



Statement on Restriction of Hazardous Substances (“RoHS”) for TI Products

TI products are designated as “RoHS-Compliant” when designated RoHS = Yes, or RoHS = Exempt, to comply with EU Directive 2011/65/EU (entered July 21, 2011) and the amended Directive (EU) 2015/863 (effective July 22, 2019) for Restriction of the Use of Hazardous Substances (“RoHS”).

To the best of TI’s knowledge, TI products that are declared as RoHS Compliant

- Do not contain restricted substances **above** the maximum threshold values shown in Table 1

OR

- Where applicable, may be subject to one of the RoHS Annex III exemptions for lead (Pb) as shown in Table 2. (For externally purchased components, other RoHS exemptions may apply):

TABLE 1

Substance	Threshold	EU RoHS Directive
Cadmium (Cd)	0.01% (100ppm)	2002/95/EC amended 2011/65/EU
Lead (Pb)	0.1% (1000ppm)	2002/95/EC amended 2011/65/EU
Mercury (Hg)	0.1% (1000ppm)	2002/95/EC amended 2011/65/EU
Hexavalent Chromium (Cr ⁶)	0.1% (1000ppm)	2002/95/EC amended 2011/65/EU
Polybrominated biphenyls (PBBs)	0.1% (1000ppm)	2002/95/EC amended 2011/65/EU
Polybrominated diphenylethers (PBDEs)	0.1% (1000ppm)	2002/95/EC amended 2011/65/EU
Bis(2-ethylhexyl) phthalate (DEHP)	0.1% (1000ppm)	EU 2015/863, enforced 22 Jul 2019
Butyl benzyl phthalate (BBP)	0.1% (1000ppm)	EU 2015/863, enforced 22 Jul 2019
Dibutyl phthalate (DBP)	0.1% (1000ppm)	EU 2015/863, enforced 22 Jul 2019
Diisobutyl phthalate (DIBP)	0.1% (1000ppm)	EU 2015/863, enforced 22 Jul 2019

TABLE 2

EU RoHS Exemption	Description	Category
7(a)	Lead in high melting temperature type solders (i.e. lead based alloys containing 85 % by weight or more lead)	2002/95/EC amended 2011/65/EU
7(c)-i	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	2002/95/EC amended 2011/65/EU
15(a)	Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies: - A semiconductor technology node of 90 nm or larger; - A single die of 300 mm ² or larger in any semiconductor node; - Stacked die packages with die of 300 mm ² or larger, or silico interposers of 300 mm ² or larger	2011/65/EU amended (EU) 2019/172: Categories 1 to 7 & 10
15	Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages	2011/65/EU amended (EU) 2019/172: Categories 8, 9 & 11

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