



Test Report No. 4754657-01 Date: 17/JAN/2019 Page 1 of 5

Jauch Quartz GmbH Mr. Stefan Durczok In der Lache 24 78056 Villingen-Schwenningen **GERMANY**



The following samples were submitted and identified by/on behalf of the client as

SGS Job file 4754657 Order date 15/NOV/2018

Order number

by Client or by a third party acting at the Client's direction Sampling

condition of the samples appropriate for testing

Sample receiving Date 19/NOV/2018

Testing period 19/NOV/2018 - 17/JAN/2019 Analytical scope According to client's requirements

Sample No Sample designation Sample material 181153649 JV75 electronic component

: In accordance with the RoHS Directive 2011/65/EU and subsequent Test requested

amendments

Test Method(s) (1) Determination of Cadmium by ICP-OES, acc. IEC 62321-5:2013

(2) Determination of Lead by ICP-OES, acc. IEC 62321-5:2013

(3) Determination of Mercury by CV-AAS, acc. IEC 62321-4:2013 (4) Determination of Chromium by ICP-OES, acc. IEC 62321-5:2013

(5) Determination of Chromium (VI) acc. IEC 62321:

A) (metal samples) Determination after extraction with hot water and derivatisation with 1,5-diphenyl-

carbazide based on IEC 62321-7-1:2015 (metal samples), ion chromatography

B) (non-metallic samples) Determination after alkaline extraction and derivatisation with 1,5-diphenylcarbazide based on IEC 62321, Ed1, 2008, C5 (polymer and electronic samples), ion

chromatography

Remark: Due to its highly reactive nature the concentration of CrVI in a corrosion-protection changes drastically with time and storage conditions. The results obtained by IEC 62321-7-1:2015 can therefore only give an indication of the presence/absence of Cr(VI) within the

limitations of the method at the time of testing.

(6) Determination of PBB/PBDE by GC/MS, acc. IEC 62321-6:2015 Remark: Please note that acc. to IEC the testing of metals for PBB/PBDE is gratuitous

Test Result(s) Please refer to next page(s)

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Conclusion

Based on the performed tests on submitted sample(s), the test results of Lead, Mercury, Cadmium, hexavalent Chromium comply with the limits as set by RoHS Directive 2011/65/EU, Annex 2 and subsequent amendments

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Test results by chemical method (Unit: mg/kg)

Sample No.		181153649		
Test Item(s):	Method (refer to)		<u>RL</u>	RoHS Limit
Cadmium(Cd)	(1)	n.d.	1	100
Lead (Pb)	(2)	n.d.	10	1000
Mercury (Hg)	(3)	n.d.	0,5	1000
Chromium, hexavalent (Cr(VI))	(5 B)	n.d.	1	1000
Sum of PBDEs	(6)	-	-	
Monobromodiphenyl ether		n.a.	50	1000 (Sum of polybrominated diphenyl ether)
Dibromodiphenyl ether		n.a.	50	
Tribromodiphenyl ether		n.a.	50	
Tetrabromodiphenyl ether	7	n.a.	50	
Pentabromodiphenyl ether		n.a. 50	50	
Hexabromodiphenyl ether		n.a.	50	
Heptabromodiphenyl ether		n.a.	50	
Octabromodiphenyl ether		n.a.	50	
Nonabromodiphenyl ether		n.a.	50	
Decabromodiphenyl ether		n.a.	50	
Sum of PBBs		-	-	
Monobromobiphenyl		n.a.	50	1000 (Sum of polybrominated biphenyls)
Dibromobiphenyl		n.a.	50	
Tribromobiphenyl		n.a.	50	
Tetrabromobiphenyl		n.a.	50	
Hexabromobiphenyl		n.a.	50	
Pentabromobiphenyl		n.a.	50	
Heptabromobiphenyl		n.a.	50	
Octabromobiphenyl		n.a.	50	
Nonabromobiphenyl		n.a.	50	
Decabromobiphenyl		n.a.	50	

 $\underline{\text{Note:}} \quad \text{mg/kg = ppm} \qquad \qquad \text{n.d.= not Detected} \qquad \qquad \text{RL = Report Limit} \qquad \qquad \text{n.a.= not analyzed}$

^{**=} elevated reporting limit due to matrix interferences

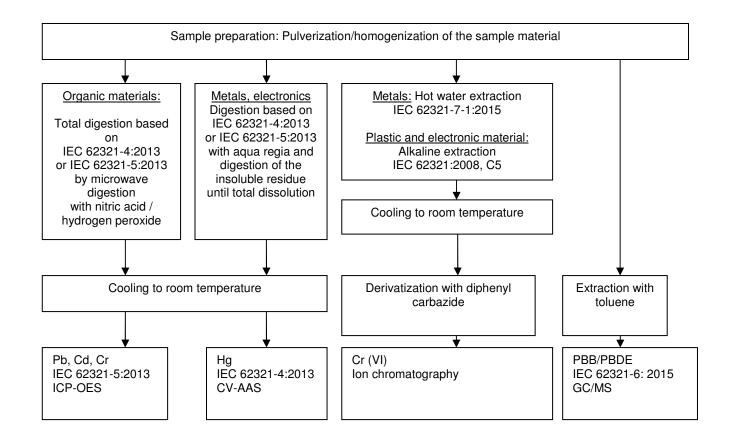




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Flow Chart for the working flow of the performed analysis







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Sample Photo(s)



End of test report
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