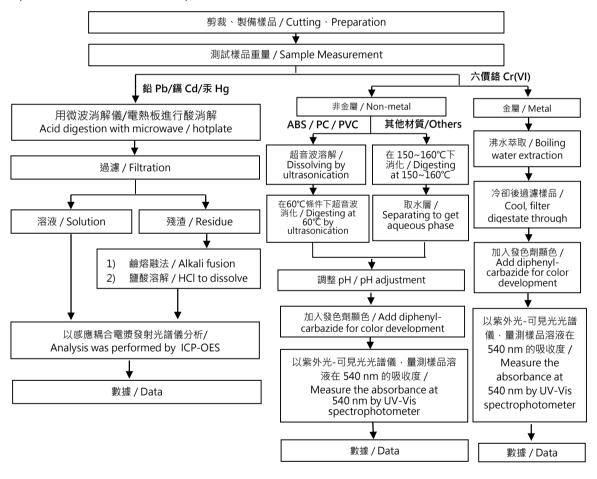


號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 35 of 53

重金屬流程圖 / Analytical flow chart of Heavy Metal

根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外)

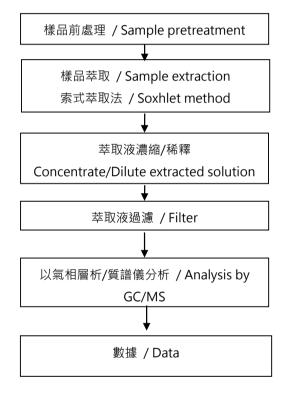
These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)





馮(No.):	日期(Date): 26-Mar-2024	頁數(Page): 36 of 53
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多溴聯苯/多溴聯苯醚 分析流程圖 / PBB/PBDE analytical FLOW CHART

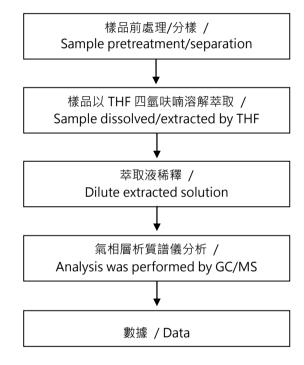




碼(I	No.):		日期(Date): 26-Mar-2024	頁數(Page): 37 of 53
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可塑劑分析流程圖 / Analytical flow chart of phthalate content

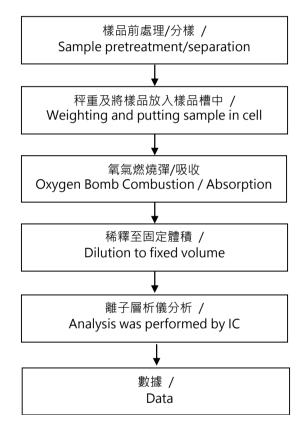
【測試方法/Test method: IEC 62321-8】





號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 38 of 53

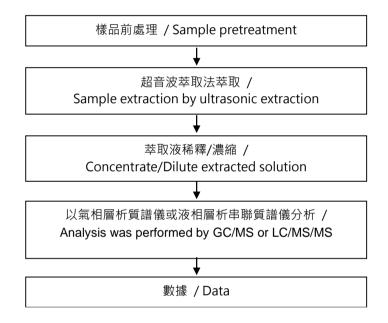
鹵素分析流程圖 / Analytical flow chart of Halogen





號碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 39 of 53
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全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)





號碼(No.): 日期(Date): 26-Mar-2024

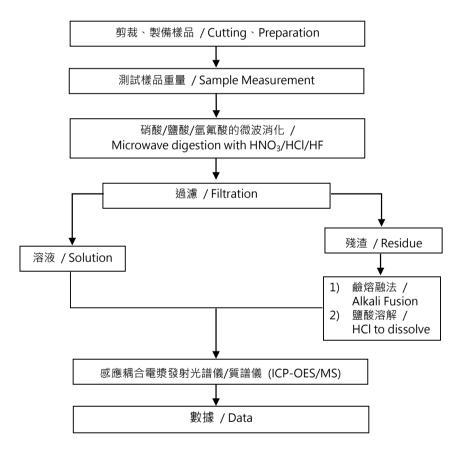
頁數(Page): 40 of 53

元素(含重金屬)分析流程圖 / Analytical flow chart of Elements (Heavy metal included)

根據以下的流程圖之條件,樣品已完全溶解。

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【参考方法/Reference method: US EPA 3051、US EPA 3052】



* US EPA 3051 方法未添加氫氟酸 / US EPA 3051 method does not add HF.

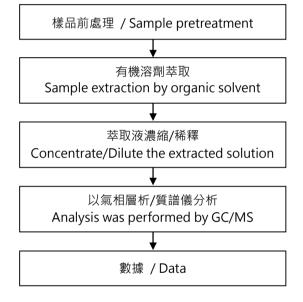


號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 41 of 53

分析流程圖 / Analytical flow chart

【適用於:多氯聯苯、多氯奈、多氯三聯苯、滅蟻靈、氯化石蠟、DBBT】

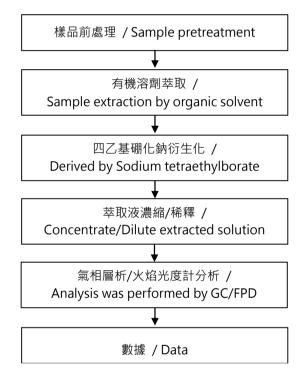
*Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT





號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 42 of 53

有機錫分析流程圖 / Analytical flow chart - Organic-Tin

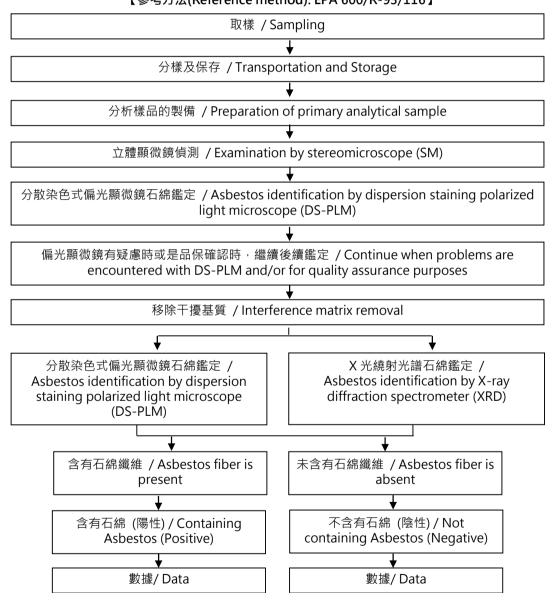




號碼(No.): 日期(Date): 26-Mar-2024

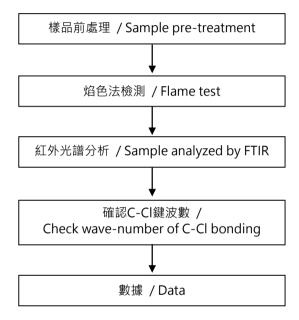
頁數(Page): 43 of 53

石綿鑑定分析流程圖 / Analysis flow chart for determination of Asbestos 【參考方法(Reference method): EPA 600/R-93/116】





聚氯乙烯物質判定分析流程圖 / Analysis flow chart - PVC

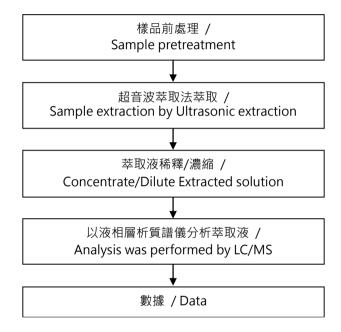




號碼(No.): 日期(Date): 26-Mar-2024

頁數(Page): 45 of 53

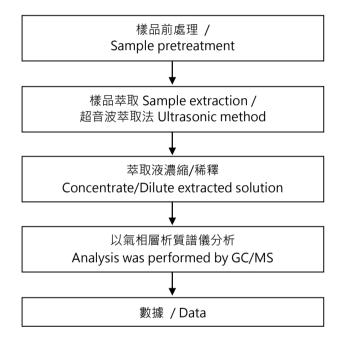
四溴雙酚-A分析流程圖 / TBBP-A analytical flow chart





號碼(No.):	日期(Date): 26-Mar-2024	頁數(Page): 46 of 53
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富馬酸二甲酯分析流程圖 / Analytical flow chart of Dimethyl Fumarate content

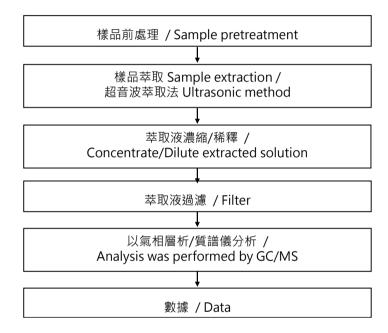




號碼(No.): 日期(Date): 26-Mar-2024

頁數(Page): 47 of 53

六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD

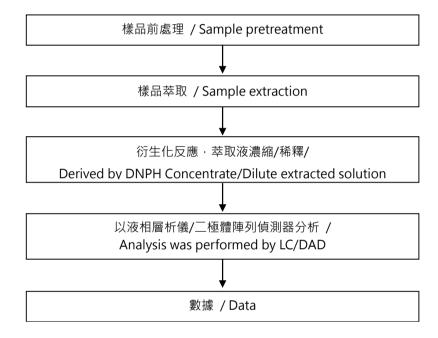




號碼(No.): 日期(Date): 26-Mar-2024

頁數(Page): 48 of 53

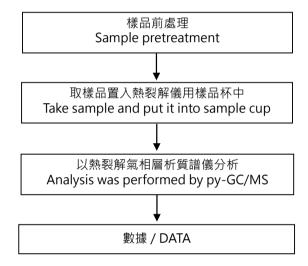
甲醛分析流程圖 / Analytical flow chart - Formaldehyde





號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 49 of 53

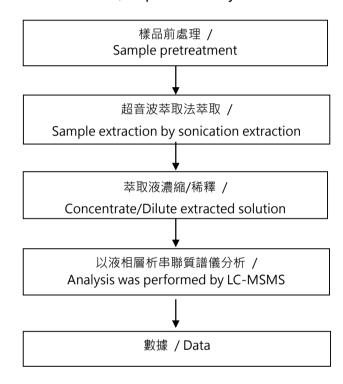
紅磷分析流程 / Analytical flow chart - Red phosphorus





號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 50 of 53

雙酚A分析流程圖 / Bisphenol A analytical flow chart

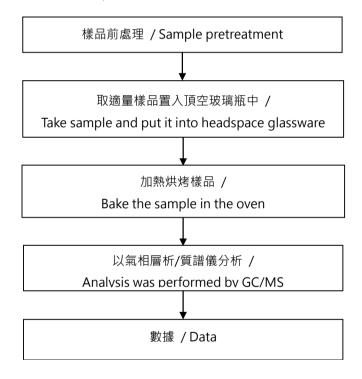




馬(No.):	日期(Date): 26-Mar-2024	頁數(Page): 51 of 53
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揮發性有機化合物分析流程圖 / Analytical flow chart of volatile organic compounds (VOCs)

【參考方法/Reference method: US EPA 5021A】

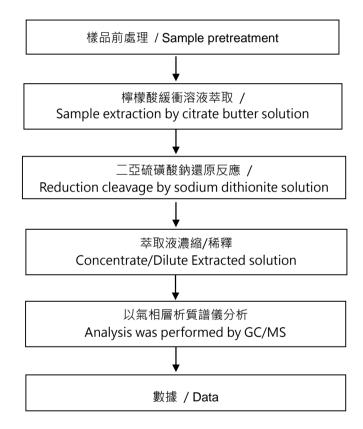




號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 52 of 53

偶氮分析流程圖 / Analytical flow chart of Azo dyes

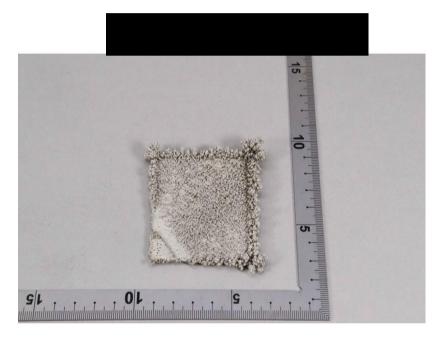
【測試方法/Test method: ISO 14362-1】





號碼(No.): 日期(Date): 26-Mar-2024 頁數(Page): 53 of 53

* 照片中如有箭頭標示,則表示為實際檢測之樣品/部位. * (The tested sample / part is marked by an arrow if it's shown on the photo.)



** 報告結尾 (End of Report) **



TI Report Number: 65979231

Component : Lead Frame Plating

Analysis Type: RoHS 10 & Halogens

Analysis Date: 12/28/2023



測試報告

Test Report

測試結果(Test Results)

號碼(No.): 日期(Date): 28-Dec-2023

頁數(Page): 1 of 51

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by the applicant as):

送樣廠商(Sample Submitted By)

樣品名稱(Sample Name) : Pd PLATING 樣品型號(Style/Item No.) : Pd PLATING

upper Sample Receiving Date) : 21-Dec-2023

測試期間(Testing Period) : 21-Dec-2023 to 28-Dec-2023

測試需求(Test Requested) : (1) 依據客戶指定,參考RoHS 2011/65/EU Annex II及其修訂指令(EU) 2015/863測試

鎘、鉛、汞、六價鉻、多溴聯苯 、多溴聯苯醚, DBP, BBP, DEHP, DIBP。 (As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs,

PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)

(2) 其他測試項目請見下一頁。 (Please refer to next pages for the other item(s).)

請參閱下一頁 (Please refer to following pages.)

結 論(Conclusion) : (1) 根據客戶所提供的樣品,其錦、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP,

BBP, DEHP, DIBP的測試結果符合RoHS 2011/65/EU Annex II暨其修訂指令(EU) 2015/863之限值要求。 (Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863

amending Annex II to Directive 2011/65/EU.)

報告簽署人/張伯睿 博士/部 图理**SGS**Ray Chang, Ph.D./ Department Manager
Signed for and on behalf
SGS TAIWAN LTD.

化學實驗室-高雄/Chemical Laboratory-Kaohsiung



號碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 2 of 51

測試部位敘述 (Test Part Description)

No.1 : 銀色金屬 (SILVER COLORED METAL)

測試結果 (Test Results)

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013 · 以感應耦合電漿	mg/kg	2	n.d.	100
	發射光譜儀分析。(With reference to IEC				
	62321-5: 2013, analysis was performed				
	by ICP-OES.)				
鉛 (Pb) (Lead (Pb))	參考IEC 62321-5: 2013,以感應耦合電漿	mg/kg	2	n.d.	1000
	發射光譜儀分析。(With reference to IEC				
	62321-5: 2013, analysis was performed				
	by ICP-OES.)				
汞 (Hg) (Mercury (Hg))	參考IEC 62321-4: 2013+ AMD1: 2017	mg/kg	2	n.d.	1000
	以感應耦合電漿發射光譜儀分析。(With				
	reference to IEC 62321-4: 2013+ AMD1:				
	2017, analysis was performed by ICP-				
. —	OES.)				
六價鉻 (Hexavalent Chromium) Cr(VI)	參考IEC 62321-7-1: 2015 · 以紫外光-可見	μg/cm²	0.1	n.d.	-
(#2)	光分光光度計分析。(With reference to				
	IEC 62321-7-1: 2015, analysis was				
〉自映 サ (Manalayana alain la any d)	performed by UV-VIS.)		-		
一溴聯苯 (Monobromobiphenyl)		mg/kg	5	n.d.	-
二溴聯苯 (Dibromobiphenyl)	_	mg/kg	5	n.d.	-
三溴聯苯 (Tribromobiphenyl)	_	mg/kg	5	n.d.	-
四溴聯苯 (Tetrabromobiphenyl)	 參考IEC 62321-6: 2015,以氣相層析儀/質	mg/kg	5	n.d.	-
五溴聯苯 (Pentabromobiphenyl)	一 普儀分析。(With reference to IEC 62321-	mg/kg	5	n.d.	-
六溴聯苯 (Hexabromobiphenyl)	6: 2015, analysis was performed by	mg/kg	5	n.d.	-
七溴聯苯 (Heptabromobiphenyl)	GC/MS.)	mg/kg	5	n.d.	-
八溴聯苯 (Octabromobiphenyl)] -,	mg/kg	5	n.d.	-
九溴聯苯 (Nonabromobiphenyl)	1	mg/kg	5	n.d.	-
十溴聯苯 (Decabromobiphenyl)	1	mg/kg	5	n.d.	-
多溴聯苯總和 (Sum of PBBs)	1	mg/kg	-	n.d.	1000



語碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 3 of 51
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	'
一溴聯苯醚 (Monobromodiphenyl ether)		mg/kg	5	n.d.	-
二溴聯苯醚 (Dibromodiphenyl ether)		mg/kg	5	n.d.	=
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.	-
四溴聯苯醚 (Tetrabromodiphenyl ether)	# */JEC 60304 6 304E NEWERSE	mg/kg	5	n.d.	-
五溴聯苯醚 (Pentabromodiphenyl ether)	参考IEC 62321-6: 2015・以氣相層析儀/質	mg/kg	5	n.d.	-
六溴聯苯醚 (Hexabromodiphenyl ether)	譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by	mg/kg	5	n.d.	-
七溴聯苯醚 (Heptabromodiphenyl ether)	GC/MS.)	mg/kg	5	n.d.	=
八溴聯苯醚 (Octabromodiphenyl ether)	(GC) (VIS.)	mg/kg	5	n.d.	-
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.	-
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.	-
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.	1000
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl		mg/kg	50	n.d.	1000
phthalate (BBP))					
鄰苯二甲酸二丁酯 (DBP) (Dibutyl		mg/kg	50	n.d.	1000
phthalate (DBP))					
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl		mg/kg	50	n.d.	1000
phthalate (DIBP))					
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-		mg/kg	50	n.d.	1000
(2-ethylhexyl) phthalate (DEHP))					
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl	 参考IEC 62321-8: 2017,以氣相層析儀/質	mg/kg	50	n.d.	-
phthalate (DINP)) (CAS No.: 28553-12-	譜儀分析。(With reference to IEC 62321-				
0, 68515-48-0)	8: 2017, analysis was performed by				
鄰苯二甲酸二異癸酯 (DIDP) (Diisodecyl	GC/MS.)	mg/kg	50	n.d.	-
phthalate (DIDP)) (CAS No.: 26761-40-					
0, 68515-49-1) ************************************		ma /les	Γ0	n d	
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)		mg/kg	50	n.d.	-
脚苯二甲酸二正戊酯 (DNPP) (Di-n-	_	mg/kg	50	n.d.	
pentyl phthalate (DNPP)) (CAS No.:		ilig/kg	50	11.0.	-
131-18-0)					
郷苯二甲酸二正己酯 (DNHP) (Di-n-hexyl		mg/kg	50	n.d.	_
phthalate (DNHP)) (CAS No.: 84-75-3)		9/ 1.9	30	1	



號碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 4 of 51
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
娜苯二甲酸二庚酯 (DHpP) (Diheptyl phthalate (DHpP)) (CAS No.: 3648-21-3)		mg/kg	50	n.d.	1
鄰苯二甲酸二(2-甲氧基乙基)酯 (DMEP) (Bis(2-methoxyethyl) phthalate (DMEP)) (CAS No.: 117-82-8)	・参考IEC 62321-8: 2017 · 以氣相層析儀/質	mg/kg	50	n.d.	-
鄰苯二甲酸二(C7-11支鏈與直鏈)烷基酯 (DHNUP) (1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)) (CAS No.: 68515-42-4)	譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二 (C6-8支鏈)烷基酯·富C7 (DIHP) (1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)) (CAS No.: 71888-89-6)		mg/kg	50	n.d.	-
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-8)		mg/kg	50	n.d.	-
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537- 15-1)	參考BS EN 14582: 2016 · 以離子層析儀分析。(With reference to BS EN 14582:	mg/kg	50	n.d.	-
溴 (Br) (Bromine (Br)) (CAS No.: 10097- 32-2)	2016, analysis was performed by IC.)	mg/kg	50	n.d.	-
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.	-
全氟辛酸 (PFOA)及其鹽類 (Perfluorooctanoic acid (PFOA) and it's salt) (CAS No.: 335-67-1 and its salts)	參考CEN/TS 15968: 2010·以液相層析串 聯質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.	-
全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	參考CEN/TS 15968: 2010·以液相層析串 聯質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.	-



碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 5 of 51
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
(,	()	(3)		No.1	(=)
砷 (As) (Arsenic (As)) (CAS No.: 7440- 38-2)		mg/kg	2	n.d.	-
磷 (P) (Phosphorus (P)) (CAS No.: 7723- 14-0)	參考US EPA 3052: 1996·以感應耦合電漿 發射光譜儀分析。(With reference to US	mg/kg	2	n.d.	-
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440- 36-0)	EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	1
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440- 41-7)		mg/kg	2	n.d.	1
三氧化二銻(Sb ₂ O ₃) (Antimony trioxide (Sb ₂ O ₃)) (CAS No.: 1309-64-4)	由銻結果計算得之。(Calculated from the result of Antimony.)	mg/kg	2▲	n.d.	-
氧化鈹 (BeO) (Beryllium oxide (BeO)) (CAS No.: 1304-56-9)	由鈹結果計算得之。(Calculated from the result of Beryllium.)	mg/kg	2▲	n.d.	-
多氯聯苯 (PCBs) (Polychlorinated biphenyls (PCBs))	參考US EPA 3550C: 2007·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	0.5	n.d.	-
多氯奈 (PCNs) (Polychlorinated naphthalene (PCNs))	參考US EPA 3550C: 2007·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
多氯三聯苯 (PCTs) (Polychlorinated terphenyls (PCTs))	參考US EPA 3550C: 2007·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	0.5	n.d.	-
短鏈氯化石蠟(C10-C13) (SCCP) (Short Chain Chlorinated Paraffins(C10-C13) (SCCP)) (CAS No.: 85535-84-8)	參考ISO 18219-1: 2021·以氣相層析儀/ 質譜儀分析。(With reference to ISO 18219-1: 2021, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
三丁基錫 (TBT) (Tributyl tin (TBT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-



