



TC-5298

Test Report



Report No : TUV(I)/8579/21-22/0102103468
ULR-TC529821000026005F

Date : 09 Nov 2021

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Name and address of customer : **IND SPHINX PRECISION LIMITED**
Plot No. 28, Sector-5, Parwanoo,
Solan
Pincode-173220

Reg No. : **8579/21-22**

CA No. : **0102103468**

Name of the sample : **Sample 3**

Batch No./ Code no. : **Coated**

Discipline : **Chemical**

Product Category : **Miscellaneous**

Date of sample receipt : **18 Oct 2021**

Date(s) of analysis : **23 Oct 2021 - 09 Nov 2021**

Sample drawn by : **Customer**

Conclusion	Based on the performed tests on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (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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Test Part Description:

Product No.	Sample No.	Material Description	Remarks
-	0102103468	Sample 3	-

Remarks :

- 1 1mg/kg=0.0001%
- 2 LOQ = Limit of Quantification
- 3 ND = Not Detected (<LOQ)
- 4 - = not regulated

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method:

- 1 With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
- 2 With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
- 3 With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
- 4 With reference to IEC 62321-7-2:2017, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis and/or with reference to IEC 62321-5:2013, determination of Chromium by ICP-OES.
- 5 With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS
- 6 With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.

Test result:

Sr. No.	Test Item(s):	Unit	Results	MDL	Limit
1	Cadmium(Cd)	mg/kg	ND	10	100
2	Lead (Pb)	mg/kg	ND	10	1000
3	Mercury (Hg)	mg/kg	ND	10	1000
4	Hexavalent Chromium (CrVI)	mg/kg	ND	10	1000
	Sum of PBBs	mg/kg	ND	-	1000
1	Monobromobiphenyl	mg/kg	ND	10	-
2	Dibromobiphenyl	mg/kg	ND	10	-
3	Tribromobiphenyl	mg/kg	ND	10	-
4	Tetrabromobiphenyl	mg/kg	ND	10	-
5	Hexabromobiphenyl	mg/kg	ND	10	-
6	Pentabromobiphenyl	mg/kg	ND	10	-
7	Heptabromobiphenyl	mg/kg	ND	10	-
8	Octabromobiphenyl	mg/kg	ND	10	-
9	Nonabromobiphenyl	mg/kg	ND	10	-
10	Decabromobiphenyl	mg/kg	ND	10	-

Fluor

Sr. No.	Test Item(s):	Unit	Results	MDL	Limit
	Sum of PBDEs	mg/kg	ND	-	1000
1	Monobromodiphenyl ether	mg/kg	ND	10	-
2	Dibromodiphenyl ether	mg/kg	ND	10	-
3	Tribromodiphenyl ether	mg/kg	ND	10	-
4	Tetrabromodiphenyl ether	mg/kg	ND	10	-
5	Pentabromodiphenyl ether	mg/kg	ND	10	-
6	Hexabromodiphenyl ether	mg/kg	ND	10	-
7	Heptabromodiphenyl ether	mg/kg	ND	10	-
8	Octabromodiphenyl ether	mg/kg	ND	10	-
9	Nonabromodiphenyl ether	mg/kg	ND	10	-
10	Decabromodiphenyl ether	mg/kg	ND	10	-
	Phthalates				
1	Dibutyl phthalate (DBP)	mg/kg	ND	50	1000
2	Butyl benzyl phthalate (BBP)	mg/kg	ND	50	1000
3	Bis (2-ethylhexyl) phthalate (DEHP)	mg/kg	ND	50	1000
4	Diisobutyl Phthalates (DIBP)	mg/kg	ND	50	1000

Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863. 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:1258637,25
- (2) Test has been performed on composite parts as per client's request
- (3) The result of Hexavalent Chromium (Cr(VI)) is "ND" as the result of Chromium (Cr) is "ND", and confirmation test of Hexavalent Chromium (Cr(VI)) is not required.
- (4) If the Chromium (Cr) content is greater than the MDL of Hexavalent Chromium (Cr(VI)), confirmation test of Hexavalent Chromium (Cr(VI)) is required.
- (5) On 4 June 2015, Commission Directive (EU) 2015/863 was published in the Official Journal of the European Union (OJEU) to include the phthalates BBP, DBP, DEHP and DIBP into ANNEX II of the Rohs Recast Directive. The new law restricts each phthalate to no more than 0.1% in each homogeneous material of an electrical product.
- (6) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
- (7) The restriction of DEHP, BBP, DBP and DIBP shall not apply to cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22 July 2019, and of medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, placed on the market before 22 July 2021.
- (8) The restriction of DEHP, BBP and DBP shall not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.



**Authorized by
(Dr. Bharat Ugare)**

Assistant Manager-Instrumentation(Chromatography)

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