

TEST REPORT

Report No. : PN:EE:856000699

DATE : 01/04/2017

856000699

TIBREWALA ELECTRONICS LTD.

6-56/2/40, BOMBAY, HIGHWAY,, BALANAGAR, HYDERABAD
HYDERABAD-500037
INDIA

CONTACT PERSON : P RATNA RAJU

THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CUSTOMER AS :

SAMPLE DESCRIPTION	HARDENER	
COLOUR	LIGHT YELLOW	
STYLE NO.	HARDNER	
REFERENCE NO.	SUPPLIER: BASF	
BUYER	TIBREWALA ELECTRONICS LTD	
BUYING HOUSE	NOT PROVIDED	
COUNTRY OF DESTINATION	INDIA	
COUNTRY OF ORIGIN	INDIA	
SAMPLE RECD ON	24/03/2017	TESTING PERIOD : 29/03/2017 to 01/04/2017
TEST(S) REQUESTED	ROHS 6E TEST	
TEST METHOD	:IEC 62321 : 2008 / 2013 / 2015	

CONCLUSION : Based on the performed tests on selected part of submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), **comply** with the limits as set by Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Test result:

RoHS Directive 2011/65/EU Annex II(amended by Directive (EU) 2015/863]

Test Item(s):	Unit	Test Method	Results	MDL	Limit
Cadmium(Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cd by ICP-OES)	n.d.	5	100
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Pb by ICP-OES)	n.d.	5	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013 (Determination of Hg by ICP-OES)	n.d.	5	1000
Hexavalent Chromium (CrVI) #	µg/cm ²	With reference to IEC 62321-7-1:2015 (Determination of CrVI by UV-VIS)	--	0.1	--
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321:2008 (Determination of CrVI by UV-VIS)	n.d.	2	1000
Sum of PBBs	mg/kg	With reference to IEC 62321-6:2015	n.d.	n.d.	1000

JOE No. : 1756800091

Page -1 of 7

Control No.:8565000681

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgsgroup.in/Service-Terms> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents a www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 15 days (in case of perishable items) and 30 days for all other samples from the date of issue of report .The samples from the regulatory bodies are to be retained as specified.This document cannot be reproduced,except in full,without prior written approval of the company.

TEST REPORT

Report No. : PN:EE:856000699

DATE : 01/04/2017

856000699

Test Item(s):	Unit	Test Method	Results	MDL	Limit
		(Determination of PBB by GC-MS)			
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Dibromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Tribromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Hexabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Pentabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Heptabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Octabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Nonabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Decabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	n.d.	50	-
Sum of PBDEs	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	-	1000
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	n.d.	50	-

JOE No. : 1756800091

Page -2 of 7

Control No.:8565000681

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgsgroup.in/Service-Terms> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents a www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 15 days (in case of perishable items) and 30 days for all other samples from the date of issue of report .The samples from the regulatory bodies are to be retained as specified.This document cannot be reproduced,except in full,without prior written approval of the company.

TEST REPORT

Report No. : PN:EE:856000699

DATE : 01/04/2017

856000699

Note :

- (a) mg/kg = ppm ; 0.1wt% = 1000ppm
- (b) n.d.= not detected
- (c) MDL = Method Detection Limit
- (d) - = not regulated
- (e) IEC 62321 series is equivalent to EN 62321 series
- (f) Test has been performed on composite part as per client's request
- (g) # =
 - a. The sample is positive for CrVI if the CrVI concentration is greater than $0.13 \mu\text{g}/\text{cm}^2$. The sample coating is considered to contain CrVI
 - b. The sample is negative for CrVI if CrVI is n.d. (concentration less than $0.10 \mu\text{g}/\text{cm}^2$). The coating is considered a non-CrVI based coating
 - c. The result between $0.10 \mu\text{g}/\text{cm}^2$ and $0.13 \mu\text{g}/\text{cm}^2$ is considered to be inconclusive - unavoidable coating variations may influence the determination