碼(No.): 日期(Date): 28-Dec-2023	頁數(Page): 6 of 5
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氧化雙三丁基錫 (TBTO) (Bis(tributyltin) oxide (TBTO)) (CAS No.: 56-35-9)	由三丁基錫測試結果計算得之。 (Calculated from the result of Tributyl Tin (TBT).)	mg/kg	0.03 🛦	n.d.	-
三苯基錫 (TPT) (Triphenyl tin (TPT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
二辛基錫 (DOT) (Dioctyl tin (DOT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
二丁基錫 (DBT) (Dibutyl tin (DBT))	參考ISO 17353: 2004·以氣相層析儀/火焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
石綿 (Asbestos)					
陽起石綿 (Actinolite) (CAS No.: 77536-66-4)		-	-	Negative	-
褐石綿/鐵石綿 (Amosite) (CAS No.: 12172-73-5)	參考EPA 600/R-93/116: 1993 · 以立體顯微鏡(SM)與分散染色式偏光顯微鏡(DS-	-	-	Negative	-
斜方角閃石綿 (Anthophyllite) (CAS No.: 77536-67-5)	PLM)及X光繞射光譜分析法(XRD)分析。 (With reference to EPA 600/R-93/116:	-	-	Negative	-
白石綿/溫石綿 (Chrysotile) (CAS No.: 12001-29-5)	1993, analysis was performed by Stereo Microscope (SM), Dispersion Staining	-	-	Negative	-
青石綿 (Crocidolite) (CAS No.: 12001- 28-4)	Polarized Light Microscope (DS-PLM) and X-ray Diffraction Spectrometer	-	-	Negative	-
透閃石綿 (Tremolite) (CAS No.: 77536- 68-6)	(XRD).)	-	-	Negative	-
聚氯乙烯 (Polyvinyl chloride) (PVC)	參考ASTM E1252: 2021·以傅立葉轉換紅外線光譜儀及焰色法分析。(With reference to ASTM E1252: 2021, analysis was performed by FT-IR and Flame Test.)	**	-	Negative	-



碼(No.): 日期(Date): 28-Dec-2023	[數(Page):	/ of	51
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
2-[2-羥基-3',5'-二-叔-丁基苯基]-苯並三	参考US EPA 3550C: 2007 · 以氣相層析儀/	mg/kg	5	n.d.	-
唑 (紫外線吸收劑320) (2-benzotriazol-2-	質譜儀分析。(With reference to US EPA				
yl-4,6-di-tert-butylphenol (UV-320))	3550C: 2007, analysis was performed by				
(CAS No.: 3846-71-7)	GC/MS.)				
四溴雙酚 A (TBBP-A)	參考RSTS-E&E-121·以液相層析儀/質譜	mg/kg	10	n.d.	-
(Tetrabromobisphenol A (TBBP-A))	儀分析。(With reference to RSTS-E&E-				
(CAS No.: 79-94-7)	121, analysis was performed by LC/MS.)				
中鏈氯化石蠟(C14-C17) (MCCP)	參考ISO 18219-2: 2021 · 以氣相層析儀/	mg/kg	50	n.d.	-
(Medium Chain Chlorinated	質譜儀分析。(With reference to ISO				
Paraffins(C14-C17) (MCCP)) (CAS No.:	18219-2: 2021, analysis was performed				
85535-85-9)	by GC/MS.)				
富馬酸二甲酯 (DMFu) (Dimethyl	參考US EPA 3550C: 2007 · 以氣相層析儀/	mg/kg	0.1	n.d.	-
fumarate (DMFu)) (CAS No.: 624-49-7)	質譜儀分析。(With reference to US EPA				
	3550C: 2007, analysis was performed by				
	GC/MS.)				
六溴環十二烷及所有主要被辨別出的異構	參考IEC 62321: 2008,以氣相層析儀/質譜	mg/kg	5	n.d.	-
物(HBCDD) (α- HBCDD, β- HBCDD, γ-	儀分析。(With reference to IEC 62321:				
HBCDD) (Hexabromocyclododecane	2008, analysis was performed by				
(HBCDD) and all major	GC/MS.)				
diastereoisomers identified ($lpha$ - HBCDD,					
β- HBCDD, γ- HBCDD)) (CAS No.:					
25637-99-4, 3194-55-6 (134237-51-7,					
134237-50-6, 134237-52-8))					
甲醛 (Formaldehyde) (CAS No.: 50-00-	參考ISO 17226-1: 2021 · 以液相層析儀/	mg/kg	3	n.d.	-
0)	二極體陣列偵測器分析。(With reference				
	to ISO 17226-1: 2021, analysis was				
	performed by LC/DAD.)				
紅磷 (Red Phosphorus)	以熱裂解-氣相層析儀/質譜儀分析。	**	-	Negative	-
• •	(Analysis was performed by Pyrolyzer-				
	GC/MS.)				



流响(NO.). 異数(rage). 0 C	No.):	日期(Date): 28-Dec-2023	頁數(Page): 8 of 51
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
雙酚A (Bisphenol A) (CAS No.: 80-05-7)	參考RSTS-CHEM-239-1·以液相層析串聯 質譜儀分析。(With reference to RSTS- CHEM-239-1, analysis was performed by LC/MS/MS.)	mg/kg	1	n.d.	-
氟氯碳化物 (Chlorofluorocarbons) (CFCs)					
CFC-11 (CAS No.: 75-69-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-12 (CAS No.: 75-71-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-13 (CAS No.: 75-72-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-111 (CAS No.: 354-56-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-112 (CAS No.: 76-12-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-113 (CAS No.: 76-13-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-114 (CAS No.: 76-14-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



號碼(No.):

日期(Date): 28-Dec-2023	頁數(Page): 9 of 51
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
CFC-115 (CAS No.: 76-15-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	ı
CFC-211 (CAS No.: 422-78-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-212 (CAS No.: 3182-26-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-213 (CAS No.: 2354-06-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-214 (CAS No.: 29255-31-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-215 (CAS No.: 4259-43-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-216 (CAS No.: 661-97-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-217 (CAS No.: 422-86-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



虎碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 10 of 51

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氟氯氫烷碳化物 (Hydrochlorofluorocarbons) (HCFCs)				11012	
HCFC-21 (CAS No.: 75-43-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-22 (CAS No.: 75-45-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-31 (CAS No.: 593-70-4)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-121 (CAS No.: 354-14-3)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-122 (CAS No.: 354-21-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-123 (CAS No.: 306-83-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-124 (CAS No.: 2837-89-0)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-131 (CAS No.: 359-28-4)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



語碼(No.): 日期(Date): 28-Dec-2023	頁數(Page): 11 of 51	
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
HCFC-141b (CAS No.: 1717-00-6)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-221 (CAS No.: 422-26-4)	参考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	=
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-222 (CAS No.: 422-49-1)	参考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	=
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-223 (CAS No.: 422-52-6)	参考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-224 (CAS No.: 422-54-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-225ca (CAS No.: 422-56-0)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-225cb (CAS No.: 507-55-1)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-226 (CAS No.: 431-87-8)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 12 of 51

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
HCFC-231 (CAS No.: 421-94-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	1
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-232 (CAS No.: 460-89-9)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-233 (CAS No.: 7125-84-0)	参考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-234 (CAS No.: 425-94-5)	u: 425-94-5) 參考US EPA 5021A: 2014,以氣相層析儀/ mg/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-235 (CAS No.: 460-92-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-241 (CAS No.: 666-27-3)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-242 (CAS No.: 460-63-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	1
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-243 (CAS No.: 460-69-5)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



琵碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 13 of 5.

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
HCFC-244	参考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-251 (CAS No.: 421-41-0)	参考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-252 (CAS No.: 819-00-1)	参考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-253 (CAS No.: 460-35-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-261 (CAS No.: 420-97-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-262 (CAS No.: 421-02-03)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-271 (CAS No.: 430-55-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HCFC-133a (CAS No.: 75-88-7)	参考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



見碼(No.): 日期(Date): 28-Dec-2023	頁數(Page): 14 of 5
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-142b (CAS No.: 75-68-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-132b (CAS No.: 1649-08-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-141	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-142	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-151	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-225	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
海龍 (Halons) Halon-1211 (CAS No.: 353-59-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
Halon-1301 (CAS No.: 75-63-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



	記碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 15 of 5:
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
海龍-2402 (Halon-2402) (CAS No.: 124-73-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
溴甲烷 (Bromomethane) (CAS No.: 74-83-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
不完全鹵化氟溴化物 (Hydrobromofluorocarbons) (HBFCs)					
HBFC-121B4 (C2HFBr4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-122B3 (C2HF2Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-123B2 (C2HF3Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-124B1 (C2HF4Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-131B3 (C2H2FBr3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-132B2 (C2H2F2Br2)	參考US EPA 5021A: 2014·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



見碼(No.): 日期(Date): 28-Dec-2023	頁數(Page): 16 of 5
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
HBFC-133B1 (C2H2F3Br)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-141B2 (C2H3FBr2)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-142B1 (C2H3F2Br)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-151B1 (C2H4FBr)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-21B2 (CHFBr2) (CAS No.: 1868-	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
53-7)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-221B6 (C3HFBr6)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-222B5 (C3HF2Br5)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-223B4 (C3HF3Br4)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 17 of 51

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
HBFC-224B3 (C3HF4Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-225B2 (C3HF5Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-226B1 (C3HF6Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-22B1 (CHF2Br) (CAS No.: 1511-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
62-2)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-231B5 (C3H2FBr5)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-232B4 (C3H2F2Br4)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-233B3 (C3H2F3Br3)	参考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-234B2 (C3H2F4Br2)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 18 of 51

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
HBFC-235B1 (C3H2F5Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-241B4 (C3H3FBr4)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-242B3 (C3H3F2Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-243B2 (C3H3F3Br2)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-244B1 (C3H3F4Br)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-251B3 (C3H4FBr3)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-252B2 (C3H4F2Br2)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
, , ,	質譜儀分析。(With reference to US EPA	J. J.			
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HBFC-253B1 (C3H4F3Br)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
·	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



虎碼(No.):	日期(Date): 28-Dec-2023	負數(Page): 19 of 51
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-261B2 (C3H5FBr2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-262B1 (C3H5F2Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-271B1 (C3H6FBr)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
HBFC-31B1 (CH2FBr) (CAS No.: 373-52-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氫氟碳化合物 (Hydrofluorocarbon) (HFCs)					
HFC-125 (C2HF5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-134 (C2H2F4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-134a (CH2FCF3) (CAS No.: 811- 97-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-143 (CH3F3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



	號碼(No.)	:	日期(Date): 28-Dec-2023	頁數(Page): 20 of 51
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HFC-143a (CH3F3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-152a (C2H4F2) (CAS No.: 75-37-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-227ea (C3HF7) (CAS No.: 431-89- 0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-23 (CHF3) (CAS No.: 75-46-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-236ea (C3H2F6) (CAS No.: 431-63- 0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-236fa (CAS No.: 431-63-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-245ca (C3H3F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-245fa (C3H3F5)	參考US EPA 5021A: 2014·以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 21 of 51
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
HFC-32 (CH2F2) (CAS No.: 75-10-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	=,
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HFC-365mfc (C4H5F5)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HFC-43-10mee (C5H2F10)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HFC-41 (CH3F) (CAS No.: 593-53-3)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
全氟化碳 (Perfluorocarbon) (PFCs)					
六氟乙烷 (Fluorocarbon 116) (CAS No.:	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
76-16-4)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
1,4-二氫八氟丁烷 (1,4-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	=,
dihydrooctafluorobutane) (CAS No.:	質譜儀分析。(With reference to US EPA				
377-36-6)	5021A: 2014, analysis was performed by				
	GC/MS.)				
2-全氟甲基戊烷 (2-	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	=
Perfluoromethylpentane) (CAS No.:	質譜儀分析。(With reference to US EPA				
355-04-4)	5021A: 2014, analysis was performed by				
	GC/MS.)				
十氟丁烷 (Decafluorobutane) (CAS No.:	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
355-25-9)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



瑪(No.):	日期(Date): 28-Dec-2023	頁數(Page): 22 of 51

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
四氟甲烷 (Freon 14) (CAS No.: 75-73-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
八氟丙烷 (Freon 218) (CAS No.: 76-19-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
2-全氟甲基丁烷 (Nonafluor-2- (trifluoromethyl)butane) (CAS No.: 594- 91-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
全氟-1-丁烯 (Perfluor-1-butene) (CAS No.: 357-26-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟異丁烯 (Perfluorisobutene) (CAS No.: 382-21-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟己烷 (Perfluorohexane) (CAS No.: 355-42-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟戊烷 (Perfluoro-n-pentane) (CAS No.: 678-26-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
八氟環丁烷 (Freon C318) (CAS No.: 115- 25-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



碼(No.	:	日期(Date): 28-Dec-2023	頁數(Page): 23 of	51
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氯碳氫化物 (Chlorinate hydrocarbon) (CHCs)					
四氯甲烷 (四氯化碳) (Carbon tetrachloride) (CAS No.: 56-23-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,1-三氯乙烷 (1,1,1-Trichloroethane) (CAS No.: 71-55-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	ı
1,1,1,2-四氯乙烷 (1,1,1,2- Tetrachloroethane) (CAS No.: 630-20- 6)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	1
1,1,2,2-四氯乙烷 (1,1,2,2- Tetrachloroethane) (CAS No.: 79-34-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,2-三氯乙烷 (1,1,2-Trichloroethane) (CAS No.: 79-00-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1-二氯乙烷 (1,1-Dichloroethane) (CAS No.: 75-34-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1-二氯乙烯 (1,1-Dichloroethylene) (CAS No.: 75-35-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1-二氯丙烯 (1,1-Dichloropropene) (CAS No.: 563-58-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



見碼(No.): 日期(Date): 28-Dec-2023	頁數(Page): 24 of 5
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
1,2,3-三氯丙烷 (1,2,3-Trichloropropane)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
(CAS No.: 96-18-4)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
1,2-二氯乙烷 (1,2-Dichloroethane) (CAS	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
No.: 107-06-2)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
1,2-二氯丙烷 (1,2-Dichloropropane)	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
(CAS No.: 78-87-5)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
1,3-二氯丙烷 (1,3-Dichloropropane)	参考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
(CAS No.: 142-28-9)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
2,2-二氯丙烷 (2,2-Dichloropropane)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
(CAS No.: 594-20-7)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
氯仿 (Chloroform) (CAS No.: 67-66-3)	参考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
氯甲烷 (Chloromethane) (CAS No.: 74-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
87-3)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
順-1,2-二氯乙烯 (cis-1,2-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
Dichloroethene) (CAS No.: 156-59-2)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				



馮(No.):	日期(Date): 28-Dec-2023	頁數(Page): 25 of 51

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
順-1,3-二氯丙烯 (cis-1,3- Dichloropropene) (CAS No.: 10061-01- 5)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
二氯甲烷 (Dichloromethane) (CAS No.: 75-09-2)	參考US EPA 5021A: 2014‧以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
四氯乙烯 (Tetrachloroethene) (CAS No.: 127-18-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
反-1,2-二氯乙烯 (trans-1,2- Dichloroethene) (CAS No.: 156-60-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
反-1,3-二氯丙烯 (trans-1,3- Dichloropropene) (CAS No.: 10061-02- 6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
三氯乙烯 (Trichloroethylene) (CAS No.: 79-01-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氯乙烷 (Chloroethane) (CAS No.: 75-00-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
六氯-1,3-丁二烯 (Hexachlorobutadiene) (CAS No.: 87-68-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-



測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
溴氯甲烷 (Bromochloromethane) (CAS	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
No.: 74-97-5)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by GC/MS.)				
 六氟化硫 (SF6) (Sulphur hexafluoride	後ろ	mg/kg	1	n.d.	
(SF6)) (CAS No.: 2551-62-4)	野部儀分析。(With reference to US EPA	mg/kg	1	n.a.	-
(310)) (CA3 No.: 2331-02-4)	5021A: 2014, analysis was performed by				
	GC/MS.)				
偶氮染料 (AZO Dyes)					
對-胺基聯苯 (4-Aminobiphenyl) (CAS	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
No.: 92-67-1)	質譜儀及高效液相層析儀/二極體陣列偵測	3 3			
· ·	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
聯苯胺 (Benzidine) (CAS No.: 92-87-5)	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
4-氯鄰甲苯胺 (4-chloro-o-toluidine)	參考EN ISO 14362-1: 2017,以氣相層析	mg/kg	3	n.d.	-
(CAS No.: 95-69-2)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)	4			
2-萘胺 (2-Naphthylamine) (CAS No.:	参考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
91-59-8)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
 鄰-胺基偶氮甲苯 (o-Aminoazotoluene)	by GC/MS and HPLC/DAD.) 参考EN ISO 14362-1: 2017 · 以氣相層析	ma/ka	3	n.d.	
(CAS No.: 97-56-3)	参考EN ISO 14302-1. 2017 · 以照相層例 質譜儀及高效液相層析儀/二極體陣列偵測	mg/kg	5	n.a.	-
(CAS NO 97-30-3)	異語				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
	Dy GC/IVIS and HE LC/DAD.)				



	號碼(No.):	日其	(Date	e): 28-Dec-2023	頁數(Page):	27 of	51
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
5-硝基-鄰-甲苯胺 (5-Nitro-o-toluidine) (CAS No.: 99-55-8)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4-氯苯胺 (4-Chloroaniline) (CAS No.: 106-47-8)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4-甲氧基-間-苯二胺 / 2,4-二胺基苯甲醚 (4-Methoxy-m-phenylenediamine / 2,4-Diaminoanisole) (CAS No.: 615-05- 4)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-二胺基二苯甲烷 (4,4'- Diaminodiphenylmethane) (CAS No.: 101-77-9)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
3,3'-二氯聯苯胺 (3,3'- Dichlorobenzidine) (CAS No.: 91-94-1)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
3,3'-二甲氧基聯苯胺 (3,3'- Dimethoxybenzidine) (CAS No.: 119- 90-4)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
3,3'-二甲基聯苯胺 (3,3'- Dimethylbenzidine) (CAS No.: 119-93- 7)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



碼(No.): 日期(Date): 28-Dec-2023 頁數(Pa	age): 28	of 51
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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
4,4'-亞甲基二-鄰-苯胺 (4,4'- Methylenedi-o-toluidine) (CAS No.: 838-88-0)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
6-甲氧基-間-甲苯胺 (6-Methoxy-m-toluidine) (CAS No.: 120-71-8)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-亞甲基-雙(2-氯苯胺) (4,4'- Methylene-bis-(2-chloro-Aniline)) (CAS No.: 101-14-4)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-二胺基二苯醚 (4,4'-Oxydianiline) (CAS No.: 101-80-4)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4,4'-硫代雙苯胺 (4,4'-Thiodianiline) (CAS No.: 139-65-1)	參考EN ISO 14362-1: 2017 · 以氣相層析質譜儀及高效液相層析儀/二極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	ന	n.d.	-
鄰-甲苯胺 (o-Toluidine) (CAS No.: 95-53-4)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	ന	n.d.	-
2,4-二氨基甲苯 (2,4-Diaminotoluene) (CAS No.: 95-80-7)	參考EN ISO 14362-1: 2017‧以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-



	號碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 29 of 52
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測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
2,4,5-三甲基苯胺 (2,4,5-	參考EN ISO 14362-1: 2017,以氣相層析	mg/kg	3	n.d.	-
Trimethylaniline) (CAS No.: 137-17-7)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
鄰-甲氧基苯胺 (2-Methoxyaniline) (CAS	參考EN ISO 14362-1: 2017,以氣相層析	mg/kg	3	n.d.	-
No.: 90-04-0)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
4-胺基偶氮苯 (4-Aminoazobenzene)	參考EN ISO 14362-1: 2017 and EN ISO	mg/kg	3	n.d.	-
(CAS No.: 60-09-3)	14362-3: 2017 · 以氣相層析質譜儀及高效				
	液相層析儀/二極體陣列偵測器分析。(With				
	reference to EN ISO 14362-1: 2017 and				
	EN ISO 14362-3: 2017, analysis was				
	performed by GC/MS and HPLC/DAD.)				
2,4-二甲基苯胺 (2,4-Xylidine) (CAS No.:	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
95-68-1)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
2,6-二甲基苯胺 (2,6-Xylidine) (CAS No.:	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
87-62-7)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				



	(No	0.):	日期(Date): 28-Dec-2023	頁數(Page): 30 of 5
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備註(Note):

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit (方法偵測極限值)
- 3. n.d. = Not Detected (未檢出); 小於MDL / Less than MDL
- 4. "-" = Not Regulated (無規格值)
- 5. **= Qualitative analysis (No Unit) 定性分析(無單位)
- 6. Negative = Undetectable 陰性(未偵測到); Positive = Detectable 陽性(已偵測到)
- 7. 石綿定性分析試驗範圍: <0.1%~100%,石綿鑑定的判定基準是以檢出含有石綿纖維為『Positive』,未檢出石綿纖維為『Negative』。(Testing range of asbestos qualitative analysis is from less than 0.1% to 100%. The judgment criterion: asbestos fibers being found is shown as "Positive"; asbestos fibers not being found is shown as "Negative".)
- 8. (#2) =
 - a. 當六價鉻結果大於 $0.13~\mu g/cm^2$ ·表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than $0.13~\mu g/cm^2$. The sample coating is considered to contain Cr(VI).)
 - b. 當六價鉻結果為n.d. (濃度小於 $0.10~\mu g/cm^2$)·表示表層不含六價鉻。(The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than $0.10~\mu g/cm^2$). The coating is considered a non-Cr(VI) based coating)
 - c. 當六價鉻結果介於 0.10 及 0.13 $\mu g/cm^2$ 時,無法確定塗層是否含有六價鉻。(The result between 0.10 $\mu g/cm^2$ and 0.13 $\mu g/cm^2$ is considered to be inconclusive unavoidable coating variations may influence the determination.)
- 9. ▲: MDL是針對元素/測試化合物之評估。(The MDL was evaluated for element / tested substance.) 換算公式 (Conversion Formula): AX = A × F

AX	Α	F
氧化鈹 (Beryllium oxide) (BeO)	鈹 (Beryllium)	2.7753
氧化雙三丁基錫 (Bis(tributyltin)oxide) (TBTO)	三丁基錫 (Tributyl Tin) (TBT)	1.0276
三氧化二銻 (Antimony trioxide) (Sb ₂ O ₃)	銻 (Antimony)	1.1971

參數換算表 (Parameter Conversion Table):

https://eecloud.sgs.com/Region TW/DocDownload.aspx?name=Others

10. 除非另有說明·參照ILAC-G8:09/2019·採用簡單二元(w=0)允收規則進行符合性判定;根據此規則·符合性結果之判定係以測試結果與限值做比較。(Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.)



(No.): 日期(Date): 28-Dec-2023	頁數(Page): 31 of 51
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PFAS Remark:

現有PFAS定量技術是分析PFAS物質的特定結構,但同碳數族群之PFAS酸及鹽類物質,其可被辨識的特定結構相同,因此無法區別所分析的特定結構是來自酸或者鹽類,故測試結果為同碳數族群之PFAS之酸及鹽類物質的濃度總合。下表PFAS物質濃度皆已包含在測試結果中,相關資訊請參見下表:(下表列舉PFAS物質僅為範例,並不包含所有同碳數族群之PFAS鹽類。)

(The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.))

