SPECTRO® Analytical Labs Limited

CIN:U74220DL1998PLC092698

TEST REPORT

Test Report Issued To:

FEROLITE JOINTINGS LIMITED

C-178,SITE NO-1, B.S.ROAD INDL.AREA, GHAZIABAD,
UTTAR PRADESH, INDIA, 201001,

Test Report No: D190829035/D190829035-1

Date of Issue: 07-Sep-2019

Sample Receipt Date: 29-Aug-2019
Date of Start of Testing: 03-Sep-2019
Date of Completion of Test: 07-Sep-2019

Customer Relationship Number 13253

Sample Description :

SAMPLE OF FEROLITE NAM 39(BLUE/BLUE) THICK 1.00MM

Customer Reference No

FJL:LAB.AUG-2019(B), DT.29.08.19

Kind Attention : MR. MITRA NAND

E-Mail: lab@ferolite.com **Contact No:** 9810295331

Sample Condition : *NA*

Sample Quantity (Approx) : *NA* Sample Size (Approx) : *NA*

SAMPLE NOT DRAWN BY OUR LABORATORY. THE RESULTS RELATE ONLY TO THE ITEMS TESTED

SPECTRO ANALYTICAL LABS LTD

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Date: 2019.09.04 10:37:21 +05:30

Report Issued By

ROHS ANALYSIS TEST

Sample ID : D190829035-1

Revision Summary: : Picture updated on the report.

Test Requested : ROHS analysis testing

Test Method &Results : Please refer to next page

S. No	Restricted substances (As per DIRECTIVE 2015/863 in Article 4 (ANNEX-II)	Maximum Concentration Level
1	Lead (Pb)	0.1% by weight/1,000 parts per million (ppm)
2	Cadmium (as Cd)	0.01% by weight/100 parts per million (ppm)
3	Mercury (as Hg)	0.1% by weight/1,000 parts per million (ppm)
4	Hexavalent Chromium (Cr+6)	0.1% by weight/1,000 parts per million (ppm)
5	Polybrominated Biphenyl (PBB) flame retardants	0.1% by weight/1,000 parts per million (ppm)
6	Polybrominated diphenyl ether (PBDE) flame retardants	0.1% by weight/1,000 parts per million (ppm)
7.	Di-n-butyl Phthalate (DBP)	0.1% by weight/1,000 parts per million (ppm)
8.	Bis (2-ethylhexyl) Phthalate (DEHP)	0.1% by weight/1,000 parts per million (ppm)
9.	Di-isobutyl Phthalate (DIBP)	0.1% by weight/1,000 parts per million (ppm)
10.	Benzyl butyl Phthalate (BBP)	0.1% by weight/1,000 parts per million (ppm)

Result Summary:

Test Requested	Comment
ROHS Test as per European Directive 2015/863 Annex II (RoHS); recasting 2011/65/EU – Lead, Cadmium, Mercury, Hexavalent Chromium, Polybrominated biphenyls (PBB) &Polybrominated diphenyl ether (PBDE), Di-n-butyl Phthalate (DBP), Bis (2-ethylhexyl) Phthalate (DEHP), Di-isobutyl Phthalate (DIBP), Benzyl butyl Phthalate (BBP)	PASS

Analyst Signature

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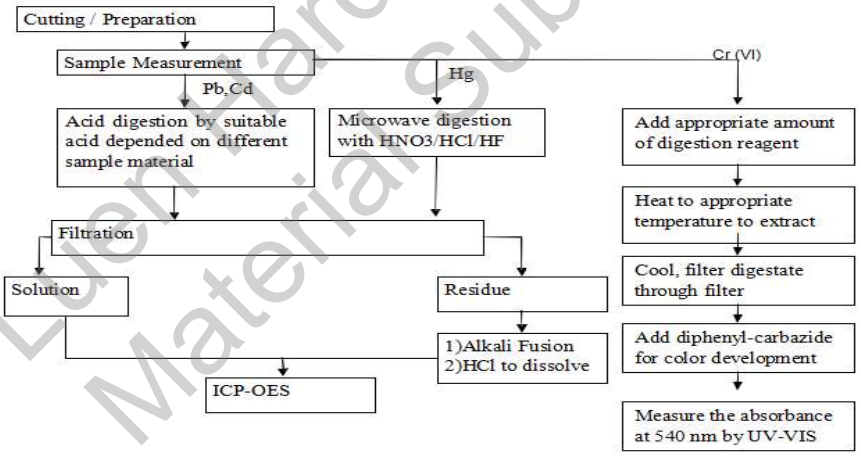
Testing Analysis Result

Testing Parameters	Unit	Test Method	Results	MDL	RoHS Limit
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013. Analysis was performed by ICP/OES	26	5	1000
Cadmium(Cd)	mg/kg	With reference IEC 62321-5:2013. Analysis was performed by ICP/OES	BDL	5	100
Mercury (Hg)	mg/kg	With reference IEC 62321-4:2013. Analysis was performed by ICP/OES	BDL	5	1000
Hexavalent Chromium (Cr(VI))	mg/kg	With reference to IEC 62321-7-2:2017. Analysis was performed by UV/Vis Spectrometry	BDL	5	1000