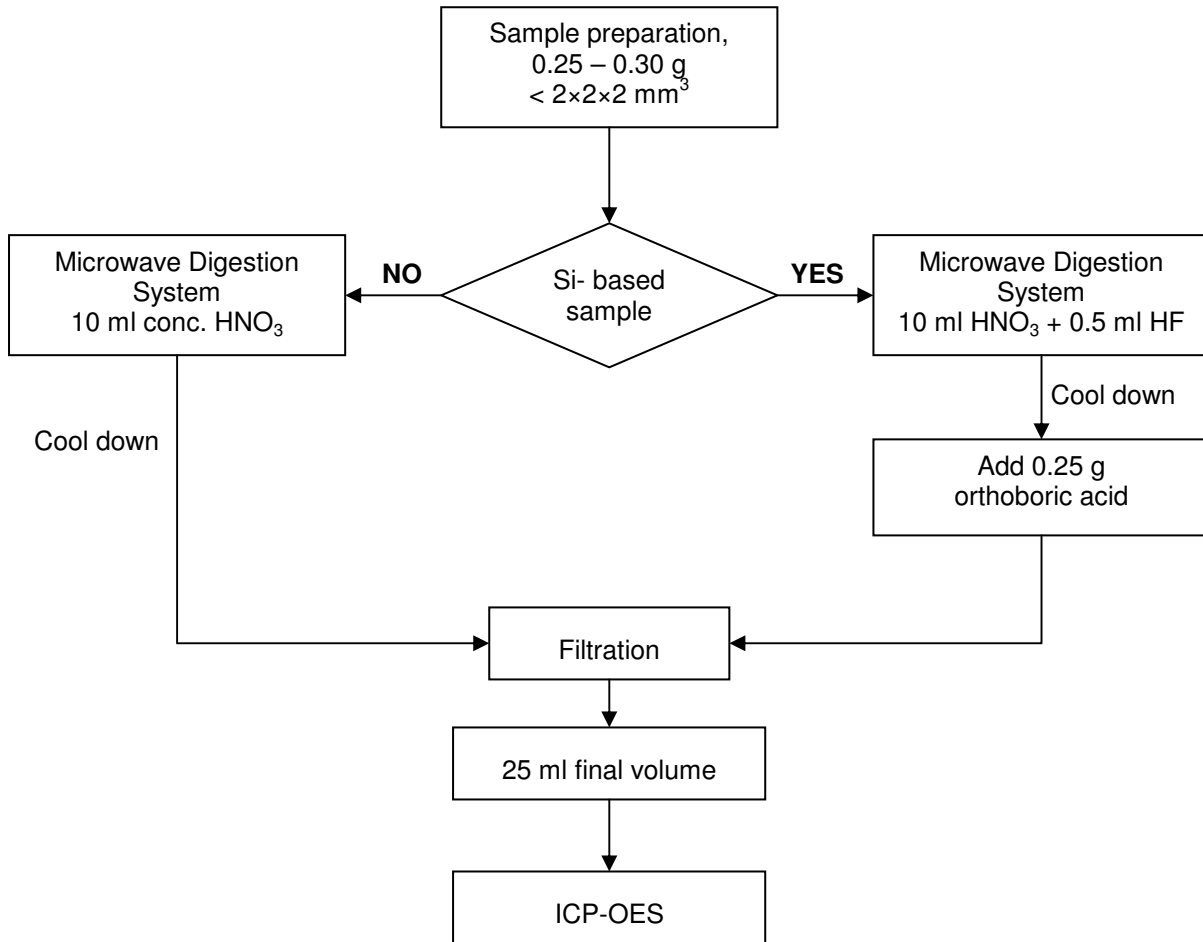
For corrosion protection coatings on metals: Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing represent status of the sample at the time of testing.

http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgsgroup.in/Service-Terms> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents a www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 15 days (in case of perishable items) and 30 days for all other samples from the date of issue of report .The samples from the regulatory bodies are to be retained as specified.This document cannot be reproduced,except in full,without prior written approval of the company.

Process Flow for analysis of metal contents in plastics, metals and electronic components sample



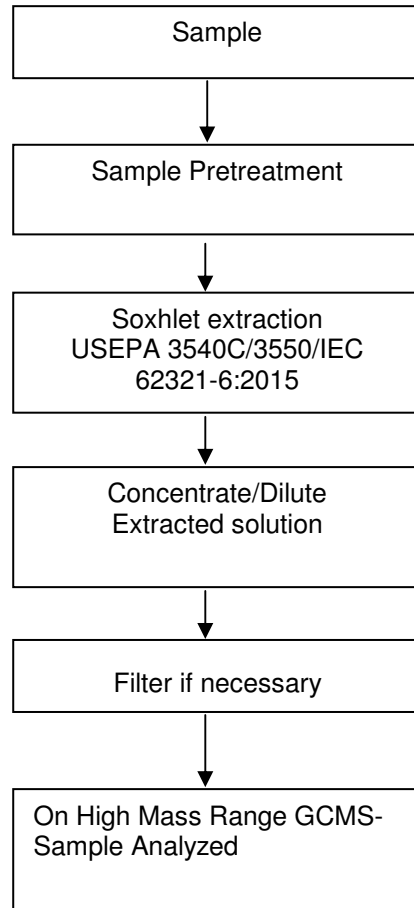
Analyzed By: Deepali Binawade

Checked By: Amit Kulkarni

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgsgroup.in/Service-Terms> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents a www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 15 days (in case of perishable items) and 30 days for all other samples from the date of issue of report .The samples from the regulatory bodies are to be retained as specified.This document cannot be reproduced,except in full,without prior written approval of the company.