群組名稱	物質名稱	CAS No.
(Group Name)	(Substance Name)	
	全氟辛烷磺酸 (PFOS)	1763-23-1
	全氟辛基磺酸鉀 (PFOS-K) Potassium perfluorooctanesulfonate (PFOS-K)	2795-39-3
	全氟辛基磺酸鋰 (PFOS-Li) Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
	全氟辛基磺酸銨 (PFOS-NH ₄) Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH ₄)	29081-56-9
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	全氟辛基磺酸二乙醇銨 (PFOS-NH(OH) ₂) Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) ₂)	70225-14-8
	全氟辛基磺酸四乙基銨 (PFOS-N(C_2H_5) ₄) Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-N(C_2H_5) ₄)	56773-42-3
	全氟辛基磺酸二癸二甲基銨 (PFOS-DDA) N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane-1- sulfonate (PFOS-DDA)	251099-16-8



號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 32 of 51

群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
	全氟辛基磺醯氟 (POSF) Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
DEOC 77 + 155 0.07 + 155	全氟辛基磺酸鎂 (PFOS-Mg) Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	全氟辛基磺酸鈉 (PFOS-Na) Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
	全氟辛烷磺酸哌啶 Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptadecafluorooctanesulfonate	71463-74-6
	全氟辛酸 (PFOA)	335-67-1
	全氟辛酸鈉 (PFOA-Na) Sodium perfluorooctanoate (PFOA-Na)	335-95-5
	全氟辛酸鉀 (PFOA-K) Potassium perfluorooctanoate (PFOA-K)	2395-00-8
PFOA, 及其鹽&衍生物	全氟辛酸銀 (PFOA-Ag) Silver perfluorooctanote (PFOA-Ag)	335-93-3
(PFOA, its salts & derivatives)	全氟辛氟 (PFOA-F) Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	全氟辛酸銨 (APFO) Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	全氟辛酸鋰 (PFOA-Li) Lithium perfluorooctanoate (PFOA-Li)	17125-58-5

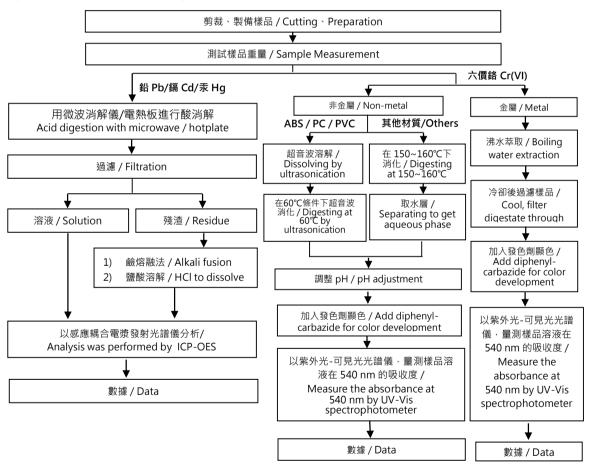


	號碼(No.):		日期(Date): 28-Dec-2023	頁數(Page): 33 of 5:
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重金屬流程圖 / Analytical flow chart of Heavy Metal

根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外)

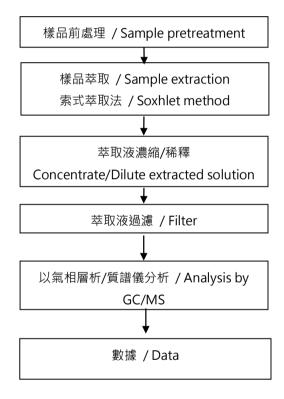
These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)





號碼()	No.):		日期(Date): 28-Dec-2023	頁數(Page): 34 of 51
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多溴聯苯/多溴聯苯醚 分析流程圖 / PBB/PBDE analytical FLOW CHART

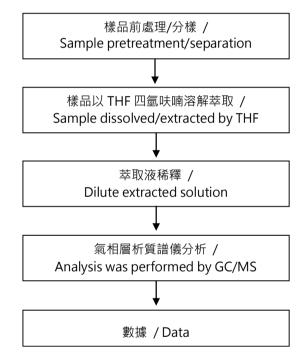




號碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 35 of 51
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可塑劑分析流程圖 / Analytical flow chart of phthalate content

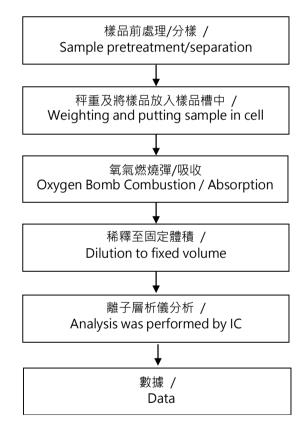
【測試方法/Test method: IEC 62321-8】





號碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 36 of 51

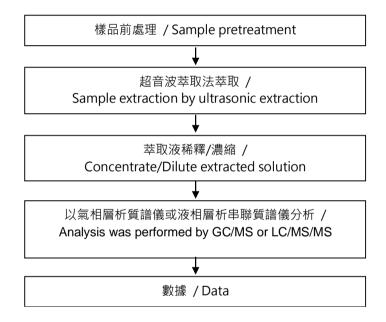
鹵素分析流程圖 / Analytical flow chart of Halogen





碼(No.):	ge): 37 of 51	用(Date): 28-Dec-2023 頁數(Page): 37 of 51): 日期(
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全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)





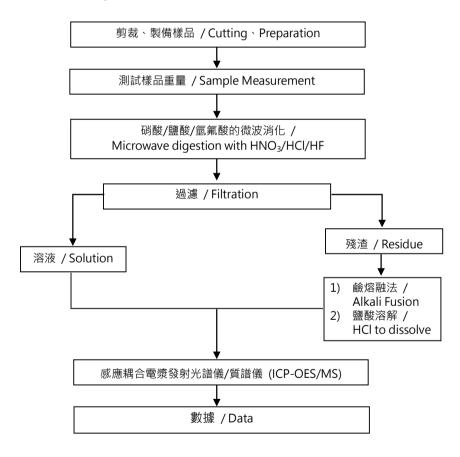
碼(No.): 日期(Date): 28-Dec-2023	頁數(Page): 38 of 51
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元素(含重金屬)分析流程圖 / Analytical flow chart of Elements (Heavy metal included)

根據以下的流程圖之條件,樣品已完全溶解。

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【参考方法/Reference method: US EPA 3051、US EPA 3052】



* US EPA 3051 方法未添加氫氟酸 / US EPA 3051 method does not add HF.

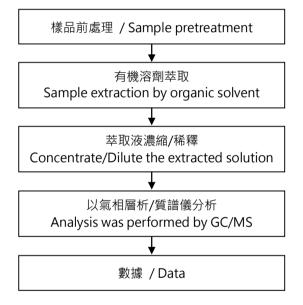


碼(No	0.):		日期(Date): 28-Dec-2023	頁數(Page): 39 of 51
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分析流程圖 / Analytical flow chart

【適用於:多氯聯苯、多氯奈、多氯三聯苯、滅蟻靈、氯化石蠟、DBBT】

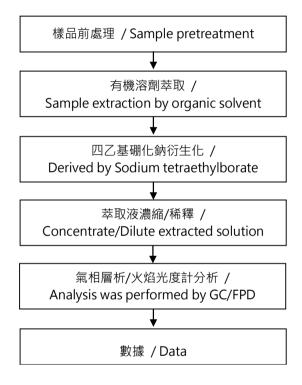
*Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT





號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 40 of 51

有機錫分析流程圖 / Analytical flow chart - Organic-Tin

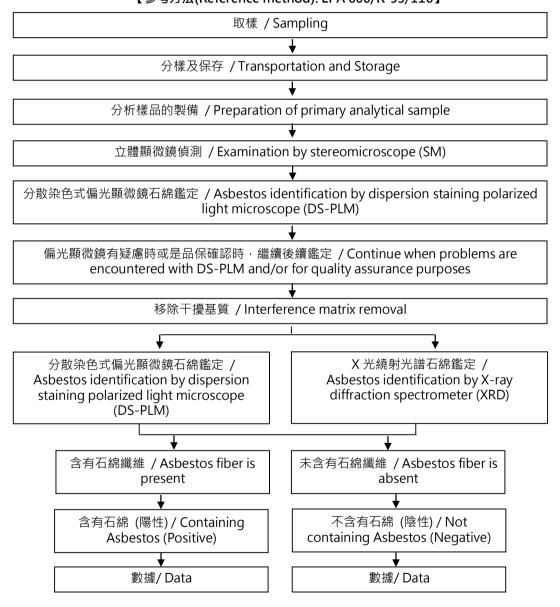




號碼(No.): 日期(Date): 28-Dec-2023

頁數(Page): 41 of 51

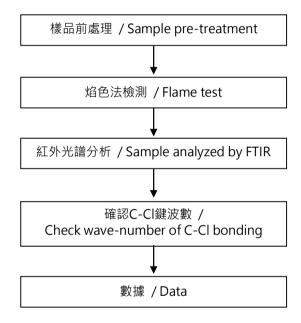
石綿鑑定分析流程圖 / Analysis flow chart for determination of Asbestos 【參考方法(Reference method): EPA 600/R-93/116】





號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 42 of 51

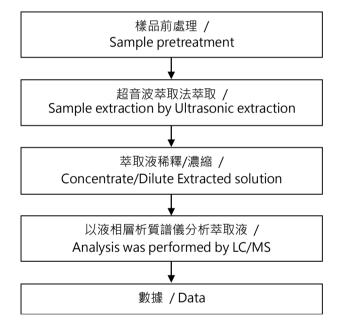
聚氯乙烯物質判定分析流程圖 / Analysis flow chart - PVC





號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 43 of 51

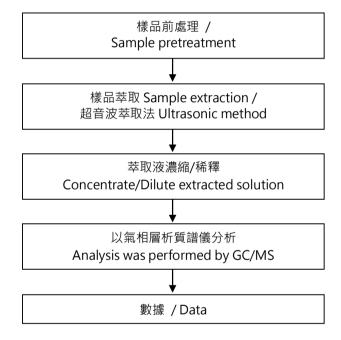
四溴雙酚-A分析流程圖 / TBBP-A analytical flow chart





が	號碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 44 of 5
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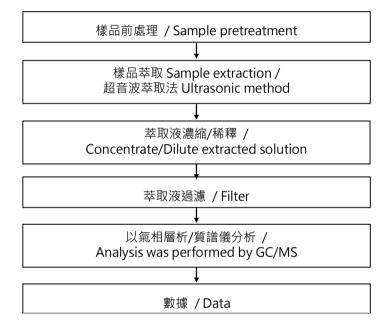
富馬酸二甲酯分析流程圖 / Analytical flow chart of Dimethyl Fumarate content





號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 45 of 51

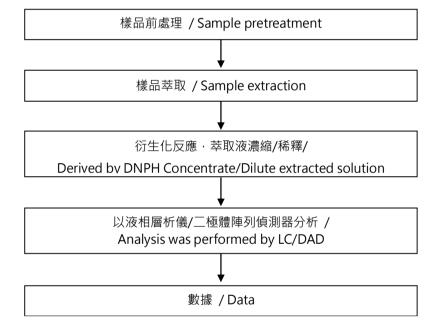
六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD





號碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 46 of 51
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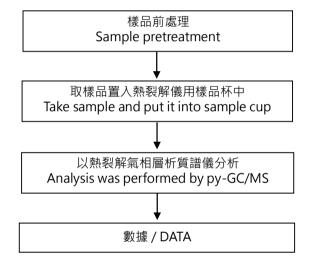
甲醛分析流程圖 / Analytical flow chart - Formaldehyde





號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 47 of 51

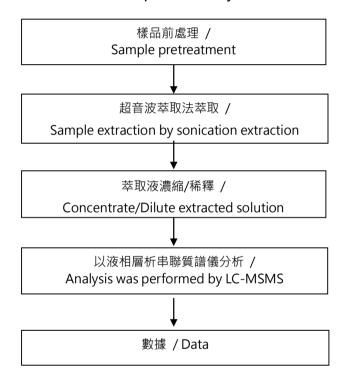
紅磷分析流程 / Analytical flow chart - Red phosphorus





號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 48 of 51

雙酚A分析流程圖 / Bisphenol A analytical flow chart

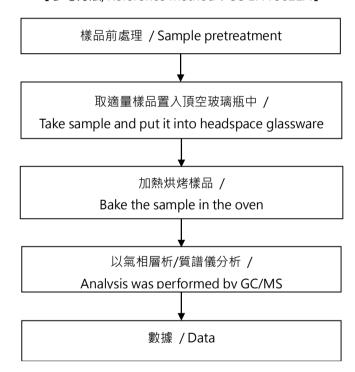




號碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 49 of 51
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揮發性有機化合物分析流程圖 / Analytical flow chart of volatile organic compounds (VOCs)

【参考方法/Reference method: US EPA 5021A】

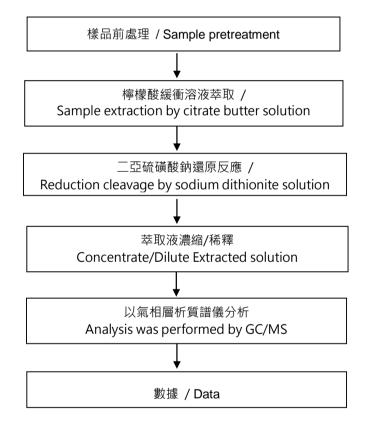




號碼(No.): 日期(Date): 28-Dec-2023 頁數(Page): 50 of 51

偶氮分析流程圖 / Analytical flow chart of Azo dyes

【測試方法/Test method: ISO 14362-1】





號碼(No.):	日期(Date): 28-Dec-2023	頁數(Page): 51 of 51
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* 照片中如有箭頭標示,則表示為實際檢測之樣品/部位. * (The tested sample / part is marked by an arrow if it's shown on the photo.)



** 報告結尾 (End of Report) **



TI Report Number: 66095909

Component : Die Attach Adhesive

Analysis Type: RoHS 10 & Halogens

Analysis Date: 12/05/2023





Test Report

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By

•

Sample Name

: DIE ATTACH PASTE

Style/Item No.

:

Sample Receiving Date

: 08-Nov-2023

Testing Period

: 08-Nov-2023 to 14-Nov-2023

Test Requested

- (1) As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).
- (2) Please refer to next pages for the other item(s).

Test Results

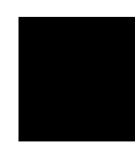
Please refer to following pages.

Conclusion

(1) Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Ray Chang Ph.D./Department manage Signed for and on behalf SGS TAIWAN LTD.

Chemical Laboratory-Kaohsiung





Test Report

Date: 05-Dec-2023 Page: 2 of 13

Test Part Description

No.1 : SILVER DIE ATTACH PASTE

Test Result(s)

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Cadmium (Cd)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	100
Lead (Pb)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Mercury (Hg)	With reference to IEC 62321-4: 2013+AMD1: 2017, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Hexavalent Chromium Cr(VI)	With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.	mg/kg	8	n.d.	1000
Monobromobiphenyl		mg/kg	5	n.d.	-
Dibromobiphenyl		mg/kg	5	n.d.	-
Tribromobiphenyl		mg/kg	5	n.d.	-
Tetrabromobiphenyl		mg/kg	5	n.d.	-
Pentabromobiphenyl	With reference to IEC 62321-6: 2015,	mg/kg	5	n.d.	-
Hexabromobiphenyl	analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Heptabromobiphenyl	analysis was performed by GC/Ms.	mg/kg	5	n.d.	-
Octabromobiphenyl		mg/kg	5	n.d.	-
Nonabromobiphenyl		mg/kg	5	n.d.	-
Decabromobiphenyl		mg/kg	5	n.d.	-
Sum of PBBs		mg/kg	-	n.d.	1000
Monobromodiphenyl ether		mg/kg	5	n.d.	-
Dibromodiphenyl ether		mg/kg	5	n.d.	-
Tribromodiphenyl ether		mg/kg	5	n.d.	-
Tetrabromodiphenyl ether		mg/kg	5	n.d.	-
Pentabromodiphenyl ether	With reference to IEC (2221 C. 2015	mg/kg	5	n.d.	-
Hexabromodiphenyl ether	With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Heptabromodiphenyl ether		mg/kg	5	n.d.	-
Octabromodiphenyl ether		mg/kg	5	n.d.	-
Nonabromodiphenyl ether		mg/kg	5	n.d.	-
Decabromodiphenyl ether		mg/kg	5	n.d.	-
Sum of PBDEs		mg/kg	-	n.d.	1000



Page: 3 of 13 Date: 05-Dec-2023

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Antimony (Sb) (CAS No.: 7440-36-0)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Beryllium (Be) (CAS No.: 7440-41-7)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Arsenic (As) (CAS No.: 7440-38-2)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Fluorine (F) (CAS No.: 14762-94-8)		mg/kg	50	n.d.	-
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	-
Bromine (Br) (CAS No.: 10097-32-2)	analysis was performed by IC.	mg/kg	50	n.d.	-
lodine (I) (CAS No.: 14362-44-8)		mg/kg	50	n.d.	-
Perfluorooctanoic acid (PFOA) and it's	With reference to CEN/TS 15968:	mg/kg	0.01	n.d.	-
salt (CAS No.: 335-67-1 and its salts)	2010, analysis was performed by				
	LC/MS/MS.				
PFOS and its salts (CAS No.: 1763-23-1	With reference to CEN/TS 15968:	mg/kg	0.01	n.d.	-
and its salts)	2010, analysis was performed by				
	LC/MS/MS.				
Hexabromocyclododecane (HBCDD) and	With reference to IEC 62321: 2008,	mg/kg	5	n.d.	-
all major diastereoisomers identified (α-	analysis was performed by GC/MS.	3 3			
HBCDD, β- HBCDD, γ- HBCDD) (CAS No.:					
25637-99-4, 3194-55-6 (134237-51-7,					
134237-50-6, 134237-52-8))					
Phthalates					
Dibutyl phthalate (DBP)	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	1000
	analysis was performed by GC/MS.				
Butyl benzyl phthalate (BBP)	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	1000
	analysis was performed by GC/MS.				
Diisobutyl phthalate (DIBP)	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	1000
	analysis was performed by GC/MS.				
Di-(2-ethylhexyl) phthalate (DEHP)	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	1000
	analysis was performed by GC/MS.				
Diisodecyl phthalate (DIDP) (CAS No.:	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	- 7
26761-40-0, 68515-49-1)	analysis was performed by GC/MS.				
Diisononyl phthalate (DINP) (CAS No.:	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	-
28553-12-0, 68515-48-0)	analysis was performed by GC/MS.				
Di-n-octyl phthalate (DNOP) (CAS No.:	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	-
117-84-0)	analysis was performed by GC/MS.				



Test Report

Date: 05-Dec-2023 Page: 4 of 13

Note:

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit
- 3. n.d. = Not Detected (Less than MDL)
- 4. "-" = Not Regulated
- 5. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.
- 6. This is the additional test report of EKR23B00505.



Test Report

Date: 05-Dec-2023 Page: 5 of 13

PFAS Remark:

The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon

number group.)

Classification of Substance Concentration	Substance Name	CAS No.
Perfluorooctane sulfonates and its	Potassium perfluorooctanesulfonate (PFOS-K)	2795-39-3
salts (PFOS and its salts)	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
(CAS No.: 1763-23-1 and its salts)	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH ₄)	29081-56-9
	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) ₂)	70225-14-8
	Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C_2H_5) ₄)	56773-42-3
	N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptadecafluorooctane-1-sulfonate (PFOS-DDA)	251099-16-8
	Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
	Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
	Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
Perfluorooctanoic acid and its salts	Sodium perfluorooctanoate (PFOA-Na)	335-95-5
(PFOA and its salts) (CAS No.: 335-67-1 and its salts)	Potassium perfluorooctanoate (PFOA-K)	2395-00-8
	Silver perfluorooctanote (PFOA-Ag)	335-93-3
	Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	Lithium perfluorooctanoate (PFOA-Li)	17125-58-5

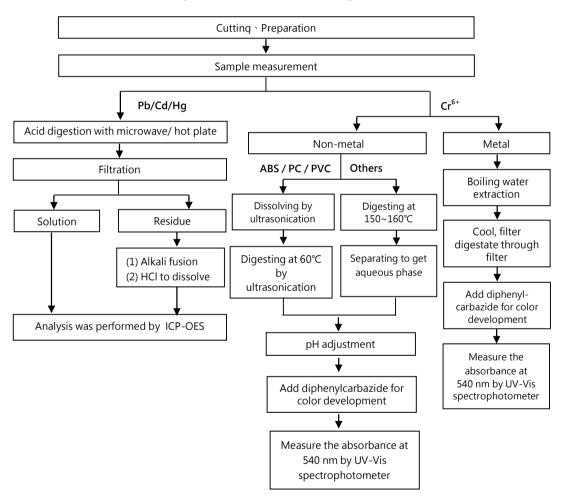


Page: 6 of 13 Date: 05-Dec-2023

Analytical flow chart of heavy metal

These samples were dissolved totally by pre-conditioning method according to below flow chart.

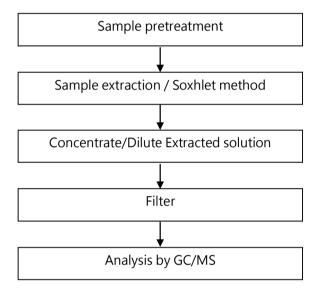
(Cr⁶⁺ test method excluded)





Page: 7 of 13 Date: 05-Dec-2023

PBB/PBDE analytical FLOW CHART



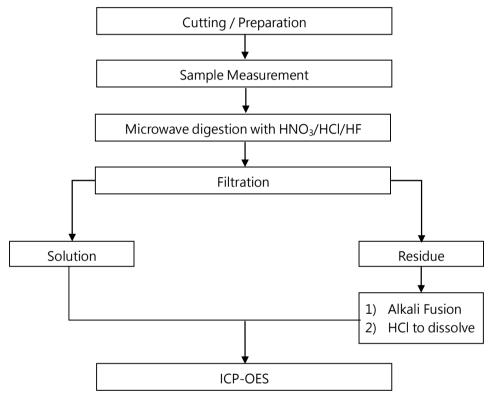


Date: 05-Dec-2023 Page: 8 of 13

Analytical flow chart of Heavy Metal

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【Reference method: US EPA 3051、US EPA 3052】

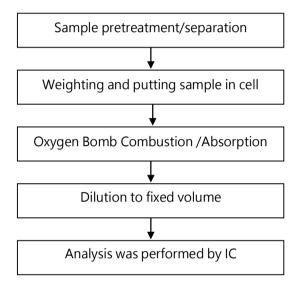


* US EPA 3051 method does not add HF.



Page: 9 of 13 Date: 05-Dec-2023

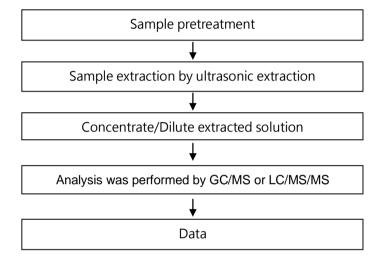
Analytical flow chart of Halogen





Page: 10 of 13 Date: 05-Dec-2023

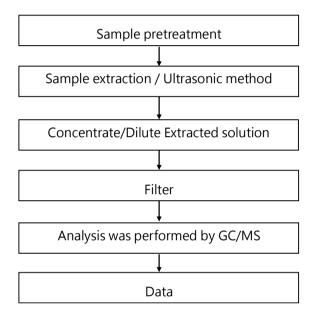
Analytical flow chart - PFAS (including PFOA/PFOS/its related compound, etc.)





