



South Asia

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Test Report No. BLR/RoHS/11/00563

Dated 21.01.2012

Applicant : SIGMA INDUSTRIES
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T- 1304

Attention : Mr.Himanshu Joshi.,
Tested Sample : Received on 23.07.2011
Test Period : 23.07.2011 to 28.07.2011
Sample Description : IP – 68 Cable Glands, Part No. PG 16
Document Submitted : Letter dated 20.07.2011
Objectives of Examination : **To test for compliance with 2002/95/EC , 2005/618/EC , 2005/717/EC , 2005/747/EC & 2006/310/EC - Restriction of Hazardous Substances (RoHS)**
- Lead, Cadmium, Hexavalent Chromium, Mercury, PBB and PBDE

Note: the submitted samples are Not Drawn by the Laboratory

Conclusion

The submitted sample was evaluated in accordance with the following directives. The verdicts were drawn as follow:

2002/95/EC , 2005/618/EC , 2005/717/EC , 2005/747/EC & 2006/310/EC – Restriction of Hazardous Substances (RoHS) - Lead, Cadmium, Hexavalent Chromium, Mercury, PBB and PBDE	PASS
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Prepared by

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Key Account Manager

Authorised by

R. Mahalakshmi
Technical Manager-Analytical Lab

Note: (1) General Terms & Conditions as mentioned overleaf, (2) The results relate only to the items tested, (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) For details of the accredited scope please contact the laboratory or visit www.nabl-india.org

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Tests Subject Description:

SAMPLE NO.	PART NO	MATERIAL DESCRIPTION	PHOTOGRAPH	RESULT
SAMPLE 001	Part No. PG 16	IP- 68 CABLE GLANDS NICKEL PLATED BRASS BASE METAL		PASS
SAMPLE 002	Part No. PG 16	IP- 68 CABLE GLANDS NYLON		PASS
SAMPLE 003	Part No. PG 16	IP- 68 CABLE GLANDS NEOPRENE RUBBER [BIG & SMALL]		PASS

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Tests Results:

1. HEAVY METALS:

2002/95/EC , 2005/618/EC , 2005/717/EC , 2005/747/EC & 2006/310/EC - Restriction of Hazardous substances (RoHS) - Heavy metals (Lead , Cadmium, Chromium and mercury) tests with reference to :
Test Methods: IEC 62321:2008, ICP-OES (Total lead, Cadmium, Chromium and Mercury) and Spectrophotometer (Hexavalent Chromium)

Samples	Unit	Total Cadmium	Hexavalent Chromium	Total Mercury	Total Lead
SAMPLE 001	mg/kg	ND	ND	ND	16678*
SAMPLE 002	mg/kg	ND	ND	ND	3
SAMPLE 003	mg/kg	ND	ND	ND	20
Limit of Quantification (mg/kg)	2				
RoHS Requirement, Max.	mg/kg	100	1000	1000	1000

Limit of Quantification: Total Cadmium, Hexavalent Chromium, Total Lead, Total Mercury - 2 mg/kg

Note: "mg/kg" denotes milligram/ kilogram.
"N.D." means Not Detected

" * " denotes applications of Lead as an alloying element in the tested material [Copper Alloy] containing up to 40000 mg/kg [4 %] Lead by weight is exempted from the requirements of Article 4(1) of RoHS directive 2002/95/EC; Annex, Clause 6

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2. FLAME RETARDANTS:			
2002/95/EC & 2005/618/EC : RESTRICTION OF HAZARDOUS SUBSTANCES (RoHS) - BROMINATED FLAME RETARDANTS (PBBS & PBDEs) WITH REFERENCE TO:			
Test Method: IEC 62321:2008 AND QUANTITATION WITH GC-MS			
	ELEMENT	SAMPLE 002	SAMPLE 003
PBBS	MONOBROMOBIPHENYL	ND	ND
	DIBROMOBIPHENYL	ND	ND
	TRIBROMOBIPHENYL	ND	ND
	TETRABROMOBIPHENYL	ND	ND
	PENTABROMOBIPHENYL	ND	ND
	HEXABROMOBIPHENYL	ND	ND
	HEPTABROMOBIPHENYL	ND	ND
	OCTABROMOBIPHENYL	ND	ND
	NONABROMOBIPHENYL	ND	ND
	DECABROMOBIPHENYL	ND	ND
	SUM OF PBBS	ND	ND
	RoHS Requirements, Max.	1000	1000
	PBDEs	MONOBROMODIPHENYL ETHER	ND
DIBROMODIPHENYL ETHER		ND	ND
TRIBROMODIPHENYL ETHER		ND	ND
TETRABROMODIPHENYL ETHER		ND	ND
PENTABROMODIPHENYL ETHER		ND	ND
HEXABROMODIPHENYL ETHER		ND	ND
HEPTABROMODIPHENYL ETHER		ND	ND
OCTABROMODIPHENYL ETHER		ND	ND
NONABROMODIPHENYL ETHER		ND	ND
DECABROMODIPHENYL ETHER		ND	ND
SUM OF PBDEs		ND	ND
RoHS Requirements, Max.		1000	1000
Limit of quantification: 5 mg/kg			
Notes: "mg/kg" denoted milligram/kilogram, "ppm" denotes parts per million "ND" denoted Not Detected			

-- END OF THE TEST REPORT --