



## RoHS-Information

### RoHS Requirements

According to [RoHS Directive 2015/863/EU](#), [2011/65/EU](#) and [Directive 2000/53/EC](#) electrical and electronic equipment and materials and components of vehicles shall not contain Cadmium (Cd), Hexavalent Chromium (Cr<sup>6+</sup>), Lead (Pb), Mercury (Hg), polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), Dibutyl phthalate (DBP), Bis (2-ethylhexyl)phthalate (DEHP), Benzyl butyl phthalate (BBP) and Diisobutylphthalat (DIBP).

The [Directive 2006/122/EC](#) restricts the use of Perfluorooctane Sulfonates (PFOS), Perfluorooctanic Acid (PFOA) and its salts.

Further restrictions show the Candidate List of Substances of very high concern for authorization according to [Regulation \(EC\) No 1907/2006 \(REACH\)](#). The actual list is published at [http://echa.europa.eu/chem\\_data/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/candidate_list_table_en.asp).

### RoHS Conformity

None of the restricted hazardous substances are added knowingly to our products. Naturally occurring traces of Cd, Pb and Hg cannot be excluded. The presence of Cr<sup>6+</sup> and organic substances (PBBs, PBDE, PFOS, PFOA) can be excluded because of the production process, including sintering at a temperature well above 1000°C at hydrogen atmosphere or vacuum respectively.

The chemical composition of the products of Plansee SE is inspected regularly by chemical analysis, according to the internal procedure QA-QR-06-01.

Based on the analytical results we confirm that the restricted hazardous substances in all Plansee SE products are below the following levels:

Restricted hazardous substance	Analysis method	Analysis Equipment	MDL [µg/g]	Guaranteed Analysis [µg/g]	RoHS Limit [µg/g]
Cadmium (Cd)	ICP-MS	PE Sciex Elan 6000	0.1	<5	100
Chromium-VI (Cr <sup>6+</sup> )	ICP-MS	PE Sciex Elan 6000	0.1	<20 (total Cr)	1000
Lead (Pb)	ICP-MS	PE Sciex Elan 6000	0.1	<10	1000
Mercury (Hg)	AAS	DMA 80 MLS	0.01	<1	1000
Organic substances	N.A.	-	-	-	1000

N.A. = Not analysed

MDL = Method detection limit

The analytical results are based on statistically taken samples covering the full product range of Plansee SE.

The analytical tests were performed by the Plansee SE Chemical Laboratories ISPA, certified for chemical analysis according to ISO/IEC 17025. Due to the expected low element concentrations the elements Cd, Cr and Pb were analysed by ICP-MS after acid dissolution (HF:HNO<sub>3</sub> – 1:1). Hg was analysed by AAS after element enrichment with a direct mercury analyser.

Prior to all analysis samples have been cleaned with a solution of HF and HNO<sub>3</sub> (mixture 1:1) to remove surface impurities.

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