Page: 11 of 13 Date: 05-Dec-2023

Analytical flow chart - HBCDD

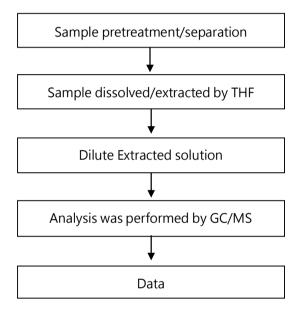




Page: 12 of 13 Date: 05-Dec-2023

Analytical flow chart of phthalate content

【Test method: IEC 62321-8】





Date: 05-Dec-2023 Page: 13 of 13

* The tested sample / part is marked by an arrow if it's shown on the photo. *



** End of Report **



TI Report Number: 65095111

Component: Bond Wire 2

Analysis Type: Other-ROHS

Analysis Date: 11/08/2023





The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By

:

Sample Name

COPPER BONDING WIRE

Style/Item No.

iCu, MaxSoft, MaxSoft2, MaxSoftLD, MaxSoftHR, DHF, RelCu

Sample Receiving Date

: 26-Oct-2023

Testing Period

26-Oct-2023 to 08-Nov-2023

Test Requested

(1) As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).

(2) As specified by client, to test PAHs and other item(s).

Test Results

Please refer to following pages.

Conclusion

(1) Based on the performed tests on selected part of submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to

Directive 2011/65/EU.

Ray Chang Ph.D./Departmen Manager Signed for and on behalf SGS TAIWAN LTD. Chemical Laboratory-Kaohsiung





Date: 08-Nov-2023 Page: 2 of 39

Test Part Description

No.1 : COPPER BONDING WIRE

Test Result(s)

Test Item(s)	Method	Unit	MDL	Result	Limit
Cadmium (Cd)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	No.1 n.d.	100
Lead (Pb)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Mercury (Hg)	With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Hexavalent Chromium Cr(VI)	With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.	mg/kg	8	n.d.	1000
Hexavalent Chromium Cr(VI) (#2)	With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.	μg/cm²	0.1	n.d.	-
Hexavalent Chromium Cr(VI) (CAS No.: 18540-29-9)	With reference to ISO 3613: 2010, analysis was performed by UV-VIS.	μg/cm²	0.02	n.d.	-
Hexavalent Chromium Cr(VI) (CAS No.: 18540-29-9)	With reference to US EPA 3060A: 1996, analysis was performed by UV-Vis.	mg/kg	2	n.d.	-
Monobromobiphenyl		mg/kg	5	n.d.	-
Dibromobiphenyl	7	mg/kg	5	n.d.	-
Tribromobiphenyl	7	mg/kg	5	n.d.	-
Tetrabromobiphenyl	7	mg/kg	5	n.d.	-
Pentabromobiphenyl	With a face and the IFC (2221 C) 2015	mg/kg	5	n.d.	-
Hexabromobiphenyl	With reference to IEC 62321-6: 2015,	mg/kg	5	n.d.	1
Heptabromobiphenyl	analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Octabromobiphenyl	7	mg/kg	5	n.d.	-
Nonabromobiphenyl	7	mg/kg	5	n.d.	-
Decabromobiphenyl	7	mg/kg	5	n.d.	-
Sum of PBBs	7	mg/kg	-	n.d.	1000



Date: 08-Nov-2023 Page: 3 of 39

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Monobromodiphenyl ether		mg/kg	5	n.d.	-
Dibromodiphenyl ether		mg/kg	5	n.d.	-
Tribromodiphenyl ether		mg/kg	5	n.d.	-
Tetrabromodiphenyl ether		mg/kg	5	n.d.	-
Pentabromodiphenyl ether	With reference to IEC 62321-6: 2015,	mg/kg	5	n.d.	-
Hexabromodiphenyl ether	analysis was performed by GC/MS.	mg/kg	5	n.d.	=
Heptabromodiphenyl ether	and y sis was performed by defivio.	mg/kg	5	n.d.	-
Octabromodiphenyl ether		mg/kg	5	n.d.	-
Nonabromodiphenyl ether		mg/kg	5	n.d.	-
Decabromodiphenyl ether		mg/kg	5	n.d.	-
Sum of PBDEs		mg/kg	-	n.d.	1000
Butyl benzyl phthalate (BBP)		mg/kg	50	n.d.	1000
Dibutyl phthalate (DBP)		mg/kg	50	n.d.	1000
Diisobutyl phthalate (DIBP)		mg/kg	50	n.d.	1000
Di-(2-ethylhexyl) phthalate (DEHP)		mg/kg	50	n.d.	1000
Diisononyl phthalate (DINP) (CAS		mg/kg	50	n.d.	-
No.: 28553-12-0, 68515-48-0)					
Diisodecyl phthalate (DIDP) (CAS		mg/kg	50	n.d.	-
No.: 26761-40-0, 68515-49-1)	With reference to IEC 62321-8: 2017,				
Di-n-octyl phthalate (DNOP) (CAS No.: 117-84-0)	analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Bis(2-methoxyethyl) phthalate		mg/kg	50	n.d.	-
(DMEP) (CAS No.: 117-82-8)					
Di-n-hexyl phthalate (DNHP) (CAS No.: 84-75-3)		mg/kg	50	n.d.	-
Di-pentyl phthalate (DPP) (CAS No.: 131-18-0)		mg/kg	50	n.d.	-
Tetrabromobisphenol A (TBBP-A) (CAS No.: 79-94-7)	With reference to RSTS-E&E-121, analysis was performed by LC/MS.	mg/kg	10	n.d.	-
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β - HBCDD, γ - HBCDD) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	With reference to IEC 62321: 2008, analysis was performed by GC/MS.	mg/kg	5	n.d.	-



Page: 4 of 39 Date: 08-Nov-2023

Test Item(s)	Method	Unit	MDL	Result No.1	Limit
Fluorine (F) (CAS No.: 14762-94-8)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-
Bromine (Br) (CAS No.: 10097-32-2)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-
lodine (I) (CAS No.: 14362-44-8)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-
Perfluorooctanoic acid (PFOA) and it's salt (CAS No.: 335-67-1 and its salts)	With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
PFOS and its salts (CAS No.: 1763- 23-1 and its salts)	With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Polychlorinated biphenyls (PCBs)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	0.5	n.d.	-
Polychlorinated naphthalene (PCNs)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Polychlorinated terphenyls (PCTs)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	0.5	n.d.	-
Short Chain Chlorinated Paraffins(C10-C13) (SCCP) (CAS No.: 85535-84-8)	With reference to ISO 18219-1: 2021, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Bisphenol A (CAS No.: 80-05-7)	With reference to RSTS-CHEM-239-1, analysis was performed by LC/MS/MS.	mg/kg	1	n.d.	-
Formaldehyde (CAS No.: 50-00-0)	With reference to ISO 17226-1: 2021, analysis was performed by LC/DAD.	mg/kg	3	n.d.	-
Asbestos					
Actinolite (CAS No.: 77536-66-4)	With reference to EPA 600/R-93/116:	-	-	Negative	-
Amosite (CAS No.: 12172-73-5)	1993, analysis was performed by	-	-	Negative	-
Anthophyllite (CAS No.: 77536-67-5)	Stereo Microscope (SM), Dispersion	-	-	Negative	-
Chrysotile (CAS No.: 12001-29-5)	Staining Polarized Light Microscope	=	-	Negative	-
Crocidolite (CAS No.: 12001-28-4)	(DS-PLM) and X-ray Diffraction	-	-	Negative	-
Tremolite (CAS No.: 77536-68-6)	Spectrometer (XRD).	=	-	Negative	-



Date: 08-Nov-2023 Page: 5 of 39

Test Item(s)	Method	Unit	MDL	Result No.1	Limit
Polycyclic Aromatic Hydrocarbons					
(PAHs)					
Benzo[a]pyrene (CAS No.: 50-32-8)		mg/kg	0.2	n.d.	-
Benzo[e]pyrene (CAS No.: 192-97-2)		mg/kg	0.2	n.d.	-
Benzo[a]anthracene (CAS No.: 56-		mg/kg	0.2	n.d.	-
55-3)					
Benzo[b]fluoranthene (CAS No.: 205-		mg/kg	0.2	n.d.	-
99-2)					
Benzo[j]fluoranthene (CAS No.: 205-		mg/kg	0.2	n.d.	-
82-3)					
Benzo[k]fluoranthene (CAS No.: 207-		mg/kg	0.2	n.d.	-
08-9)				<u> </u>	
Chrysene (CAS No.: 218-01-9)		mg/kg	0.2	n.d.	-
Dibenzo[a,h]anthracene (CAS No.:	With reference to AfPS GS 2019:01	mg/kg	0.2	n.d.	-
53-70-3)	PAK, analysis was performed by				
Benzo[g,h,i]perylene (CAS No.: 191-	GC/MS.	mg/kg	0.2	n.d.	-
24-2)			0.0		
Indeno[1,2,3-c,d]pyrene (CAS No.:		mg/kg	0.2	n.d.	-
193-39-5)		(1	0.2		
Anthracene (CAS No.: 120-12-7)		mg/kg	0.2	n.d.	-
Fluoranthene (CAS No.: 206-44-0)		mg/kg	0.2	n.d.	-
Phenanthrene (CAS No.: 85-01-8)		mg/kg	0.2	n.d.	-
Pyrene (CAS No.: 129-00-0)		mg/kg	0.2	n.d.	-
Naphthalene (CAS No.: 91-20-3)		mg/kg	0.2	n.d.	-
Sum of 15 PAHs		mg/kg	-	n.d.	-
Acenaphthylene (CAS No.: 208-96-8)		mg/kg	0.2	n.d.	-
Acenaphthene (CAS No.: 83-32-9)		mg/kg	0.2	n.d.	-
Fluorene (CAS No.: 86-73-7)		mg/kg	0.2	n.d.	-
Dimethyl fumarate (DMFu) (CAS No.:	•	mg/kg	0.1	n.d.	-
624-49-7)	analysis was performed by GC/MS.				
Polyvinyl chloride (PVC)	With reference to ASTM E1252: 2021,	**	-	Negative	-
	analysis was performed by FT-IR and				
	Flame Test.				



Page: 6 of 39 Date: 08-Nov-2023

Test Item(s)	Method	Unit	MDL	Result	Limit
,				No.1	
Tributyl tin (TBT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Bis(tributyltin) oxide (TBTO) (CAS	Calculated from the result of Tributyl	mg/kg	0.03 🛦	n.d.	-
No.: 56-35-9)	Tin (TBT).				
Triphenyl tin (TPT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Dioctyl tin (DOT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Dibutyl tin (DBT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
AZO Dyes					
4-Aminobiphenyl (CAS No.: 92-67-1)	With reference to EN ISO 14362-1:	mg/kg	3	n.d.	-
	2017, analysis was performed by				
	GC/MS and HPLC/DAD.				
Benzidine (CAS No.: 92-87-5)	With reference to EN ISO 14362-1:	mg/kg	3	n.d.	-
	2017, analysis was performed by				
	GC/MS and HPLC/DAD.				
4-chloro-o-toluidine (CAS No.: 95-	With reference to EN ISO 14362-1:	mg/kg	3	n.d.	-
69-2)	2017, analysis was performed by				
	GC/MS and HPLC/DAD.				
2-Naphthylamine (CAS No.: 91-59-8)	With reference to EN ISO 14362-1:	mg/kg	3	n.d.	-
	2017, analysis was performed by				
	GC/MS and HPLC/DAD.				
o-Aminoazotoluene (CAS No.: 97-	With reference to EN ISO 14362-1:	mg/kg	3	n.d.	-
56-3)	2017, analysis was performed by				
	GC/MS and HPLC/DAD.				
5-Nitro-o-toluidine (CAS No.: 99-55-	With reference to EN ISO 14362-1:	mg/kg	3	n.d.	-
8)	2017, analysis was performed by				
	GC/MS and HPLC/DAD.				
4-Chloroaniline (CAS No.: 106-47-8)	With reference to EN ISO 14362-1:	mg/kg	3	n.d.	-
	2017, analysis was performed by				
	GC/MS and HPLC/DAD.				
4-Methoxy-m-phenylenediamine /	With reference to EN ISO 14362-1:	mg/kg	3	n.d.	-
2,4-Diaminoanisole (CAS No.: 615-	2017, analysis was performed by				
05-4)	GC/MS and HPLC/DAD.				



Date: 08-Nov-2023 Page: 7 of 39

Test Item(s)	Method	Unit	MDL	Result No.1	Limit
4,4'-Diaminodiphenylmethane (CAS No.: 101-77-9)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
3,3'-Dichlorobenzidine (CAS No.: 91-94-1)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
3,3'-Dimethoxybenzidine (CAS No.: 119-90-4)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	ı
3,3'-Dimethylbenzidine (CAS No.: 119-93-7)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	ı
4,4'-Methylenedi-o-toluidine (CAS No.: 838-88-0)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
6-Methoxy-m-toluidine (CAS No.: 120-71-8)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
4,4'-Methylene-bis-(2-chloro- Aniline) (CAS No.: 101-14-4)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
4,4'-Oxydianiline (CAS No.: 101-80- 4)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
4,4'-Thiodianiline (CAS No.: 139-65- 1)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
o-Toluidine (CAS No.: 95-53-4)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
2,4-Diaminotoluene (CAS No.: 95- 80-7)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
2,4,5-Trimethylaniline (CAS No.: 137- 17-7)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-



Date: 08-Nov-2023 Page: 8 of 39

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
2-Methoxyaniline (CAS No.: 90-04-0)	2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	1
4-Aminoazobenzene (CAS No.: 60-09-3)	With reference to EN ISO 14362-1: 2017 and EN ISO 14362-3: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
2,4-Xylidine (CAS No.: 95-68-1)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	ı
2,6-Xylidine (CAS No.: 87-62-7)	With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.	mg/kg	3	n.d.	-
Chlorofluorocarbons (CFCs)					
CFC-11 (CAS No.: 75-69-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-12 (CAS No.: 75-71-8)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-13 (CAS No.: 75-72-9)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-111 (CAS No.: 354-56-3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-112 (CAS No.: 76-12-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-113 (CAS No.: 76-13-1)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-114 (CAS No.: 76-14-2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-115 (CAS No.: 76-15-3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-211 (CAS No.: 422-78-6)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-212 (CAS No.: 3182-26-1)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
CFC-213 (CAS No.: 2354-06-5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-



Date: 08-Nov-2023 Page: 9 of 39

Test Item(s)	Method	Unit	MDL	Result No.1	Limit
CFC-214 (CAS No.: 29255-31-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	ı
CFC-215 (CAS No.: 4259-43-2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	ı
CFC-216 (CAS No.: 661-97-2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	1
CFC-217 (CAS No.: 422-86-6)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Hydrochlorofluorocarbons (HCFCs)					
HCFC-21 (CAS No.: 75-43-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-22 (CAS No.: 75-45-6)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-31 (CAS No.: 593-70-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-121 (CAS No.: 354-14-3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-122 (CAS No.: 354-21-2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-123 (CAS No.: 306-83-2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-124 (CAS No.: 2837-89-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-131 (CAS No.: 359-28-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-141b (CAS No.: 1717-00-6)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-221 (CAS No.: 422-26-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-222 (CAS No.: 422-49-1)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-223 (CAS No.: 422-52-6)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-224 (CAS No.: 422-54-8)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-225ca (CAS No.: 422-56-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-



Date: 08-Nov-2023 Page: 10 of 39

Test Item(s)	Method	Unit	MDL	Result No.1	Limit
HCFC-225cb (CAS No.: 507-55-1)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-226 (CAS No.: 431-87-8)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	ı
HCFC-231 (CAS No.: 421-94-3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	ı
HCFC-232 (CAS No.: 460-89-9)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	ı
HCFC-233 (CAS No.: 7125-84-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	1
HCFC-234 (CAS No.: 425-94-5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	1
HCFC-235 (CAS No.: 460-92-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-241 (CAS No.: 666-27-3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-242 (CAS No.: 460-63-9)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-243 (CAS No.: 460-69-5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-244	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-251 (CAS No.: 421-41-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-252 (CAS No.: 819-00-1)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-253 (CAS No.: 460-35-5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-261 (CAS No.: 420-97-3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-262 (CAS No.: 421-02-03)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-271 (CAS No.: 430-55-7)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HCFC-133a (CAS No.: 75-88-7)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-



Date: 08-Nov-2023 Page: 11 of 39

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
HCFC-142b (CAS No.: 75-68-3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
HCFC-132b (CAS No.: 1649-08-7)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
ICFC-141	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
HCFC-142	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	1
	analysis was performed by GC/MS.				
HCFC-151	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
HCFC-225	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
Halons					
Halon-1211 (CAS No.: 353-59-3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
Halon-1301 (CAS No.: 75-63-8)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
Halon-2402 (CAS No.: 124-73-2)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
Bromomethane (CAS No.: 74-83-9)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
Hydrobromofluorocarbons (HBFCs)					
HBFC-121B4 (C2HFBr4)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=
	analysis was performed by GC/MS.				
HBFC-122B3 (C2HF2Br3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=
	analysis was performed by GC/MS.				
HBFC-123B2 (C2HF3Br2)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
HBFC-124B1 (C2HF4Br)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
HBFC-131B3 (C2H2FBr3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
HBFC-132B2 (C2H2F2Br2)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
HBFC-133B1 (C2H2F3Br)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				



Date: 08-Nov-2023 Page: 12 of 39

Test Item(s)	Method	Unit	MDL	Result No.1	Limit	
HBFC-141B2 (C2H3FBr2)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-142B1 (C2H3F2Br)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-151B1 (C2H4FBr)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=,	
	analysis was performed by GC/MS.					
HBFC-21B2 (CHFBr2) (CAS No.:	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=,	
1868-53-7)	analysis was performed by GC/MS.					
HBFC-221B6 (C3HFBr6)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=	
·	analysis was performed by GC/MS.					
HBFC-222B5 (C3HF2Br5)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=	
•	analysis was performed by GC/MS.					
HBFC-223B4 (C3HF3Br4)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-224B3 (C3HF4Br3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-225B2 (C3HF5Br2)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-226B1 (C3HF6Br)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=	
	analysis was performed by GC/MS.					
HBFC-22B1 (CHF2Br) (CAS No.:	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
1511-62-2)	analysis was performed by GC/MS.					
HBFC-231B5 (C3H2FBr5)	With reference to US EPA 5021A: 2014,	mg/kg 1	mg/kg 1 n	g 1	n.d.	-
	analysis was performed by GC/MS.					
HBFC-232B4 (C3H2F2Br4)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-233B3 (C3H2F3Br3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-234B2 (C3H2F4Br2)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-235B1 (C3H2F5Br)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-241B4 (C3H3FBr4)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					
HBFC-242B3 (C3H3F2Br3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
	analysis was performed by GC/MS.					



Page: 13 of 39 Date: 08-Nov-2023

Test Item(s)	Method	Unit	MDL	Result No.1	Limit
HBFC-243B2 (C3H3F3Br2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HBFC-244B1 (C3H3F4Br)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HBFC-251B3 (C3H4FBr3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	ı
HBFC-252B2 (C3H4F2Br2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	Ī
HBFC-253B1 (C3H4F3Br)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HBFC-261B2 (C3H5FBr2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HBFC-262B1 (C3H5F2Br)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HBFC-271B1 (C3H6FBr)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HBFC-31B1 (CH2FBr) (CAS No.: 373- 52-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Hydrofluorocarbon (HFCs)					
HFC-125 (C2HF5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-134 (C2H2F4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-134a (CH2FCF3) (CAS No.: 811- 97-2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-143 (CH3F3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-143a (CH3F3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-152a (C2H4F2) (CAS No.: 75-37- 6)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-227ea (C3HF7) (CAS No.: 431- 89-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-23 (CHF3) (CAS No.: 75-46-7)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-236ea (C3H2F6) (CAS No.: 431- 63-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-



Date: 08-Nov-2023 Page: 14 of 39

Test Item(s)	Method	Unit	MDL Result No.1		Limit
HFC-236fa (CAS No.: 431-63-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-245ca (C3H3F5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-245fa (C3H3F5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-32 (CH2F2) (CAS No.: 75-10-5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-365mfc (C4H5F5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
HFC-43-10mee (C5H2F10)			1	n.d.	-
HFC-41 (CH3F) (CAS No.: 593-53-3)				n.d.	-
Perfluorocarbon (PFCs)					
Fluorocarbon 116 (CAS No.: 76-16-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
1,4-dihydrooctafluorobutane (CAS No.: 377-36-6)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
2-Perfluoromethylpentane (CAS No.: 355-04-4)			1	n.d.	-
Decafluorobutane (CAS No.: 355-25-9)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Freon 14 (CAS No.: 75-73-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Freon 218 (CAS No.: 76-19-7)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Nonafluor-2-(trifluoromethyl)butane (CAS No.: 594-91-2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Perfluor-1-butene (CAS No.: 357-26-6)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Perfluorisobutene (CAS No.: 382-21-8)			1	n.d.	-
Perfluorohexane (CAS No.: 355-42-0)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Perfluoro-n-pentane (CAS No.: 678- 26-2)			1	n.d.	-



Date: 08-Nov-2023 Page: 15 of 39

Test Item(s)	Method			Result No.1	Limit	
Freon C318 (CAS No.: 115-25-3)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-	
Chlorinate hydrocarbon (CHCs)						
Carbon tetrachloride (CAS No.: 56-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
23-5)	analysis was performed by GC/MS.					
1,1,1-Trichloroethane (CAS No.: 71-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
55-6)	analysis was performed by GC/MS.					
1,1,1,2-Tetrachloroethane (CAS No.:	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	1	
630-20-6)	analysis was performed by GC/MS.	3 3				
1,1,2,2-Tetrachloroethane (CAS No.:	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
79-34-5)	analysis was performed by GC/MS.	3 3				
1,1,2-Trichloroethane (CAS No.: 79-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	1	
00-5)	analysis was performed by GC/MS.					
1,1-Dichloroethane (CAS No.: 75-34-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=	
3)	analysis was performed by GC/MS.					
1,1-Dichloroethylene (CAS No.: 75-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=	
35-4)	analysis was performed by GC/MS.	3 3				
1,1-Dichloropropene (CAS No.: 563-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=	
58-6)	analysis was performed by GC/MS.					
1,2,3-Trichloropropane (CAS No.: 96-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=	
18-4)	analysis was performed by GC/MS.	3 3				
1,2-Dichloroethane (CAS No.: 107-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	1	
06-2)	analysis was performed by GC/MS.					
1,2-Dichloropropane (CAS No.: 78-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=	
87-5)	analysis was performed by GC/MS.	3 3				
1,3-Dichloropropane (CAS No.: 142-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
28-9)	analysis was performed by GC/MS.	3 3				
2,2-Dichloropropane (CAS No.: 594-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
20-7)	analysis was performed by GC/MS.	J. J				
Chloroform (CAS No.: 67-66-3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
,	analysis was performed by GC/MS.	J. J.				
Chloromethane (CAS No.: 74-87-3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
,	analysis was performed by GC/MS.	J. J.				
cis-1,2-Dichloroethene (CAS No.:	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-	
156-59-2)	analysis was performed by GC/MS.	J. J.				