Remark: mg/kg = ppm, 0.1wt% = 1000ppm, BDL= Not Detected, MDL = Method Detection Limit

Testing Analysis Flow Chart

Flow of IEC 62321 (Pb, Cd, Hg & Cr^{6+})



Remarks: Sample received was totally dissolved by preconditioning method. (excluded Cr(VI) method)

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Testing Analysis Result

Testing Parameters	Unit	Test Method	Results	MDL	RoHS Limit
Polybrominated Biphenyls (PBBs)	mg/kg	With reference to IEC62321, Ed1:2008-12. Analysis was performed by GC/MS	ND	-	1000
Monobromobiphenyl	mg/kg		ND	10	-
Dibromobiphenyl	mg/kg		ND	10	-
Tribromobiphenyl	mg/kg		ND	10	-
Tetrabromobiphenyl	mg/kg		ND	10	-
Hexabromobiphenyl	mg/kg		ND	10	-
Pentabromobiphenyl	mg/kg		ND	10	-
Heptabromobiphenyl	mg/kg		ND	10	-
Octabromobiphenyl	mg/kg		ND	10	-
Nonabromobiphenyl	mg/kg		ND	10	-
Decabromobiphenyl	mg/kg		ND	10	-
Polybrominated Diphenylethers (PBDEs)	mg/kg		ND	-	1000
Monobromodiphenyl ether	mg/kg		ND	10	-
Dibromodiphenyl ether	mg/kg		ND	10	-
Tribromodiphenyl ether	mg/kg		ND	10	-
Tetrabromodiphenyl ether	mg/kg		ND	10	-
Pentabromodiphenyl ether	mg/kg		ND	10	-
Hexabromodiphenyl ether	mg/kg		ND	10	-
Heptabromodiphenyl ether	mg/kg		ND	10	-
Octabromodiphenyl ether	mg/kg		ND	10	-
Nonabromodiphenyl ether	mg/kg		ND	10	-
Decabromodiphenyl ether *	mg/kg		ND	10	-
Di-n-butyl Phthalate (DBP)	mg/kg	EPA-8061 A Analysis was performed by GC/MS	BDL	10	1000
Bis (2-ethylhexyl) Phthalate (DEHP)	mg/kg		12.29	10	1000
Di-isobutyl Phthalate (DIBP)	mg/kg		14.29	10	1000
Benzyl butyl Phthalate (BBP)	mg/kg		BDL	10	1000

Note:
(1) mg/kg = ppm ; 0.1wt% = 1000ppm
(2) BDL=Below Detection Limit
(3) ND = Not Detected
(4) MDL = Method Detection Limit
(5) * = The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE will be included in the sum of PBDE after 01.07.2008.

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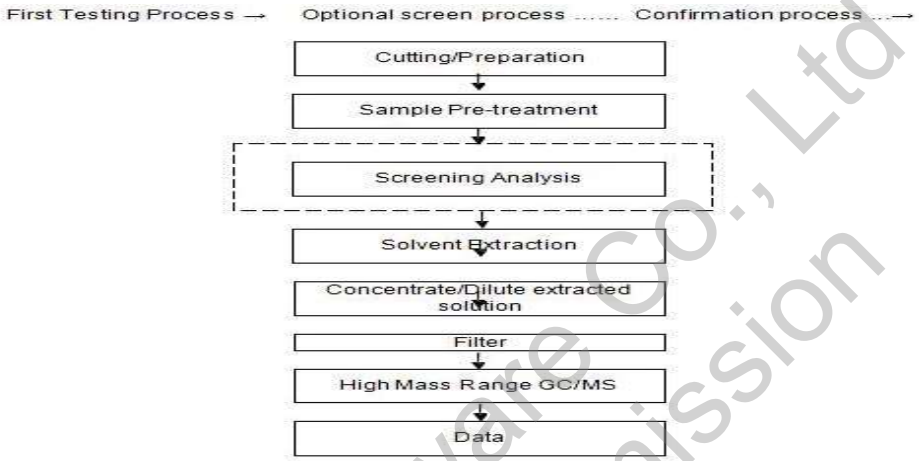
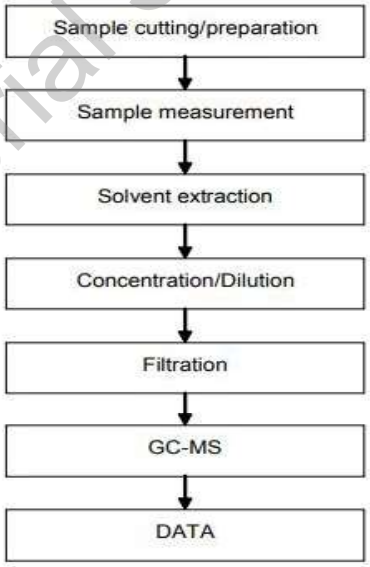
Testing Analysis Flow Chart

Process Flow of PBB & PBDE by GC/MS (IEC-62321)



Process Flow of Phthalates by GC/MS



-- End of Test Report --

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