

**Test Report** No.: SHAPH23001918305 **Date**: Mar 08, 2023 Page 1 of 9

Client Name: WUXI NANDA ELECTRONICS SOLDER FACTORY(CO.,LTD)

Client Address: EAST DINGXIANG ROAD18, HUDAI INDUSTRIAL PARK, BINHU DISTRICT, WUXI

CITY, JINAGSU P.R. CHINA

Sample Name: Pb95.5Sn2Ag2.5

Client Ref. Information:  $\Phi$ 0.3mm/ $\Phi$ 0.4mm/0.5mm/0.7mm/0.75mm/0.76mm/ 12/18/20/25/30mil

The above sample(s) and information were provided by the client.

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SGS Job No.: SUZIN2302000506PL03

Sample Receiving Date: Feb 28, 2023

Testing Period: Feb 28, 2023 ~ Mar 08, 2023

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

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

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive	
2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated	
biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl)	Pass
phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and	
Diisobutyl phthalate (DIBP)	

Signed for and on behalf of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Mei Shen

Approved Signatory





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#### Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	003	SHA23-0019183-0001.C003	Silver metal piece

#### Remarks:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to Titration method, IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC

62321-7-1:2015, IEC 62321-6:2015 and IEC62321-8:2017, analysis was performed by

ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	003
Cadmium(Cd)	100	mg/kg	2	ND
Lead(Pb)	0.1	%	-	95.6▲
Mercury(Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	μg/cm²	0.10	ND
Polybromobiphenyl (PBBs)	1000	mg/kg	-	ND
Monobromobiphenyl (MonoBB)	-	mg/kg	5	ND
Dibromobiphenyl (DiBB)	-	mg/kg	5	ND
Tribromobiphenyl (TriBB)	-	mg/kg	5	ND
Tetrabromobiphenyl (TetraBB)	-	mg/kg	5	ND
Pentabromobiphenyl (PentaBB)	-	mg/kg	5	ND
Hexabromobiphenyl (HexaBB)	-	mg/kg	5	ND
Heptabromobiphenyl (HeptaBB)	-	mg/kg	5	ND
Octabromobiphenyl (OctaBB)	-	mg/kg	5	ND
Nonabromobiphenyl (NonaBB)	-	mg/kg	5	ND
Decabromobiphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDEs)	1000	mg/kg	-	ND
Monobromodiphenylether (MonoBDE)	-	mg/kg	5	ND
Dibromodiphenylether (DiBDE)	-	mg/kg	5	ND
Tribromodiphenylether (TriBDE)	-	mg/kg	5	ND
Tetrabromodiphenylether (TetraBDE)	-	mg/kg	5	ND
Pentabromodiphenylether (PentaBDE)	-	mg/kg	5	ND
Hexabromodiphenylether (HexaBDE)	-	mg/kg	5	ND
Heptabromodiphenylether (HeptaBDE)	-	mg/kg	5	ND
Octabromodiphenylether (OctaBDE)	-	mg/kg	5	ND
Nonabromodiphenylether (NonaBDE)	-	mg/kg	5	ND
Decabromodiphenylether (DecaBDE)	-	mg/kg	5	ND
Dibutyl Phthalate(DBP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate(BBP)	1000	mg/kg	50	ND



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Test Item(s)	Limit	Unit(s)	MDL	003
Bis-(2-ethylhexyl) Phthalate(DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalate(DIBP)	1000	mg/kg	50	ND

#### Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series
- (3) ▼ = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 μg/cm². The sample coating is considered to contain CrVI.
- b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 μg/cm²). The coating is considered a non-CrVI based coating.
- c. The result between 0.10  $\mu g/cm^2$  and 0.13  $\mu g/cm^2$  is considered to be inconclusive unavoidable coating variations may influence the determination.

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

(4) ▲ According to the declaration from the client, Lead (Pb) in No.XXX is exempted by EU RoHS directive 2011/65/EU based on |ANNEX III 7(a)|: Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019.



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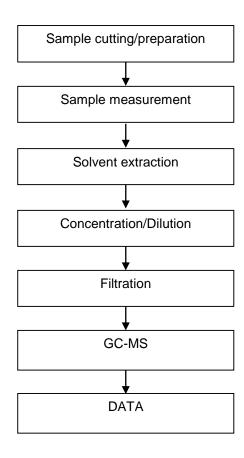
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#### **Phthalates Testing Flow Chart**





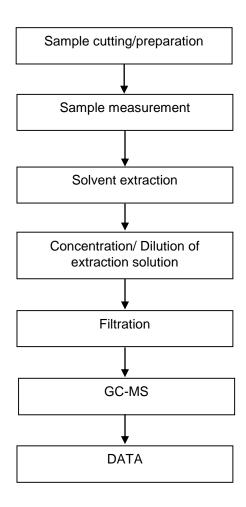
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#### PBBs/PBDEs Testing Flow Chart





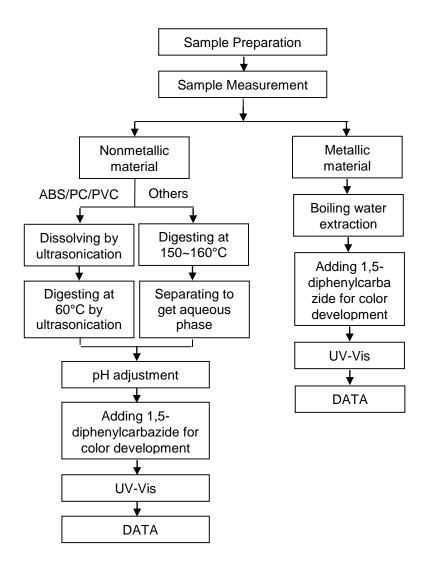
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# Hexavalent Chromium (Cr(VI)) Testing Flow Chart





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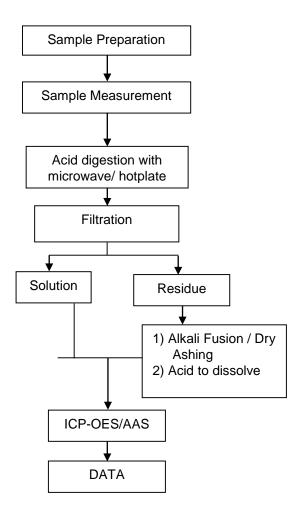
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### Elements (IEC62321) Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.





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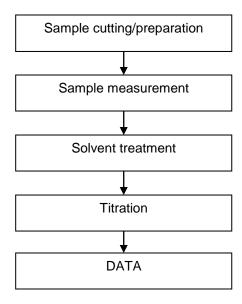
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### **Titration Testing Flow Chart**





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Sample Photo:



SGS authenticate the photo on original report only \*\*\* End of Report \*\*\*



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