Page: 16 of 39 Date: 08-Nov-2023

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
cis-1,3-Dichloropropene (CAS No.:	: With reference to US EPA 5021A: 2014,		1	n.d.	=
10061-01-5)	analysis was performed by GC/MS.				
Dichloromethane (CAS No.: 75-09-2)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=
	analysis was performed by GC/MS.				
Tetrachloroethene (CAS No.: 127-18-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=
4)	analysis was performed by GC/MS.				
trans-1,2-Dichloroethene (CAS No.:	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	=
156-60-5)	analysis was performed by GC/MS.				
trans-1,3-Dichloropropene (CAS No.:	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
10061-02-6)	analysis was performed by GC/MS.				
Trichloroethylene (CAS No.: 79-01-6)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
Chloroethane (CAS No.: 75-00-3)	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
	analysis was performed by GC/MS.				
Hexachlorobutadiene (CAS No.: 87-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
68-3)	analysis was performed by GC/MS.				
Bromochloromethane (CAS No.: 74-	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
97-5)	analysis was performed by GC/MS.				
Sulphur hexafluoride (SF6) (CAS No.:	With reference to US EPA 5021A: 2014,	mg/kg	1	n.d.	-
2551-62-4)	analysis was performed by GC/MS.				
Perchlorate (CAS No.: 14797-73-0)	Analysis was performed by IC.	μg/g	0.006	n.d.	-
Chromium (Cr) (CAS No.: 7440-47-3)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Selenium (Se) (CAS No.: 7782-49-2)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Antimony (Sb) (CAS No.: 7440-36-0)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Arsenic (As) (CAS No.: 7440-38-2)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Phosphorus (P) (CAS No.: 7723-14-0)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Barium (Ba) (CAS No.: 7440-39-3)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
TBBP-A-bis (CAS No.: 21850-44-2)	With reference to US EPA 3550C: 2007,	mg/kg	5	n.d.	-
	analysis was performed by GC/MS.				



Date: 08-Nov-2023 Page: 17 of 39

Note:

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit
- 3. n.d. = Not Detected (Less than MDL)
- 4. "-" = Not Regulated
- 5. **= Qualitative analysis (No Unit)
- 6. Negative = Undetectable; Positive = Detectable
- 7. Testing range of asbestos qualitative analysis is from less than 0.1% to 100%. The judgment criterion: asbestos fibers being found is shown as "Positive"; asbestos fibers not being found is shown as "Negative".
- 8. (#2) =
 - a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 μ g/cm². The sample coating is considered to contain Cr(VI).
 - b. The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 μ g/cm²). The coating is considered a non-Cr(VI) based coating
 - c. The result between 0.10 μ g/cm² and 0.13 μ g/cm² is considered to be inconclusive unavoidable coating variations may influence the determination.
- 9. ▲ : The MDL was evaluated for element / tested substance.

Conversion Formula : $AX = A \times F$

AX	Α	F	
Bis(tributyltin)oxide (TBTO)	Tributyl Tin (TBT)	1.0276	

Parameter Conversion Table: https://eecloud.sgs.com/Region TW/DocDownload.aspx?name=Others

10. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.



Date: 08-Nov-2023 Page: 18 of 39

PAHs Remark:

△ AfPS (German commission for Product Safety): GS PAHs requirements

		T -	•		
	Category 1	· ·	gory 2	Cate	gory 3
Parameter	toys (Directive	Materials that are not in Category 1, with intended or foreseeable long-term skin contact (> 30 seconds) or short-term repetitive contact with the skin.		Materials not covered by Category 1 or 2, with intended or foreseeable short-term skin contact (≦30 seconds).	
	term skin contact (> 30 seconds).	a. Use by children under 14	b. Other consumer products	a. Use by children under 14	b. Other consumer products
Naphthalene	< 1	< 2		< 10	
Phenanthrene					
Anthracene	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Fluoranthene	\ I Sulli	\ 3 3dill	< 10 3um	< 20 Julii	\ 30 3um
Pyrene					
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[a]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[e]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno[1,2,3-c,d] pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo[a,h]anthracene		< 0.2	< 0.5	< 0.5	< 1
Benzo[g,h,i]perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Sum of 15 PAH	< 1	< 5	< 10	< 20	< 50

Unit: mg/kg



Date: 08-Nov-2023 Page: 19 of 39

PFAS Remark:

The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.)

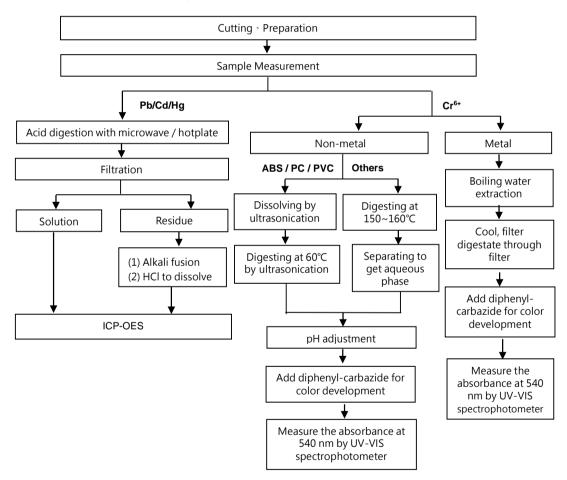
Classification of Substance Concentration	Substance Name	CAS No.
Perfluorooctane sulfonates and	Potassium perfluorooctanesulfonate (PFOS-K)	2795-39-3
its salts (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH ₄)	29081-56-9
	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) ₂)	70225-14-8
	Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-N(C_2H_5) ₄)	56773-42-3
	N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane- 1-sulfonate (PFOS-DDA)	251099-16-8
	Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
	Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
	Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
Perfluorooctanoic acid and its salts (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	Sodium perfluorooctanoate (PFOA-Na)	335-95-5
	Potassium perfluorooctanoate (PFOA-K)	2395-00-8
	Silver perfluorooctanote (PFOA-Ag)	335-93-3
	Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	Lithium perfluorooctanoate (PFOA-Li)	17125-58-5



Date: 08-Nov-2023 Page: 20 of 39

Analytical flow chart of Heavy Metal

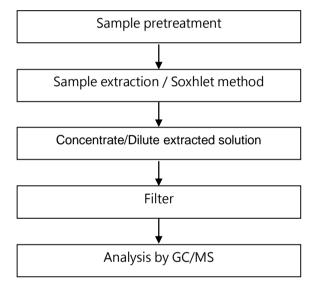
These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)





Page: 21 of 39 Date: 08-Nov-2023

PBB/PBDE analytical FLOW CHART

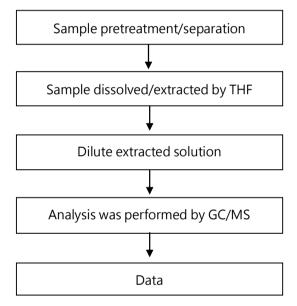




Page: 22 of 39 Date: 08-Nov-2023

Analytical flow chart of phthalate content

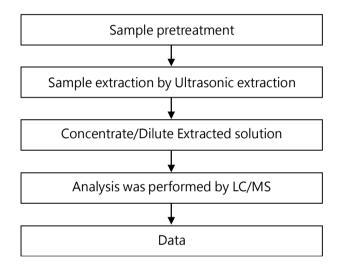
【Test method: IEC 62321-8】





Page: 23 of 39 Date: 08-Nov-2023

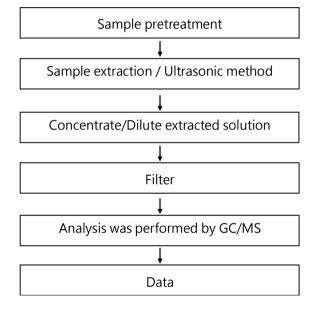
TBBP-A analytical flow chart





Date: 08-Nov-2023 Page: 24 of 39

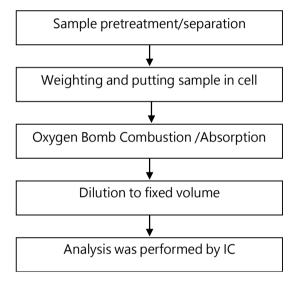
Analytical flow chart - HBCDD





Date: 08-Nov-2023 Page: 25 of 39

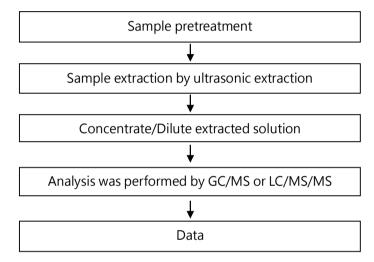
Analytical flow chart of Halogen





Page: 26 of 39 Date: 08-Nov-2023

Analytical flow chart - PFAS (including PFOA/PFOS/its related compound, etc.)

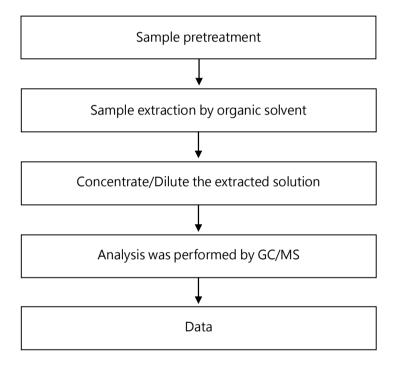




Page: 27 of 39 Date: 08-Nov-2023

Analytical flow chart

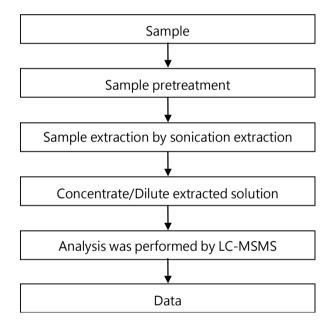
* Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT





Page: 28 of 39 Date: 08-Nov-2023

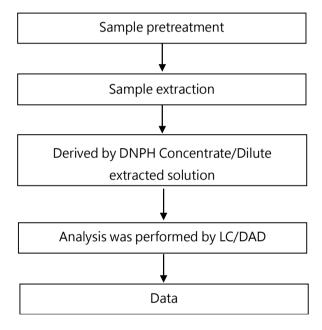
BPA analytical flow chart





Date: 08-Nov-2023 Page: 29 of 39

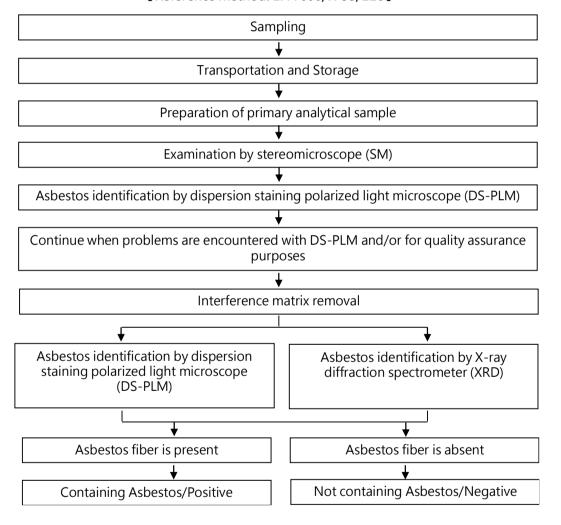
Analytical flow chart - Formaldehyde





Date: 08-Nov-2023 Page: 30 of 39

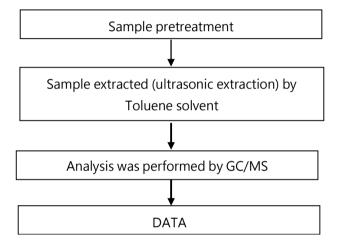
Analysis flow chart for determination of Asbestos 【Reference method: EPA 600/R-93/116】





Page: 31 of 39 Date: 08-Nov-2023

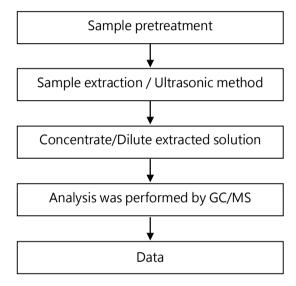
PAHs (PolyAromaticHydrocarbons) analytical flow chart





Page: 32 of 39 Date: 08-Nov-2023

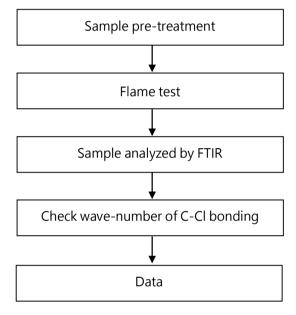
Analytical flow chart of Dimethyl Fumarate





Date: 08-Nov-2023 Page: 33 of 39

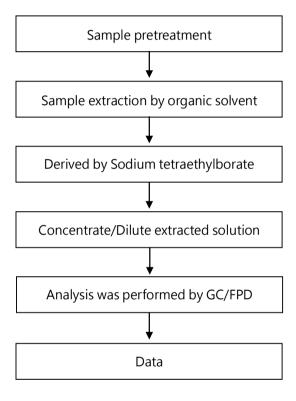
Analysis flow chart - PVC





Date: 08-Nov-2023 Page: 34 of 39

Analytical flow chart - Organic-Tin

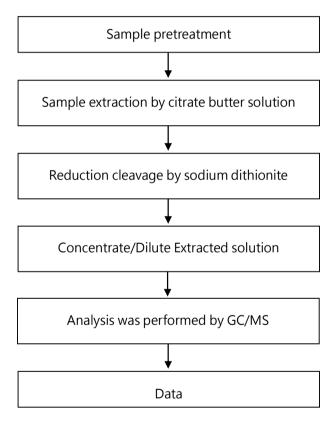




Date: 08-Nov-2023 Page: 35 of 39

Analytical flow chart of Azo dyes

【Test method: ISO 14362-1】

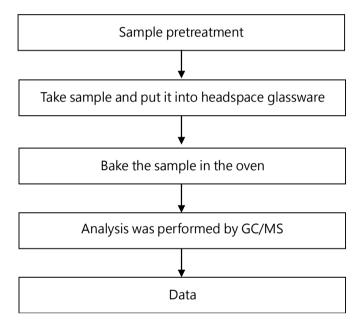




Page: 36 of 39 Date: 08-Nov-2023

Analytical flow chart of volatile organic compounds (VOCs)

【Reference method: US EPA 5021A】

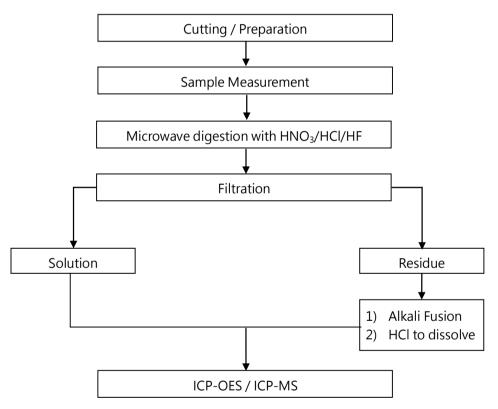




Date: 08-Nov-2023 Page: 37 of 39

Analytical flow chart of Elements (Heavy metal included)

These samples were dissolved totally by pre-conditioning method according to below flow chart. 【Reference method: US EPA 3051、US EPA 3052】

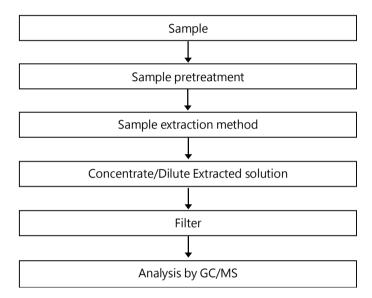


* US EPA 3051 method does not add HF.



Page: 38 of 39 Date: 08-Nov-2023

Analytical flow chart of TBBP-A-bis





Date: 08-Nov-2023 Page: 39 of 39

* The tested sample / part is marked by an arrow if it's shown on the photo. *



** End of Report **



TI Report Number: 65095109

Component: Bond Wire 2

Analysis Type: Other-ROHS Be Test

Analysis Date: 11/08/2023



Date: 08-Nov-2023 Page: 1 of 4

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By :

Sample Name : COPPER BONDING WIRE

Style/Item No. : iCu, MaxSoft, MaxSoft2, MaxSoftLD, MaxSoftHR, DHF, RelCu

Sample Receiving Date : 26-Oct-2023

Testing Period : 26-Oct-2023 to 08-Nov-2023

Test Requested : Testing item(s) is/are specified by client. Please refer to result table for

testing item(s).

Test Results: Please refer to following pages.

Ray Chang Ph.D./Departmer Manager Signed for and on behalf SGS TAIWAN LTD.
Chemical Laboratory-Kaohsiung





Date: 08-Nov-2023 Page: 2 of 4

Test Part Description

No.1 : COPPER BONDING WIRE

Test Result(s)

Test Item(s)	Method	Unit	MDL	Result
				No.1
	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.
	analysis was performed by ICP-OES.			

Note:

1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm

2. MDL = Method Detection Limit

3. n.d. = Not Detected (Less than MDL)

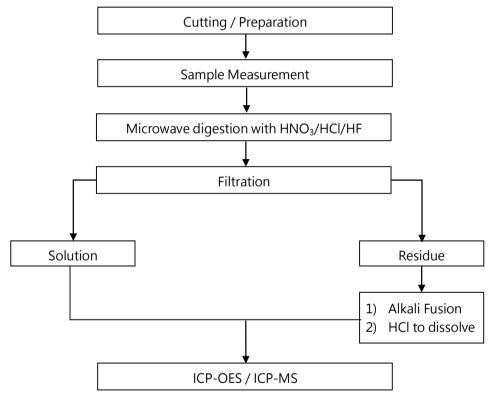


Date: 08-Nov-2023 Page: 3 of 4

Analytical flow chart of Elements (Heavy metal included)

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【Reference method: US EPA 3051 \ US EPA 3052】



* US EPA 3051 method does not add HF.



Date: 08-Nov-2023 Page: 4 of 4

* The tested sample / part is marked by an arrow if it's shown on the photo. *



** End of Report **



TI Report Number: 65095107

Component: Bond Wire 2

Analysis Type: Other-REACH SVHC

Analysis Date: 11/08/2023





The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By :

Sample Name : COPPER BONDING WIRE

Style/Item No. : iCu, MaxSoft, MaxSoft2, MaxSoftLD, MaxSoftHR, DHF, RelCu

Sample Receiving Date : 26-Oct-2023

Testing Period : 26-Oct-2023 to 08-Nov-2023

Test Requested : As specified by client, the sample(s) was/were tested with reference to Regulation

(EC) No 1907/2006 concerning the REACH.

(1) 235 Substances of Very High Concern (SVHC). Candidate list is published on

June 14, 2023

(2) 6 Substances of Very High Concern (SVHC). Proposed list is published on

September 1, 2023

Test Results : Please refer to following pages.

Summary: According to the ruling of the Court of Justice of the European Union on the

definition of an article under REACH, and the specified scope as well as analytical technique, the test results of the selected component article are $\leq 0.1\%$ (w/w) in

the submitted sample(s).

Ray Chang Ph.D./Department Manager Signed for and on behalf SGS TAIWAN LTD.
Chemical Laboratory-Kaohsiung





Date: 08-Nov-2023 Page: 2 of 16

Test Part Description

No.1 : COPPER BONDING WIRE

Test Method

With reference to RSTS-EE-SVHC-007, analysis was performed by ICP-OES, UV-VIS, GC/MS, LC/MS, GC/FPD, LC/DAD/MS, LC/MS/MS.

Test Result(s)

(1) Candidate List of SVHC (2023/06/14)

Substance Name	RL	Concentration	Limit
		No.1	Lillit
All tested SVHC in candidate list	-	n.d.	0.1

(2) Proposed list of SVHC (2023/09/01)

Substance Name	RL	Concentration	Limit
		No.1	LIIIII
All tested SVHC in proposed list	-	n.d.	0.1

Remark:

1. (1) Candidate List of SVHC (2023/06/14)

https://echa.europa.eu/web/guest/candidate-list-table

(2) Proposed list of SVHC (2023/09/01)

https://echa.europa.eu/substances-of-very-high-concern-identification

Unit: %

- 2. In accordance with Regulation (EC) No 1907/2006, any producer or importer of articles shall notify ECHA, in accordance with paragraph 2 of Article 7, if a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1) of the Regulation,
 - if (a) the substance is present in those articles in quantities totaling over one tonne per producer or importer per year; and (b) the substance is present in those articles above a concentration of 0.1% weight by weight (w/w).
- 3. Article 33 of Regulation (EC) No 1907/2006 requires supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.
- 4. If a SVHC is found over 0.1% (w/w) and/or the specific concentration limit which is set in Regulation (EC) No 1272/2008 and its amendments, client is suggested to prepare a Safety Data Sheet (SDS) against the SVHC to comply with the supply chain communication obligation under Regulation (EC) No 1907/2006, in which:



Date: 08-Nov-2023 Page: 3 of 16

- (I) a substance that is classified as hazardous under the CLP Regulation (EC) No 1272/2008.
- (II) mixture that is classified as hazardous under the CLP Regulation (EC) No 1272/2008, when it contains a substance with concentration equal to, or greater than the classification limit as set in Regulation (EC) No. 1272/2008; or (III) a mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008, but contains either:
- (a) a substance posing human health or environmental hazards in an individual concentration of ≥ 1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or ≥ 0.2 % by volume for gaseous mixtures; or
- (b) a substance that is PBT, or vPvB in an individual concentration of \geq 0.1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures); or
- (c) a substance on the SVHC candidate list (for reasons other than those listed above), in an individual concentration of \geq 0.1 % by weight for non-gaseous mixtures; or
- (d) a substance for which there are Europe-wide workplace exposure limits
- 5. If a SVHC is found over the reporting limit, client is suggested to identify the component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.

Note:

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. RL = Reporting Limit
- 3. n.d. = Not Detected (Less than RL)
- 4. "-" = Not Regulated
- 5. (*): conc. of Sodium dichromate dihydrate (CAS No.: 7789-12-0) = conc. of sodium dichromate x 1.1375
- 6. (**): The concentrations of above-mentioned mixtures are evaluated per the gained composition rate between the selected marks and the mixtures.
- 7. F Parameter Conversion Table/Classification:
 - https://eecloud.sgs.com/Region_TW/DocDownload.aspx?name=Others
- 8. (X P): Regarding the compound containing Cr(VI) and lead, lead and Cr(VI) are tested and respectively used for the calculation of the independent concentration of the compound containing Cr(VI) and lead. The minimum value of the two independently calculated concentrations is used as the final concentration for the report.
- 9. (X C): Oligomers of chromic acid and dichromic acid: since the oligomers are made of the unknown amount of chromic acid or dichromic acid that results in no fixed molecular weight, therefore the monomer of chromic acid or dichromic acid is relevant and considered.
- 10. (X H): Tetraboron disodium heptaoxide, hydrate: Only anhydrous form of disodium tetraborate is relevant and considered according to ECHA explanation (Ref no.: INC 000000032519).



Date: 08-Nov-2023 Page: 4 of 16

11. ***: The substance was calculated by the test results of Monooctyl Tin, Dioctyl Tin, Tributyl Tin, Dibutyl Tin, PFOA or element (Ex. Arsenic, Lead, Cr(VI), Boron, Cobalt, Barium, Cadmium respectively).