Process Flow for analysis of Flame Retardants in plastics, metals and electronic components sample



Analyzed By : Sachin Vibhute

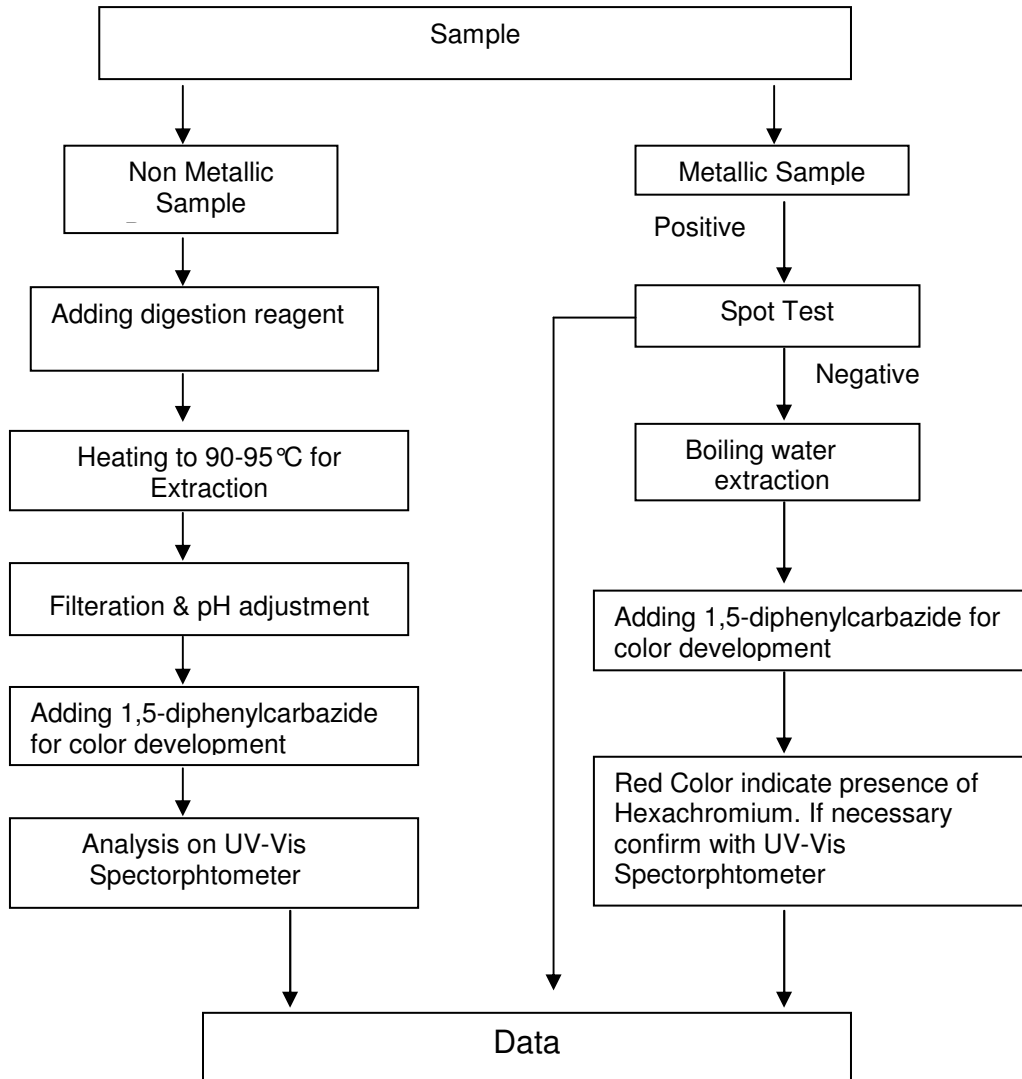
Checked By : Amit Kulkarni

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgsgroup.in/Service-Terms> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents a www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 15 days (in case of perishable items) and 30 days for all other samples from the date of issue of report .The samples from the regulatory bodies are to be retained as specified.This document cannot be reproduced,except in full,without prior written approval of the company.

Process Flow for analysis of Hexachromium contents in plastics, metals and electronic components

sample



Analyzed By: Sachin Vibhute

Checked By: Amit Kulkarni

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgsgroup.in/Service-Terms> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents a www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 15 days (in case of perishable items) and 30 days for all other samples from the date of issue of report .The samples from the regulatory bodies are to be retained as specified.This document cannot be reproduced,except in full,without prior written approval of the company.

TEST REPORT

Report No. : PN:EE:8560000699

DATE : 01/04/2017

8560000699

Sample Photo:



SGS authenticate the photo on original report only

*** End of Report ***

Per Pro SGS India Private Ltd

AMIT M. KULKARNI
MANAGER-CHEMICAL
Authorized Signatory

Email your Test Report Related Enquiries at Feedback.HLT@sgs.com

JOE No. : 1756800091

Page -7 of 7

Control No.:8565000681

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgsgroup.in/Service-Terms> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents a www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law."

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 15 days (in case of perishable items) and 30 days for all other samples from the date of issue of report .The samples from the regulatory bodies are to be retained as specified.This document cannot be reproduced,except in full,without prior written approval of the company.

Testing Laboratory—Transportation, Consumer and Retail, Gat No. : 624/2, Kuruli, Chakan, Taluka – Khed, Pune-410501, Maharashtra, India, Phone: +91 2135 615300, Fax: +91 2135 615333
Regd. & Corp. Off: SGS House, 4B, A.S. Marg, Vikhroli (West), Mumbai-400083. t: (022) 25798421 to 28 f: (022) 25798431 to 25798435

SGS India Pvt. Ltd

www.sgs.com