Table 1: The test result is given as:

_			
- 1	Ini	t٠	9/

Substance Name / Specific Element(s)	RL	Concentration
		No.1
Tributyl Tin (TBT)	0.0487	n.d.
Arsenic (As) (X E)	0.005	n.d.
Hexavalent chromium Cr(VI)	0.005	n.d.
Boron (B) (X E)	0.005	n.d.
Cobalt (Co)	0.005	n.d.
Dibutyl Tin (DBT)	0.027	n.d.
Barium (Ba)	0.005	n.d.
Dioctyl Tin (DOT)	0.023	n.d.
Monooctyl Tin (MOT)	0.0138	n.d.
Lead (Pb)	0.005	n.d.
Cadmium (Cd)	0.005	n.d.

- 12. (X S): Regarding the compound containing arsenic and lead, lead and arsenic are tested and respectively used for the calculation of the independent concentration of the compound containing arsenic and lead. The minimum value of the two independently calculated concentrations is used as the final concentration for the report.
- 13. (\times T): TGIC is a mixture and also contains β -TGIC. According to the ECHA's technical dossier the ratio of β -TGIC to TGIC is around 1 to 10. Therefore β -TGIC is issued based on the above-mentioned ratio.
- 14. (X B): Only if both qualitative results of lead and silicon are positive, the test result of the compound will be calculated based on the concentration of barium.
- 15. (X): RP-HP can't be identified directly and test result can't be calculated based on specific element(s) or compound. RP-HP is identified as SVHC because of 4-HPbl, therefore 4-HPbl is analysed instead of RP-HP.
- 16. (●): Since lead has a wide application, it is unlikely to determine if the detected lead comes from the lead ion, lead element or/ and lead compounds. Therefore the detected total lead is used on behalf of lead.
- 17. (X U): Boric acid (H3BO3), sodium salt, hydrate; Boric acid (H3BO3), disodium salt; Trisodium orthoborate; Boric acid, sodium salt; Orthoboric acid, sodium salt; Boric acid (H3BO3), sodium salt (1:1) (CAS No.: 25747-83-5; 22454-04-2; 14312-40-4; 1333-73-9; 13840-56-7; 14890-53-0). The calculation is based on the largest molecular weight of Orthoboric acid, sodium salt (CAS No.: 13840-56-7). The F Parameter is 11.8215.
- 18. (X D): Regarding the compound containing Boron and lead, lead and Boron are tested and respectively used for the calculation of the independent concentration of the compound containing Boron and lead. The minimum value of the two independently calculated concentrations is used as the final concentration for the report.



Date: 08-Nov-2023 Page: 5 of 16

- 19. (XG): The compound is qualitatively screened first. When there is a signal of the compound, specific elements Sulfur and Phosphorus are used to calculate the concentration of compound.
- 20. (X): A specific index compound is qualitatively screened first. After the evaluation, and the specific signal is positive, the total Fluorine is used to calculate the concentration of SVHC compound.
- 21. (X A): Regarding the compound containing Boron and Barium, Barium and Boron are tested and respectively used for the calculation of the independent concentration of the compound containing Boron and Barium. The minimum value of the two independently calculated concentrations is used as the final concentration for the report.
- 22. (X E): The extracted soluble Boron / Arsenic are detected by ICP-OES.
- 23. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.



Date: 08-Nov-2023 Page: 6 of 16

[Appendix 1]

(1) Candidate List of SVHC (2023/06/14): Unit: %

(1) Ca	ndidate list of SVAC (2023/06/14):	Unit: %
No.	Substance Name	RL
1.	4,4'- Diaminodiphenylmethane (MDA) (CAS No.: 101-77-9)	0.05
2.	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk Xylene) (CAS No.: 81-15-2)	0.05
3.	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (CAS No.: 85535-84-8)	0.05
4.	Anthracene (CAS No.: 120-12-7)	0.05
5.	Benzyl butyl phthalate (BBP) (CAS No.: 85-68-7)	0.05
6.	Bis(tributyltin) oxide (TBTO)*** (CAS No.: 56-35-9)	-
7.	Diarsenic pentaoxide*** (CAS No.: 1303-28-2)	-
8.	Diarsenic trioxide*** (CAS No.: 1327-53-3)	-
9.	Dibutyl phthalate (DBP) (CAS No.: 84-74-2)	0.05
10.	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β - HBCDD, γ - HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	0.05
11.	Lead hydrogen arsenate*** (CAS No.: 7784-40-9) (X S)	-
12.	Sodium dichromate*** (CAS No.: 10588-01-9, 7789-12-0) (*)	-
13.	Triethyl arsenate*** (CAS No.: 15606-95-8)	-
14.	Bis (2-ethylhexyl)phthalate (DEHP) (CAS No.: 117-81-7)	0.05
15.	2,4-Dinitrotoluene (CAS No.: 121-14-2)	0.05
16.	Anthracene oil (CAS No.: 90640-80-5) (**)	0.05
17.	Anthracene oil, anthracene paste (CAS No.: 90640-81-6) (**)	0.05
18.	Anthracene oil, anthracene paste, anthracene fraction (CAS No.: 91995-15-2) (**)	0.05
19.	Anthracene oil, anthracene paste, distn. Lights (CAS No.: 91995-17-4) (**)	0.05
20.	Anthracene oil, anthracene-low (CAS No.: 90640-82-7) (**)	0.05
21.	Diisobutyl phthalate (DIBP) (CAS No.: 84-69-5)	0.05
22.	Lead chromate*** (CAS No.: 7758-97-6) (X P)	-
23.	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)*** (CAS No.: 12656-85-8) (※ P)	-
24.	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*** (CAS No.: 1344-37-2) (※ P)	-
25.	Pitch, coal tar, high-temp. (CAS No.: 65996-93-2) (**)	0.05
26.	Tris(2-chloroethyl) phosphate (TCEP) (CAS No.: 115-96-8)	0.05
27.	Acrylamide (CAS No.: 79-06-1)	0.05
28.	Ammonium dichromate*** (CAS No.: 7789-09-5)	=
29.	Boric acid*** (CAS No.: 10043-35-3, 11113-50-1)	=
30.	Disodium tetraborate, anhydrous*** (CAS No.: 1303-96-4, 1330-43-4, 12179-04-3)	-
31.	Potassium chromate*** (CAS No.: 7789-00-6)	-
	Potassium dichromate*** (CAS No.: 7778-50-9)	-
33.	Sodium chromate*** (CAS No.: 7775-11-3)	-
34.	Tetraboron disodium heptaoxide, hydrate (CAS No.: 12267-73-1) (X H)	-



Page: 7 of 16 Date: 08-Nov-2023

No.	Substance Name	RL
35.	Trichloroethylene (CAS No.: 79-01-6)	0.05
36.	2-Ethoxyethanol (CAS No.: 110-80-5)	0.05
37.	2-Methoxyethanol (CAS No.: 109-86-4)	0.05
38.	Acids generated from chromium trioxide and their oligomers: Chromic acid*** (CAS No.: 7738-94-5)	-
	Acids generated from chromium trioxide and their oligomers: Dichromic acid*** (CAS No.: 13530-68-2)	-
	Acids generated from chromium trioxide and their oligomers: Oligomers of chromic acid and dichromic acid (X C)	-
39.	Chromium trioxide ***(CAS No.: 1333-82-0)	-
	Cobalt(II) carbonate*** (CAS No.: 513-79-1)	-
	Cobalt(II) diacetate*** (CAS No.: 71-48-7)	-
	Cobalt(II) dinitrate*** (CAS No.: 10141-05-6)	-
	Cobalt(II) sulphate*** (CAS No.: 10124-43-3)	-
	1,2,3-trichloropropane (CAS No.: 96-18-4)	0.05
45.	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) (CAS No.: 71888-89-6)	0.05
46.	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) (CAS No.: 68515-42-4)	0.05
47.	1-Methyl-2-pyrrolidone (NMP) (CAS No.: 872-50-4)	0.05
48.	2-Ethoxyethyl acetate (CAS No.: 111-15-9)	0.05
49.	Hydrazine (CAS No.: 7803-57-8, 302-01-2)	0.05
50.	Strontium chromate*** (CAS No.: 7789-06-2)	=
51.	Cobalt dichloride (CAS No.: 7646-79-9)	0.005
52.	1,2-Dichloroethane (CAS No.: 107-06-2)	0.05
53.	2,2'-dichloro-4,4'-methylenedianiline (CAS No.: 101-14-4)	0.05
	2-Methoxyaniline, o-Anisidine (CAS No.: 90-04-0)	0.05
55.	4-(1,1,3,3-tetramethylbutyl)phenol (CAS No.: 140-66-9)	0.05
56.	Aluminosilicate Refractory Ceramic Fibres Coxides of aluminium and silicon are the main	0.05
	components present (in the fibres) within variable concentration ranges]	
	Arsenic acid*** (CAS No.: 7778-39-4)	-
	Bis(2-methoxyethyl) ether (CAS No.: 111-96-6)	0.05
	Bis(2-methoxyethyl) phthalate (CAS No.: 117-82-8)	0.05
	Calcium arsenate*** (CAS No.: 7778-44-1)	-
	Dichromium tris(chromate)*** (CAS No.: 24613-89-6)	-
	Formaldehyde, oligomeric reaction products with aniline (technical MDA) (CAS No.: 25214-70-4)	0.05
	Lead diazide, Lead azide*** (CAS No.: 13424-46-9)	=
	Lead dipicrate*** (CAS No.: 6477-64-1)	=
	Lead styphnate*** (CAS No.: 15245-44-0)	-
	N,N-dimethylacetamide (DMAC) (CAS No.: 127-19-5)	0.05
67.	Pentazinc chromate octahydroxide*** (CAS No.: 49663-84-5)	-



Date: 08-Nov-2023 Page: 8 of 16

No.	Substance Name	RL
68.	Phenolphthalein (CAS No.: 77-09-8)	0.05
69.	Potassium hydroxyoctaoxodizincatedichromate*** (CAS No.: 11103-86-9)	-
70.	Trilead diarsenate*** (CAS No.: 3687-31-8) (% S)	=
71.	Zirconia Aluminosilicate Refractory Ceramic Fibres Coxides of aluminium, silicon and zirconium	0.05
	are the main components present (in the fibres) within variable concentration ranges I	
	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone or Michler's base] (CAS No.: 2580-56-5)	0.05
73.	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone or Michler's base] (CAS No.: 548-62-9)	0.05
74.	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme) (CAS No.: 112-49-2)	0.05
75.	1, 2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) (CAS No.: 110-71-4)	0.05
76.	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC) (CAS No.: 2451-62-9)	0.05
77.	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC) (CAS No.: 59653-74-6) (※ T)	0.05
78.	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone or Michler's base] (CAS No.: 561-41-1)	0.05
79.	4,4'-bis(dimethylamino)benzophenone (Michler's ketone) (CAS No.: 90-94-8)	0.05
80.	Diboron trioxide*** (CAS No.: 1303-86-2)	=
	Formamide (CAS No.: 75-12-7)	0.05
	Lead(II) bis(methanesulfonate)*** (CAS No.: 17570-76-2)	-
	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base) (CAS No.: 101-61-1)	0.05
84.	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 0.1% of Michler's ketone or Michler's base] (CAS No.: 6786-83-0)	0.05
85.	[Phthalato(2-)]dioxotrilead*** (CAS No.: 69011-06-9)	=
86.	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (CAS No.: 84777-06-0)	0.05
87.	1,2-Diethoxyethane (CAS No.: 629-14-1)	0.05
88.	1-bromopropane (n-propyl bromide) (CAS No.: 106-94-5)	0.05
89.	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine (CAS No.: 143860-04-2)	0.05
90.	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	0.05
91.	4,4'-Methylenedi-o-toluidine (CAS No.: 838-88-0)	0.05
92.	4,4'-Oxydianiline and its salts (CAS No.: 101-80-4)	0.05
93.	4-Aminoazobenzene (CAS No.: 60-09-3)	0.05
94.	2,4-Diaminotoluene (CAS No.: 95-80-7)	0.05



Date: 08-Nov-2023 Page: 9 of 16

No.	Substance Name	RL
95.	4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a	0.05
	carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined	
	substances which include any of the individual isomers or a combination thereof]	
	6-methoxy-m-toluidine (p-cresidine) (CAS No.: 120-71-8)	0.05
	Acetic acid, lead salt, basic*** (CAS No.: 51404-69-4)	-
	Biphenyl-4-ylamine (CAS No.: 92-67-1)	0.05
	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE) (CAS No.: 1163-19-5)	0.05
100.	Cyclohexane-1,2-dicarboxylic anhydride (HHPA), cis-cyclohexane-1,2- dicarboxylic anhydride, trans-cyclohexane-1,2- dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA) (CAS No.: 85-42-7, 13149-00-3, 14166-21-3)	0.05
101.	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA) (CAS No.: 123-77-3)	0.05
102.	Dibutyltin dichloride (DBTC)*** (CAS No.: 683-18-1)	-
103.	Diethyl sulphate (CAS No.: 64-67-5)	0.05
104.	Diisopentyl phthalate (CAS No.: 605-50-5)	0.05
105.	Dimethyl sulphate (CAS No.: 77-78-1)	0.05
106.	Dinoseb (6-sec-butyl-2,4-dinitrophenol) (CAS No.: 88-85-7)	0.05
107.	Dioxobis(stearato)trilead*** (CAS No.: 12578-12-0)	-
108.	Fatty acids, C16-18, lead salts*** (CAS No.: 91031-62-8)	=
109.	Furan (CAS No.: 110-00-9)	0.05
110.	Henicosafluoroundecanoic acid (CAS No.: 2058-94-8)	0.05
111.	Heptacosafluorotetradecanoic acid (CAS No.: 376-06-7)	0.05
112.	Hexahydromethylphthalic anhydride (CAS No.: 25550-51-0)	0.05
	Hexahydro-4-methylphthalic anhydride (CAS No.: 19438-60-9)	
	Hexahydro-3-methylphthalic anhydride (CAS No.: 57110-29-9)	
	Hexahydro-1-methylphthalic anhydride (CAS No.: 48122-14-1)	
	Lead bis(tetrafluoroborate)*** (CAS No.: 13814-96-5) (X D)	-
	Lead cyanamidate*** (CAS No.: 20837-86-9)	-
115.	Lead dinitrate*** (CAS No.: 10099-74-8)	-
	Lead monoxide (lead oxide)*** (CAS No.: 1317-36-8)	-
117.	Lead oxide sulfate*** (CAS No.: 12036-76-9)	-
118.	Lead titanium trioxide*** (CAS No.: 12060-00-3)	-
119.	Lead Titanium Zirconium Oxide*** (CAS No.: 12626-81-2)	
120.	Methoxyacetic acid (CAS No.: 625-45-6)	0.05
121.	Methyloxirane (Propylene oxide) (CAS No.: 75-56-9)	0.05
122.	N,N-dimethylformamide; dimethyl formamide (CAS No.: 68-12-2)	0.05
123.	N-methylacetamide (CAS No.: 79-16-3)	0.05
124.	n-pentyl-isopentylphthalate (CAS No.: 776297-69-9)	0.05



Date: 08-Nov-2023 Page: 10 of 16

No.	Substance Name	RL
125.	o-aminoazotoluene (CAS No.: 97-56-3)	0.05
126.	Orange lead (lead tetroxide)*** (CAS No.: 1314-41-6)	=
127.	o-Toluidine (CAS No.: 95-53-4)	0.05
128.	Pentacosafluorotridecanoic acid (CAS No.: 72629-94-8)	0.05
129.	Pentalead tetraoxide sulphate*** (CAS No.: 12065-90-6)	-
130.	Pyrochlore, antimony lead yellow*** (CAS No.: 8012-00-8)	-
131.	Silicic acid (H2Si2O5), barium salt (1:1), lead-doped (X B) (CAS No.: 68784-75-8)	0.05
132.	Silicic acid, lead salt*** (CAS No.: 11120-22-2)	-
133.	Sulfurous acid, lead salt, dibasic*** (CAS No.: 62229-08-7)	-
134.	Tetraethyllead*** (CAS No.: 78-00-2)	-
135.	Tetralead trioxide sulphate*** (CAS No.: 12202-17-4)	-
136.	Tricosafluorododecanoic acid (CAS No.: 307-55-1)	0.05
137.	Trilead bis(carbonate) dihydroxide (basic lead carbonate)*** (CAS No.: 1319-46-6)	-
138.	Trilead dioxide phosphonate*** (CAS No.: 12141-20-7)	-
139.	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched	0.05
	alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated	
	covering UVCB- and well-defined substances, polymers and homologues, which include any of	
	the individual isomers and/or combinations thereof]	
	Ammonium pentadecafluorooctanoate (APFO)*** (CAS No.: 3825-26-1)	-
	Cadmium (Cd) (CAS No.: 7440-43-9)	0.005
	Cadmium oxide*** (CAS No.: 1306-19-0)	-
	Dipentyl phthalate (DPP) (CAS No.: 131-18-0)	0.05
	Pentadecafluorooctanoic acid (PFOA) (CAS No.: 335-67-1)	0.05
	Cadmium sulphide*** (CAS No.: 1306-23-6)	-
	Di-n-hexyl phthalate (DNHP) (CAS No.: 84-75-3)	0.05
147.	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I.	0.05
	Direct Red 28) (CAS No.: 573-58-0)	
148.	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-	0.05
	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6- (phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) (CAS No.: 1937-37-7)	0.05
149.	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6- (phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) (CAS No.: 1937-37-7) Imidazolidine-2-thione (2-imidazoline-2-thiol) (CAS No.: 96-45-7)	0.05
149. 150.	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) (CAS No.: 1937-37-7) Imidazolidine-2-thione (2-imidazoline-2-thiol) (CAS No.: 96-45-7) Lead di(acetate)*** (CAS No.: 301-04-2)	
149. 150. 151.	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) (CAS No.: 1937-37-7) Imidazolidine-2-thione (2-imidazoline-2-thiol) (CAS No.: 96-45-7) Lead di(acetate)*** (CAS No.: 301-04-2) Trixylyl phosphate (CAS No.: 25155-23-1)	
149. 150. 151. 152.	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) (CAS No.: 1937-37-7) Imidazolidine-2-thione (2-imidazoline-2-thiol) (CAS No.: 96-45-7) Lead di(acetate)*** (CAS No.: 301-04-2) Trixylyl phosphate (CAS No.: 25155-23-1) 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (CAS No.: 68515-50-4)	0.05
149. 150. 151. 152. 153.	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) (CAS No.: 1937-37-7) Imidazolidine-2-thione (2-imidazoline-2-thiol) (CAS No.: 96-45-7) Lead di(acetate)*** (CAS No.: 301-04-2) Trixylyl phosphate (CAS No.: 25155-23-1) 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (CAS No.: 68515-50-4) Cadmium chloride*** (CAS No.: 10108-64-2)	0.05 - 0.05
149. 150. 151. 152. 153. 154.	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) (CAS No.: 1937-37-7) Imidazolidine-2-thione (2-imidazoline-2-thiol) (CAS No.: 96-45-7) Lead di(acetate)*** (CAS No.: 301-04-2) Trixylyl phosphate (CAS No.: 25155-23-1) 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (CAS No.: 68515-50-4) Cadmium chloride*** (CAS No.: 10108-64-2) Sodium perborate; perboric acid, sodium salt***	0.05 - 0.05
149. 150. 151. 152. 153. 154. 155.	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) (CAS No.: 1937-37-7) Imidazolidine-2-thione (2-imidazoline-2-thiol) (CAS No.: 96-45-7) Lead di(acetate)*** (CAS No.: 301-04-2) Trixylyl phosphate (CAS No.: 25155-23-1) 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (CAS No.: 68515-50-4) Cadmium chloride*** (CAS No.: 10108-64-2)	0.05 - 0.05 0.05



Date: 08-Nov-2023 Page: 11 of 16

No.	Substance Name	RL
157.	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) (CAS No.: 3846-71-7)	0.05
158.	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)***	-
	(CAS No.: 15571-58-1)	
159.	Cadmium fluoride*** (CAS No.: 7790-79-6)	-
	Cadmium sulphate*** (CAS No.: 10124-36-4, 31119-53-6)	-
161.	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and	=
	2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-	
	stannatetradecanoate (reaction mass of DOTE and MOTE)***	
162.	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters	0.05
	with ≥ 0.3% of dihexyl phthalate (CAS No.: 68515-51-5, 68648-93-1)	
163.	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-	0.05
	dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1]	
1.6.4	and [2] or any combination thereof]	0.05
	1,3-propanesultone (CAS No.: 1120-71-4)	0.05
	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) (CAS No.: 3864-99-1)	0.05
	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) (CAS No.: 36437-37-3)	0.05
	Nitrobenzene (CAS No.: 98-95-3)	0.05
168.	Perfluorononan-1-oic-acid and its sodium and ammonium salts (CAS No.: 375-95-1, 21049-39-	0.05
	8, 4149-60-4)	
	Benzo[def]chrysene (Benzo[a]pyrene) (CAS No.: 50-32-8)	0.05
	4,4'-isopropylidenediphenol (Bisphenol A) (CAS No.: 80-05-7)	0.05
171.	4-Heptylphenol, branched and linear (4-HPbl) [substances with a linear and/or branched alkyl chain with a	0.05
	carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and	
170	well-defined substances which include any of the individual isomers or a combination thereof]	0.05
1/2.	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts (CAS No.: 3108-42-	0.05
470	7, 335-76-2, 3830-45-3)	0.05
	p-(1,1-dimethylpropyl)phenol (CAS No.: 80-46-6)	0.05
	Perfluorohexane-1-sulphonic acid and its salts (PFHxS) (CAS No.: 355-46-4)	0.05
175.	1,6,7,8,9,14,15,16,17, 17,18,18- Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene	0.05
	("Dechlorane Plus"TM) [covering any of its individual anti- and syn-isomers or any combination thereof]	
	Benz[a]anthracene (CAS No.: 56-55-3)	0.05
	Cadmium nitrate*** (CAS No.: 10325-94-7)	-
178.	'	-
	Cadmium hydroxide*** (CAS No.: 21041-95-2)	_
	Chrysene (CAS No.: 218-01-9)	0.05
181.	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol,	=
	branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear] (※ R)	



Page: 12 of 16 Date: 08-Nov-2023

No.	Substance Name	RL
182.	Dicyclohexyl phthalate (DCHP) (CAS No.: 84-61-7)	0.05
	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride; TMA) (CAS No.: 552-30-7)	0.05
184.	Benzo[ghi]perylene (CAS No.: 191-24-2)	0.05
185.	Octamethylcyclotetrasiloxane (D4) (CAS No.: 556-67-2)	0.05
186.	Decamethylcyclopentasiloxane (D5) (CAS No.: 541-02-6)	0.05
187.	Dodecamethylcyclohexasiloxane (D6) (CAS No.: 540-97-6)	0.05
188.	Disodium octaborate*** (CAS No.: 12008-41-2)	-
189.	Ethylenediamine (CAS No.: 107-15-3)	0.05
190.	Lead (Pb) (CAS No.: 7439-92-1) (●)	0.005
191.	Terphenyl, hydrogenated (CAS No.: 61788-32-7)	0.05
192.	2,2-bis(4'-hydroxyphenyl)-4-methylpentane (CAS No.: 6807-17-6)	0.05
193.	Benzo[k]fluoranthene (CAS No.: 207-08-9)	0.05
194.	Fluoranthene (CAS No.: 206-44-0)	0.05
195.	Phenanthrene (CAS No.: 85-01-8)	0.05
196.	Pyrene (CAS No.: 129-00-0)	0.05
197.	1,7,7-trimethyl-3-(phenylmethylene) bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor) (CAS No.: 15087-24-8)	0.05
198.	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering	0.05
100	any of their individual isomers and combinations thereof)	
	2-methoxyethyl acetate (CAS No.: 110-49-6)	0.05
	4-tert-butylphenol (CAS No.: 98-54-4)	0.05
201.	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	0.05
202.	Diisohexyl phthalate (CAS No.: 71850-09-4)	0.05
203.	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone (CAS No.: 119313-12-1)	0.05
204.	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one (CAS No.: 71868-10-5)	0.05
205.	Perfluorobutane sulfonic acid (PFBS) and its salts	0.05
206.	1-vinylimidazole (CAS No.: 1072-63-5)	0.05
207.	2-methylimidazole (CAS No.: 693-98-1)	0.05
208.	Butyl 4-hydroxybenzoate (CAS No.: 94-26-8)	0.05
209.	Dibutylbis(pentane-2,4-dionato-O,O')tin*** (CAS No.: 22673-19-4)	-
	Bis(2-(2-methoxyethoxy)ethyl) ether (CAS No.: 143-24-8)	0.05
211.	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety***	-
212.	1,4-dioxane (CAS No.: 123-91-1)	0.05



Date: 08-Nov-2023 Page: 13 of 16

No.	Substance Name	RL
213.	2,2-bis(bromomethyl)propane1,3-diol (BMP) (CAS No.: 3296-90-0)	0.05
	2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA) (CAS No.: 36483-57-5, 1522-92-5)	0.05
	2,3-dibromo-1-propanol (2,3-DBPA) (CAS No.: 96-13-9)	0.05
214.	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers ((2R)-3-(4-tert-butylphenyl)-2-methylpropanal; 2-(4-tert-butylbenzyl)propionaldehyde; (2S)-3-(4-tert-butylphenyl)-2-methylpropanal) (CAS No.: 75166-31-3; 80-54-6; 75166-30-2)	0.05
215.	4,4'-(1-methylpropylidene)bisphenol; (bisphenol B) (CAS No.: 77-40-7)	0.05
216.	Glutaral (CAS No.: 111-30-8)	0.05
217.	Alkanes, C14-16, chloro; Alkanes, C14-17, chloro; di-, tri- and tetrachlorotetradecane; Tetradecane, chloro derivs. (CAS No.: 1372804-76-6; 85535-85-9; 198840-65-2)	0.05
218.	Orthoboric acid, sodium salt*** (CAS No.: 13840-56-7) · boric acid (H3BO3), sodium salt, hydrate; Boric acid (H3BO3), disodium salt; Trisodium orthoborate; Boric acid, sodium salt; Boric acid (H3BO3), sodium salt (1:1) (CAS No.: 25747-83-5; 22454-04-2; 14312-40-4; 1333-73-9; 14890-53-0) (※ U)	-
219.	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/or combinations thereof (PDDP) (Phenol, 4-dodecyl, branched; 4-isododecylphenol; Phenol, 4-isododecyl-; Phenol, dodecyl-, branched; Phenol, (tetrapropenyl) derivatives; Phenol, tetrapropylene-) (CAS No.: 210555-94-5; 27459-10-5; 27147-75-7; 121158-58-5; 74499-35-7; 57427-55-1)	0.05
220.	(\pm)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	0.05
221.	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC) (CAS No.: 119-47-1)	0.05
222.	S-(tricyclo[5.2.1.0'2,6]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-	0.05
222	(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate (CAS No.: 255881-94-8) (※ G)	0.05
	Tris(2-methoxyethoxy)vinylsilane (CAS No.: 1067-53-4) N-(hydroxymethyl)acrylamide (CAS No.: 924-42-5)	0.05
	1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene] (CAS No.: 37853-59-1)	0.05
	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (CAS No.: 79-94-7)	0.05
	4,4'-sulphonyldiphenol (CAS No.: 80-09-1)	0.05
	Barium diboron tetraoxide*** (CAS No.: 13701-59-2) (X A)	-
	Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof	0.05
230.	Isobutyl 4-hydroxybenzoate (CAS No.: 4247-02-3)	0.05
	Melamine (CAS No.: 108-78-1)	0.05
	Perfluoroheptanoic acid and its salts	0.05
	reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine (※ I)	0.05
234.	Bis(4-chlorophenyl) sulphone (CAS No.: 80-07-9)	0.05
	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (CAS No.: 75980-60-8)	0.05



Page: 14 of 16 Date: 08-Nov-2023

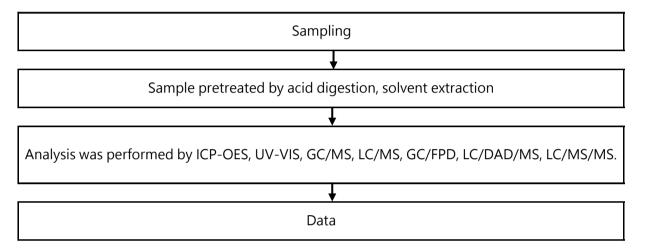
(2) Proposed list of SVHC (2023/09/01):

(2)						
No.	Substance Name	RL				
1.	2,4,6-tri-tert-butylphenol (CAS No.: 732-26-3)	0.05				
2.	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (CAS No.: 3147-75-9)	0.05				
3.	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one (CAS	0.05				
	No.: 119344-86-4)					
4.	Bumetrizole (CAS No.: 3896-11-5)	0.05				
5.	Dibutyl phthalate (DBP) (CAS No.: 84-74-2)	0.05				
6.	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	0.05				



Date: 08-Nov-2023 Page: 15 of 16

Analytical flow chart of SVHC





Date: 08-Nov-2023 Page: 16 of 16

* The tested sample / part is marked by an arrow if it's shown on the photo. *



** End of Report **



TI Report Number: 64162438

Component: Lead Frame

Analysis Type: RoHS 10 & Halogens

Analysis Date: 10/31/2023





Date: 31-Oct-2023

Page: 1 of 18

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By

÷

Sample Name

:

Sample Receiving Date

: 23-Oct-2023

Testing Period

: 23-Oct-2023 to 31-Oct-2023

Test Requested

(1) As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).

(2) Please refer to next pages for the other item(s).

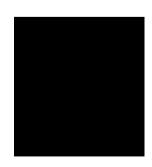
Test Results

Please refer to following pages.

Conclusion

(1) Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.







Date: 31-Oct-2023

Page: 2 of 18

Test Part Description

No.1 : COPPER COLORED METAL

Test Result(s)

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	•
Cadmium (Cd)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	100
Lead (Pb)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Mercury (Hg)	With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Hexavalent Chromium Cr(VI) (#2)	With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.	μg/cm²	0.1	n.d.	-
Monobromobiphenyl		mg/kg	5	n.d.	-
Dibromobiphenyl		mg/kg	5	n.d.	=
Tribromobiphenyl		mg/kg	5	n.d.	-
Tetrabromobiphenyl		mg/kg	5	n.d.	-
Pentabromobiphenyl		mg/kg	5	n.d.	-
Hexabromobiphenyl		mg/kg	5	n.d.	-
Heptabromobiphenyl		mg/kg	5	n.d.	-
Octabromobiphenyl		mg/kg	5	n.d.	-
Nonabromobiphenyl		mg/kg	5	n.d.	-
Decabromobiphenyl		mg/kg	5	n.d.	-
Sum of PBBs	With reference to IEC 62321-6: 2015,	mg/kg	-	n.d.	1000
Monobromodiphenyl ether	analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Dibromodiphenyl ether		mg/kg	5	n.d.	-
Tribromodiphenyl ether		mg/kg	5	n.d.	-
Tetrabromodiphenyl ether		mg/kg	5	n.d.	-
Pentabromodiphenyl ether		mg/kg	5	n.d.	-
Hexabromodiphenyl ether		mg/kg	5	n.d.	-
Heptabromodiphenyl ether		mg/kg	5	n.d.	-
Octabromodiphenyl ether		mg/kg	5	n.d.	-
Nonabromodiphenyl ether		mg/kg	5	n.d.	-
Decabromodiphenyl ether		mg/kg	5	n.d.	-
Sum of PBDEs		mg/kg	-	n.d.	1000



Page: 3 of 18 Date: 31-Oct-2023

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Butyl benzyl phthalate (BBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Dibutyl phthalate (DBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Di-(2-ethylhexyl) phthalate (DEHP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Diisobutyl phthalate (DIBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Diisodecyl phthalate (DIDP) (CAS No.: 26761-40-0, 68515-49-1)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Diisononyl phthalate (DINP) (CAS No.: 28553-12-0, 68515-48-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Di-n-octyl phthalate (DNOP) (CAS No.: 117-84-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Bis(2-methoxyethyl) phthalate (DMEP) (CAS No.: 117-82-8)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Di-n-pentyl phthalate (DNPP) (CAS No.: 131-18-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Di-n-hexyl phthalate (DNHP) (CAS No.: 84-75-3)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
1,2-Benzenedicarboxylic acid, di-C6- 8-branched alkyl esters, C7-rich (DIHP) (CAS No.: 71888-89-6)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
1,2-Benzenedicarboxylic acid, di-C7- 11-branched and linear alkyl esters (DHNUP) (CAS No.: 68515-42-4)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β - HBCDD, γ - HBCDD) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	With reference to IEC 62321-9: 2021, analysis was performed by GC/MS.	mg/kg	20	n.d.	-



o.: Date: 31-Oct-2023

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Fluorine (F) (CAS No.: 14762-94-8)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	=
	analysis was performed by IC.				
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	-
	analysis was performed by IC.				
Bromine (Br) (CAS No.: 10097-32-2)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	-
	analysis was performed by IC.				
lodine (I) (CAS No.: 14362-44-8)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	-
	analysis was performed by IC.				
PFOS and its salts (CAS No.: 1763-	With reference to CEN/TS 15968: 2010,	mg/kg	0.01	n.d.	-
23-1 and its salts)	analysis was performed by LC/MS/MS.				
PFOA and its salts (CAS No.: 335-67-	With reference to CEN/TS 15968: 2010,	mg/kg	0.01	n.d.	-
1 and its salts)	analysis was performed by LC/MS/MS.				
Polyvinyl chloride (PVC)	With reference to ASTM E1252: 2021,	**	-	Negative	-
	analysis was performed by FT-IR and				
	Flame Test.				
Polychlorinated biphenyls (PCBs)	With reference to US EPA 3550C: 2007,	mg/kg	0.5	n.d.	-
	analysis was performed by GC/MS.				
Polychlorinated naphthalene (PCNs)	With reference to US EPA 3550C: 2007,	mg/kg	5	n.d.	-
	analysis was performed by GC/MS.				
Polychlorinated terphenyls (PCTs)	With reference to US EPA 3550C: 2007,	mg/kg	0.5	n.d.	-
	analysis was performed by GC/MS.				
Short Chain Chlorinated	With reference to ISO 18219-1: 2021,	mg/kg	50	n.d.	-
Paraffins(C10-C13) (SCCP) (CAS No.:	analysis was performed by GC/MS.				
85535-84-8)					
Tributyl tin (TBT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Bis(tributyltin) oxide (TBTO) (CAS	Calculated from the result of Tributyl	mg/kg	0.03 🛦	n.d.	-
No.: 56-35-9)	Tin (TBT).				
Triphenyl tin (TPT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	1
	analysis was performed by GC/FPD.				
Dibutyl tin (DBT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Dioctyl tin (DOT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Bisphenol A (CAS No.: 80-05-7)	With reference to RSTS-CHEM-239-1,	mg/kg	1	n.d.	-
	analysis was performed by LC/MS/MS.				

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Page: 4 of 18



o.: Date: 31-Oct-2023

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Antimony (Sb) (CAS No.: 7440-36-0)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-
Beryllium (Be) (CAS No.: 7440-41-7)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-
Arsenic (As) (CAS No.: 7440-38-2)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-

Note:

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit
- 3. n.d. = Not Detected (Less than MDL)
- 4. "-" = Not Regulated
- 5. **= Qualitative analysis (No Unit)
- 6. Negative = Undetectable ; Positive = Detectable
- 7.(#2) =
 - a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 μ g/cm². The sample coating is considered to contain Cr(VI).
 - b. The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 μ g/cm²). The coating is considered a non-Cr(VI) based coating
 - c. The result between 0.10 μ g/cm² and 0.13 μ g/cm² is considered to be inconclusive unavoidable coating variations may influence the determination.
- 8. ▲ : The MDL was evaluated for element / tested substance.

Conversion Formula : $AX = A \times F$

AX	Α	F
Bis(tributyltin)oxide (TBTO)	Tributyl Tin (TBT)	1.0276

Parameter Conversion Table: https://eecloud.sgs.com/Region TW/DocDownload.aspx?name=Others

- 9. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.
- 10. This is the additional test report of ETR23A04238.

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Page: 5 of 18



Date: 31-Oct-2023

Page: 6 of 18

PFAS Remark:

The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.)

Classification of Substance Concentration	Substance Name	CAS No.
Perfluorooctane sulfonates and	Potassium perfluorooctanesulfonate (PFOS-K)	2795-39-3
its salts (PFOS and its salts)	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
(CAS No.: 1763-23-1 and its salts)	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH ₄)	29081-56-9
	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) ₂)	70225-14-8
	Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C_2H_5) ₄)	56773-42-3
	N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane- 1-sulfonate (PFOS-DDA)	251099-16-8
	Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
Perfluorooctane sulfonates and its salts (PFOS and its salts)	Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
(CAS No.: 1763-23-1 and its salts)	Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
Perfluorooctanoic acid and its	Sodium perfluorooctanoate (PFOA-Na)	335-95-5
salts (PFOA and its salts)	Potassium perfluorooctanoate (PFOA-K)	2395-00-8
(CAS No.: 335-67-1 and its salts)	Silver perfluorooctanote (PFOA-Ag)	335-93-3
	Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	Lithium perfluorooctanoate (PFOA-Li)	17125-58-5

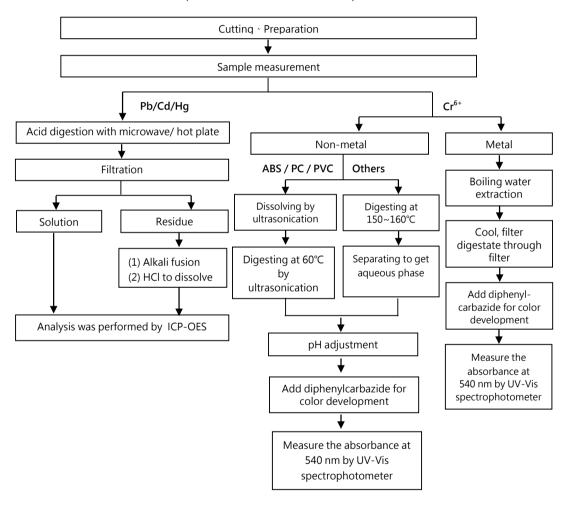


.: Date: 31-Oct-2023

Analytical flow chart of heavy metal

These samples were dissolved totally by pre-conditioning method according to below flow chart.

(Cr⁶⁺ test method excluded)



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Page: 7 of 18



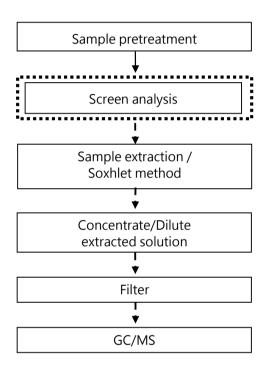
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Analytical flow chart – PBBs / PBDEs

First testing process

Optional screen process

Confirmation process



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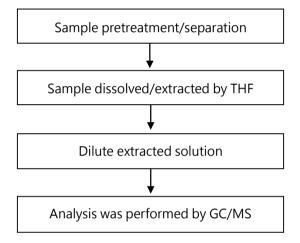
Page: 8 of 18



Date: 31-Oct-2023

Analytical flow chart - Phthalate

[Test method: IEC 62321-8]



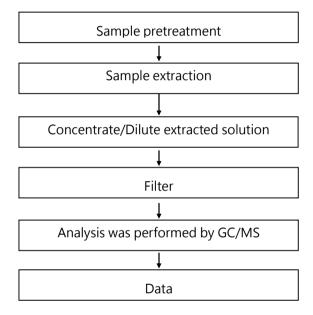
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Page: 9 of 18



No.:	Date: 31-Oct-2023
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Analytical flow chart - HBCDD



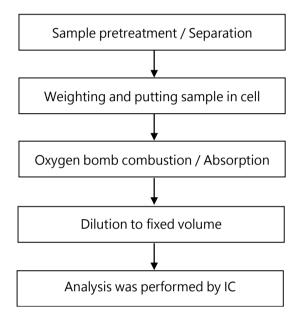
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Page: 10 of 18



o.: Date: 31-Oct-2023

Analytical flow chart - Halogen



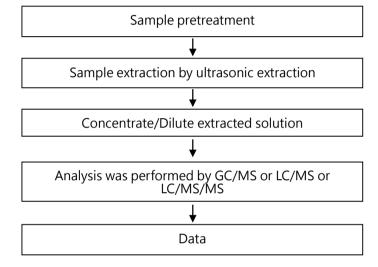
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Page: 11 of 18



Date: 31-Oct-2023

Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)



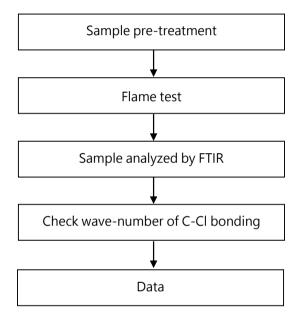
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Page: 12 of 18



o.: Date: 31-Oct-2023

Analysis flow chart - PVC



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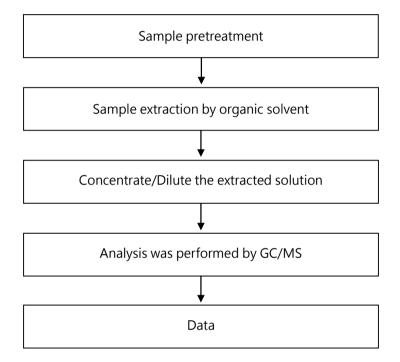
Page: 13 of 18



Date: 31-Oct-2023

Analytical flow chart

* Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT



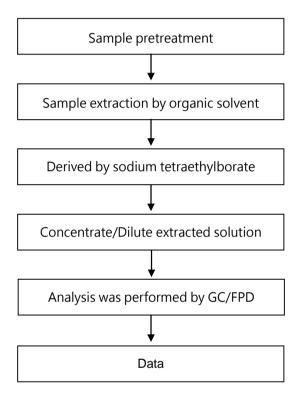
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Page: 14 of 18



Date: 31-Oct-2023

Analytical flow chart - Organic-Tin



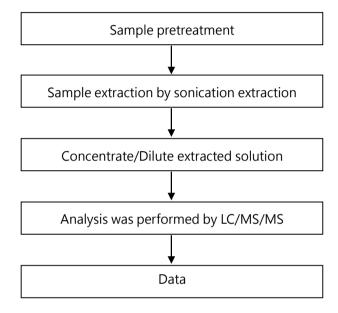
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Page: 15 of 18



Date: 31-Oct-2023 No.:

Analytical flow chart - Bisphenol A



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Page: 16 of 18

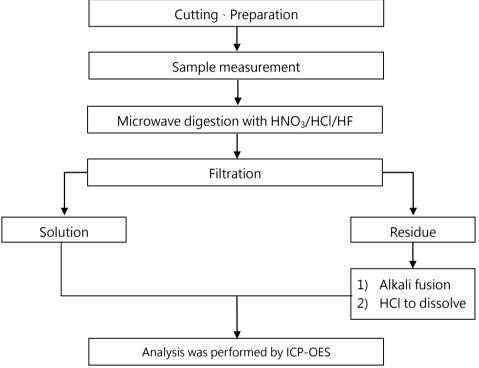


Date: 31-Oct-2023

Analytical flow chart of elements (Heavy metal included)

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【Reference method: US EPA 3051A \ US EPA 3052】



* US EPA 3051A method does not add HF.

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Page: 17 of 18



o.: Date: 31-Oct-2023

* The tested sample / part is marked by an arrow if it's shown on the photo. *



** End of Report **

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Page: 18 of 18



TI Report Number: 64073907

Component : Mold Compound

Analysis Type: RoHS 10 & Halogens

Analysis Date: 08/06/2023



No.:

Date: 07-Aug-2023 Page: 1 of 12

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By

: EPOXY MOLDING COMPOUND

Sample Name Style/Item No.

tyle/Item No. :

Sample Receiving Date

: 01-Aug-2023

Testing Period

: 01-Aug-2023 to 07-Aug-2023

Test Requested

(1) As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).

(2) Please refer to next pages for the other item(s).

Test Results

Please refer to following pages.

Conclusion

(1) Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Ray Chang, Ph.D./Department Manager Signed for and on behalf SGS TAIWAN LTD. Chemical Laboratory-Kaohsiung





Ν	lo.:			

Date: 07-Aug-2023 Page: 2 of 12

TEST PART DESCRIPTION

No.1 : BLACK EPOXY MOLDING COMPOUND

Test Result(s)

Test Item(s)	Method	Unit	MDL	Result No.1	Limit
Cadmium (Cd)	With reference to IEC 62321-5: 2013,	mg/kg	2	n.d.	100
Cadiffidiff (Cd)	analysis was performed by ICP-OES.	mg/kg		n.a.	100
Lead (Pb)	With reference to IEC 62321-5: 2013,	ma/ka	2	n.d.	1000
Lead (PD)	· · · · · · · · · · · · · · · · · · ·	mg/kg	2	n.a.	1000
NA - v - v · v · (I I - v)	analysis was performed by ICP-OES. With reference to IEC 62321-4: 2013+	(1	2	1	1000
Mercury (Hg)		mg/kg	2	n.d.	1000
	AMD1: 2017, analysis was performed by ICP-OES.				
Hexavalent Chromium Cr(VI)	With reference to IEC 62321-7-2: 2017,	mg/kg	8	n.d.	1000
	analysis was performed by UV-VIS.	mg/kg	0	n.u.	1000
Manahramahinhanyi	analysis was performed by 0 v - v1s.	ma/ka	5	n.d.	_
Monobromobiphenyl Dibromobiphenyl		mg/kg	5	n.d.	-
Dibromobiphenyl Tribromobiphenyl		mg/kg	5		
1 ,		mg/kg		n.d.	-
Tetrabromobiphenyl	<u> </u>	mg/kg	5	n.d.	
Pentabromobiphenyl	With reference to IEC 62321-6: 2015,	mg/kg	5	n.d.	-
Hexabromobiphenyl	analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Heptabromobiphenyl		mg/kg	5	n.d.	-
Octabromobiphenyl		mg/kg	5	n.d.	-
Nonabromobiphenyl		mg/kg	5	n.d.	-
Decabromobiphenyl		mg/kg	5	n.d.	-
Sum of PBBs		mg/kg	-	n.d.	1000
Monobromodiphenyl ether		mg/kg	5	n.d.	-
Dibromodiphenyl ether		mg/kg	5	n.d.	-
Tribromodiphenyl ether		mg/kg	5	n.d.	=.
Tetrabromodiphenyl ether		mg/kg	5	n.d.	-
Pentabromodiphenyl ether	With reference to IEC 62321-6: 2015,	mg/kg	5	n.d.	-
Hexabromodiphenyl ether	analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Heptabromodiphenyl ether	analysis was performed by GC/MS.	mg/kg	5	n.d.	=
Octabromodiphenyl ether		mg/kg	5	n.d.	-
Nonabromodiphenyl ether		mg/kg	5	n.d.	-
Decabromodiphenyl ether		mg/kg	5	n.d.	-
Sum of PBDEs		mg/kg	-	n.d.	1000



Page: 3 of 12 Date: 07-Aug-2023

Test Item(s)	Method	Unit	MDL	Result	Limit
Dandlium (Da) (CAC No : 7440, 41, 7)	With reference to UC FDA 2052: 1006	20 G /l/G	2	No.1	
Beryllium (Be) (CAS No.: 7440-41-7)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
A (A) (CACAL 7440 20 2)	analysis was performed by ICP-OES.				
Arsenic (As) (CAS No.: 7440-38-2)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
(51) (616) 1 7440 26 2)	analysis was performed by ICP-OES.		•		
Antimony (Sb) (CAS No.: 7440-36-0)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α -HBCDD, β - HBCDD, γ - HBCDD) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	With reference to IEC 62321: 2008, analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Perfluorooctanoic acid (PFOA) and it's salt (CAS No.: 335-67-1 and its salts)	With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
PFOS and its salts (CAS No.: 1763-23-1 and its salts)	With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Fluorine (F) (CAS No.: 14762-94-8)		mg/kg	50	n.d.	-
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	-
Bromine (Br) (CAS No.: 10097-32-2)	analysis was performed by IC.	mg/kg	50	n.d.	-
lodine (I) (CAS No.: 14362-44-8)		mg/kg	50	n.d.	-
Dibutyl phthalate (DBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Di-(2-ethylhexyl) phthalate (DEHP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Diisobutyl phthalate (DIBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Butyl benzyl phthalate (BBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Diisopentyl phthalate (DIPP) (CAS No.: 605-50-5)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Diisononyl phthalate (DINP) (CAS No.: 28553-12-0, 68515-48-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Di-n-octyl phthalate (DNOP) (CAS No.: 117-84-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-



No.:

Date: 07-Aug-2023 Page: 4 of 12

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Di-n-hexyl phthalate (DNHP) (CAS No.:	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	-
84-75-3)	analysis was performed by GC/MS.				
Bis-(2-methoxyethyl) phthalate (DMEP)	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	-
(CAS No.: 117-82-8)	analysis was performed by GC/MS.				
Di-pentyl phthalate (DNPP) (CAS No.:	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	-
131-18-0)	analysis was performed by GC/MS.				
1,2-Benzenedicarboxylic acid, di-C6-8-	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	-
branched alkyl esters, C7-rich (DIHP)	analysis was performed by GC/MS.				
(CAS No.: 71888-89-6)					
1,2-Benzenedicarboxylic acid, di-C7-	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	-
11-branched and linear alkyl esters	analysis was performed by GC/MS.				
(DHNUP) (CAS No.: 68515-42-4)					
Diisodecyl phthalate (DIDP) (CAS No.:	With reference to IEC 62321-8: 2017,	mg/kg	50	n.d.	-
26761-40-0, 68515-49-1)	analysis was performed by GC/MS.				

Note:

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit
- 3. n.d. = Not Detected (Less than MDL)
- 4. "-" = Not Regulated
- 5. PFOS and its salts including:

CAS No.: 1763-23-1, 2795-39-3, 29457-72-5, 29081-56-9, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7, 91036-71-4, 4021-47-0 and others.

- 6. PFOA and its salts including:
 - CAS No.: 335-67-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0, 3825-26-1 and others.
- 7. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.
- 8. This is the additional test report of EKR23800024.



No.:

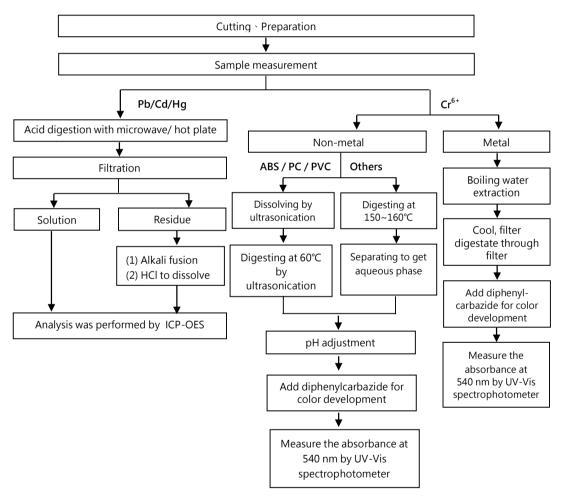
Date: 07-Aug-2023

Page: 5 of 12

Analytical flow chart of heavy metal

These samples were dissolved totally by pre-conditioning method according to below flow chart.

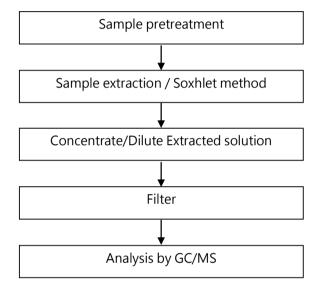
(Cr^{6+} test method excluded)





Page: 6 of 12 Date: 07-Aug-2023

PBB/PBDE analytical FLOW CHART





No.:

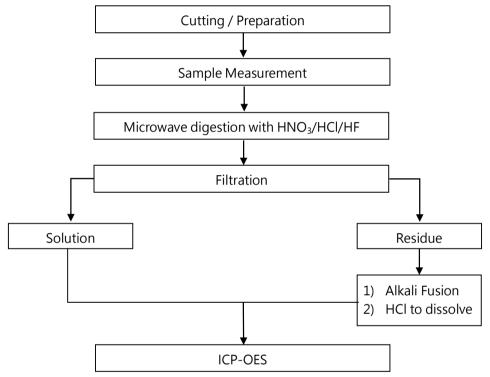
Date: 07-Aug-2023

Page: 7 of 12

Analytical flow chart of Elements (Heavy Metal included)

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【Reference method: US EPA 3051A、US EPA 3052】



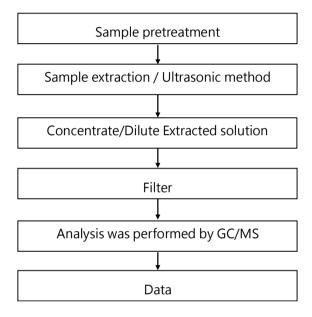
* US EPA 3051A method does not add HF.



Date: 07-Aug-2023

Page: 8 of 12

Analytical flow chart - HBCDD



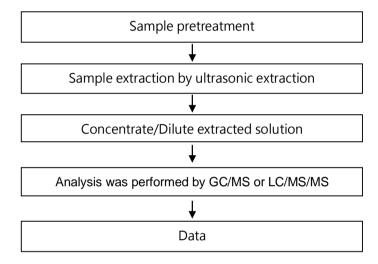


No.:

Date: 07-Aug-2023

Page: 9 of 12

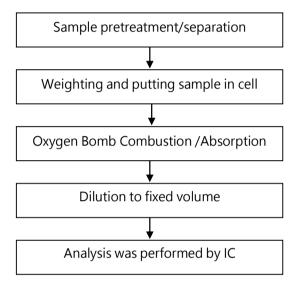
Analytical flow chart - PFAS (including PFOA/PFOS/its related compound, etc.)





Page: 10 of 12 Date: 07-Aug-2023

Analytical flow chart of Halogen

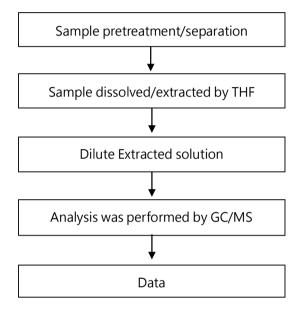




Page: 11 of 12 Date: 07-Aug-2023

Analytical flow chart of phthalate content

【Test method: IEC 62321-8】



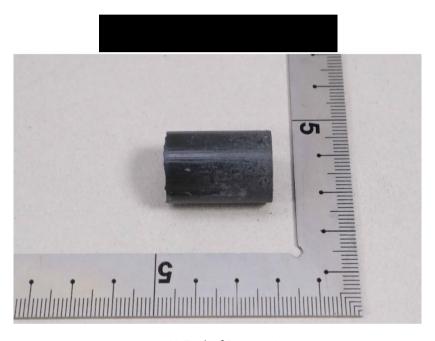


No.:

Date: 07-Aug-2023

Page: 12 of 12

* The tested sample / part is marked by an arrow if it's shown on the photo. *



** End of Report **



TI Report Number: 61462730

Component: Bond Wire

Analysis Type: RoHS 10 & Halogens

Analysis Date: 06/04/2023



Date: 05-Jun-2023

Page: 1 of 16

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By

:

Sample Name

: COPPER WIRE

No.:

Sample Receiving Date

26-May-2023

Testing Period

: 26-May-2023 to 02-Jun-2023

Test Requested

(1) As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).

(2) Please refer to next pages for the other item(s).

Test Results

Please refer to following pages.

Conclusion

(1) Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Troy Chang / Department Malager Signed for and on behalf of Alwah SGS TAIWAN LTD. Chemical Laboratory - Taipei





D.:	Date: 05-Jun-2023
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Test Part Description

No.1 : COPPER COLORED METAL WIRE

Test Result(s)

Test Item(s)	Method	Unit	MDL	Result	Limit
	W''		2	No.1	100
Cadmium (Cd)	With reference to IEC 62321-5: 2013,	mg/kg	2	n.d.	100
1 (01)	analysis was performed by ICP-OES.	4			1000
Lead (Pb)	With reference to IEC 62321-5: 2013,	mg/kg	2	n.d.	1000
	analysis was performed by ICP-OES.	4			1000
Mercury (Hg)	With reference to IEC 62321-4: 2013+	mg/kg	2	n.d.	1000
	AMD1: 2017, analysis was performed				
	by ICP-OES.				
Hexavalent Chromium Cr(VI) (#2)	With reference to IEC 62321-7-1: 2015,	μg/cm²	0.1	n.d.	-
	analysis was performed by UV-VIS.				
Monobromobiphenyl		mg/kg	5	n.d.	-
Dibromobiphenyl		mg/kg	5	n.d.	-
Tribromobiphenyl		mg/kg	5	n.d.	-
Tetrabromobiphenyl		mg/kg	5	n.d.	-
Pentabromobiphenyl		mg/kg	5	n.d.	ı
Hexabromobiphenyl		mg/kg	5	n.d.	ı
Heptabromobiphenyl		mg/kg	5	n.d.	1
Octabromobiphenyl		mg/kg	5	n.d.	-
Nonabromobiphenyl		mg/kg	5	n.d.	-
Decabromobiphenyl		mg/kg	5	n.d.	-
Sum of PBBs	With reference to IEC 62321-6: 2015,	mg/kg	-	n.d.	1000
Monobromodiphenyl ether	analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Dibromodiphenyl ether		mg/kg	5	n.d.	-
Tribromodiphenyl ether		mg/kg	5	n.d.	-
Tetrabromodiphenyl ether		mg/kg	5	n.d.	-
Pentabromodiphenyl ether		mg/kg	5	n.d.	-
Hexabromodiphenyl ether	7	mg/kg	5	n.d.	-
Heptabromodiphenyl ether	7	mg/kg	5	n.d.	-
Octabromodiphenyl ether		mg/kg	5	n.d.	-
Nonabromodiphenyl ether	7	mg/kg	5	n.d.	-
Decabromodiphenyl ether		mg/kg	5	n.d.	-
Sum of PBDEs	7	mg/kg	-	n.d.	1000

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Page: 2 of 16



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Date: 05-Jun-2023	Page: 3 of 16

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Polychlorinated biphenyls (PCBs)	With reference to US EPA 3550C: 2007,	mg/kg	0.5	n.d.	-
	analysis was performed by GC/MS.				
Polychlorinated naphthalene (PCNs)	With reference to US EPA 3550C: 2007,	mg/kg	5	n.d.	
	analysis was performed by GC/MS.				
Polychlorinated terphenyls (PCTs)	With reference to US EPA 3550C: 2007,	mg/kg	0.5	n.d.	-
	analysis was performed by GC/MS.				
Short Chain Chlorinated	With reference to ISO 18219-1: 2021,	mg/kg	50	n.d.	-
Paraffins(C10-C13) (SCCP) (CAS No.: 85535-84-8)	analysis was performed by GC/MS.				
Tributyl tin (TBT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Bis(tributyltin) oxide (TBTO) (CAS	Calculated from the result of Tributyl	mg/kg	0.03 🛦	n.d.	-
No.: 56-35-9)	Tin (TBT).				
Triphenyl tin (TPT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Dibutyl tin (DBT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Dioctyl tin (DOT)	With reference to ISO 17353: 2004,	mg/kg	0.03	n.d.	-
	analysis was performed by GC/FPD.				
Fluorine (F) (CAS No.: 14762-94-8)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	-
	analysis was performed by IC.				
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	-
	analysis was performed by IC.				
Bromine (Br) (CAS No.: 10097-32-2)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	-
	analysis was performed by IC.				
lodine (I) (CAS No.: 14362-44-8)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.	-
	analysis was performed by IC.				
Beryllium (Be) (CAS No.: 7440-41-7)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
Antimony (Sb) (CAS No.: 7440-36-0)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.	-
	analysis was performed by ICP-OES.				
PFOS and its salts (CAS No.: 1763-		mg/kg	0.01	n.d.	-
23-1 and its salts)	With reference to CEN/TS 15968: 2010,				
PFOA and its salts (CAS No.: 335-67-	analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1 and its salts)					



No.:		
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Page: 4 of 16 Date: 05-Jun-2023

Test Item(s)	Method	Unit	MDL	Result No.1	Limit
Polyvinyl chloride (PVC)	With reference to ASTM E1252: 2021, analysis was performed by FT-IR and Flame Test.	**	-	Negative	-
Dibutyl phthalate (DBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Butyl benzyl phthalate (BBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Di-(2-ethylhexyl) phthalate (DEHP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Diisodecyl phthalate (DIDP) (CAS No.: 26761-40-0, 68515-49-1)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Diisononyl phthalate (DINP) (CAS No.: 28553-12-0, 68515-48-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Di-n-octyl phthalate (DNOP) (CAS No.: 117-84-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Diisobutyl phthalate (DIBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Di-n-hexyl phthalate (DNHP) (CAS No.: 84-75-3)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Bis(2-methoxyethyl) phthalate (DMEP) (CAS No.: 117-82-8)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
1,2-Benzenedicarboxylic acid, di-C7- 11-branched and linear alkyl esters (DHNUP) (CAS No.: 68515-42-4)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) (CAS No.: 71888-89-6)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β - HBCDD, γ - HBCDD) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	With reference to IEC 62321: 2008, analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Arsenic (As) (CAS No.: 7440-38-2)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-



Date: 05-Jun-2023 Page: 5 of 16

Note:

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit
- 3. n.d. = Not Detected (Less than MDL)
- 4. "-" = Not Regulated
- 5. **= Qualitative analysis (No Unit)
- 6. Negative = Undetectable; Positive = Detectable
- 7. PFOS and its salts including:
 - CAS No.: 1763-23-1, 2795-39-3, 29457-72-5, 29081-56-9, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7, 91036-71-4, 4021-47-0 and others.
- 8. PFOA and its salts including:
 - CAS No.: 335-67-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0, 3825-26-1 and others.
- 9. (#2) =
 - a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 μ g/cm². The sample coating is considered to contain Cr(VI).
 - b. The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 μ g/cm²). The coating is considered a non-Cr(VI) based coating
 - c. The result between 0.10 μ g/cm² and 0.13 μ g/cm² is considered to be inconclusive unavoidable coating variations may influence the determination.
- 10. ▲ : The MDL was evaluated for element / tested substance.

Conversion Formula : $AX = A \times F$

AX	Α	F
Bis(tributyltin)oxide (TBTO)	Tributyl Tin (TBT)	1.0276

Parameter Conversion Table: https://eecloud.sgs.com/Region TW/DocDownload.aspx?name=Others

11. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.



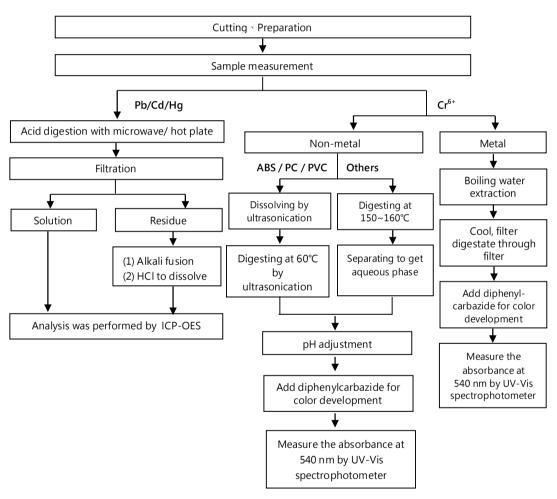
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Page: 6 of 16 Date: 05-Jun-2023

Analytical flow chart of heavy metal

These samples were dissolved totally by pre-conditioning method according to below flow chart.

(Cr⁶⁺ test method excluded)



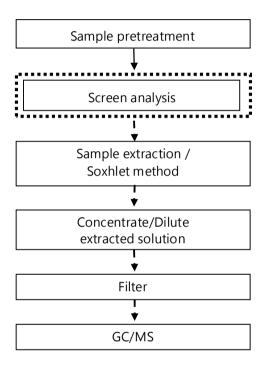


No.:

Date: 05-Jun-2023 Page: 7 of 16

Analytical flow chart - PBBs / PBDEs

First testing process ____
Optional screen process ____
Confirmation process ___

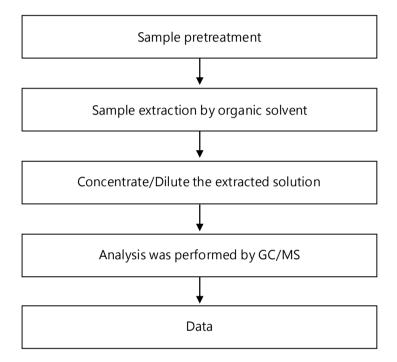




10::	Date: 05-Jun-2023

Analytical flow chart

* Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT



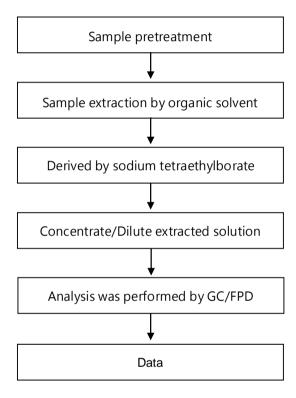
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Page: 8 of 16



No.: Date: 05-Jun-2023

Analytical flow chart - Organic-Tin



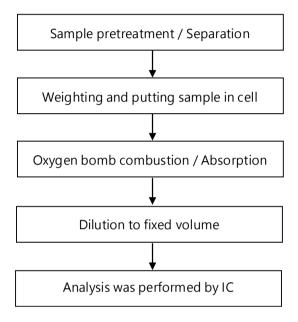
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Page: 9 of 16



Page: 10 of 16 No.: Date: 05-Jun-2023

Analytical flow chart - Halogen



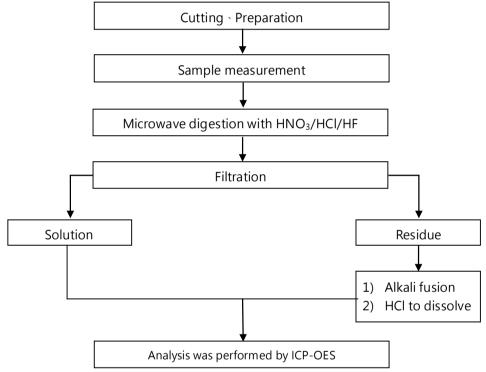


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Analytical flow chart of elements (Heavy metal included)

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【Reference method: US EPA 3051A、US EPA 3052】



^{*} US EPA 3051A method does not add HF.

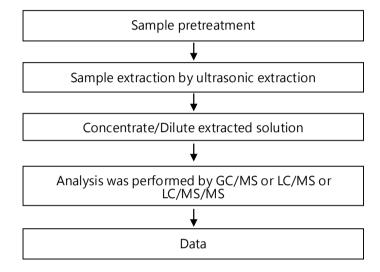
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Page: 11 of 16



No.: Date: 05-Jun-2023

Analytical flow chart - PFAS (including PFOA/PFOS/its related compound, etc.)



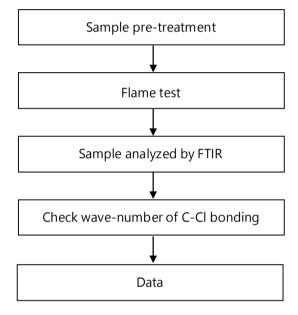
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Page: 12 of 16



No.: Date: 05-Jun-2023

Analysis flow chart - PVC



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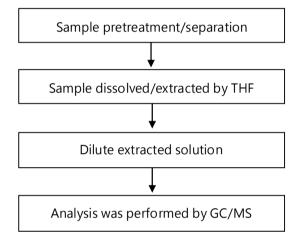
Page: 13 of 16



Page: 14 of 16 No.: Date: 05-Jun-2023

Analytical flow chart - Phthalate

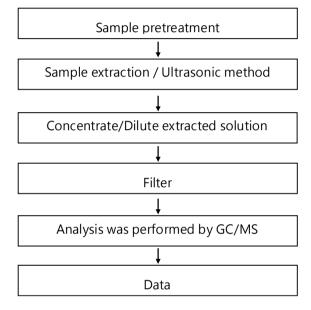
[Test method: IEC 62321-8]





No.: Date: 05-Jun-2023

Analytical flow chart - HBCDD

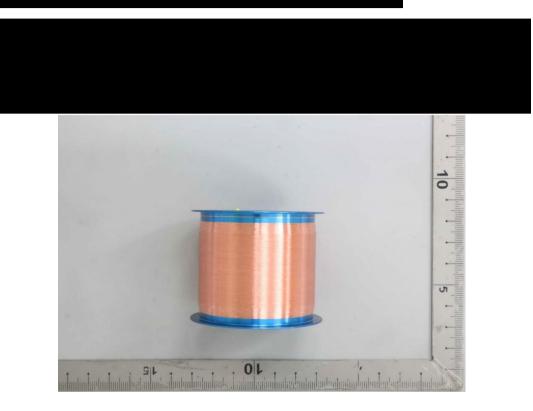


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Page: 15 of 16



No.: Date: 05-Jun-2023



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Page: 16 of 16