

Test Report

No.: CKGEC24000279503

Date: Apr 17, 2024

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Client Name: SICHUAN JINWAN ELECTRONIC CO.,LTD

Client Address: NO..88 MICRO-ELECTRONIC INDUSTRIAL PARK YULONG STREET,ECONOMIC DEVELOPMENT ZONE,SUINING,SICHUAN

Sample Name: Ag plating

Client Ref. Information: See attachment

Lot No.: 20240407

Main Substance: Ag

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

SGS Job No.: CQP24-003590

Sample Receiving Date: Apr 12, 2024

Testing Period: Apr 12, 2024 ~ Apr 17, 2024

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 (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass

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

Amber Xu

Amber Xu
Approved Signatory

scan to see the report



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Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A2	CKG24-0002795-0001.C002	Silver metal

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 (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to 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/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A2
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	ND
Polybrominated biphenyls (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	5	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	5	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	5	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	5	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	5	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	5	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	5	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	5	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	5	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	5	ND
Polybrominated diphenyl ethers (PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	5	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	5	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	5	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	5	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	5	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	5	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	5	ND



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Test Item(s)	Limit	Unit(s)	MDL	A2
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	5	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	5	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	5	ND
Bis(2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl phthalate (DBP)	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 Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm². The sample coating is considered to contain Cr(VI).
 - b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-Cr(VI) based coating.
 - c. The result between 0.10 µg/cm² and 0.13 µg/cm² 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.

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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Elements Testing Flow Chart

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



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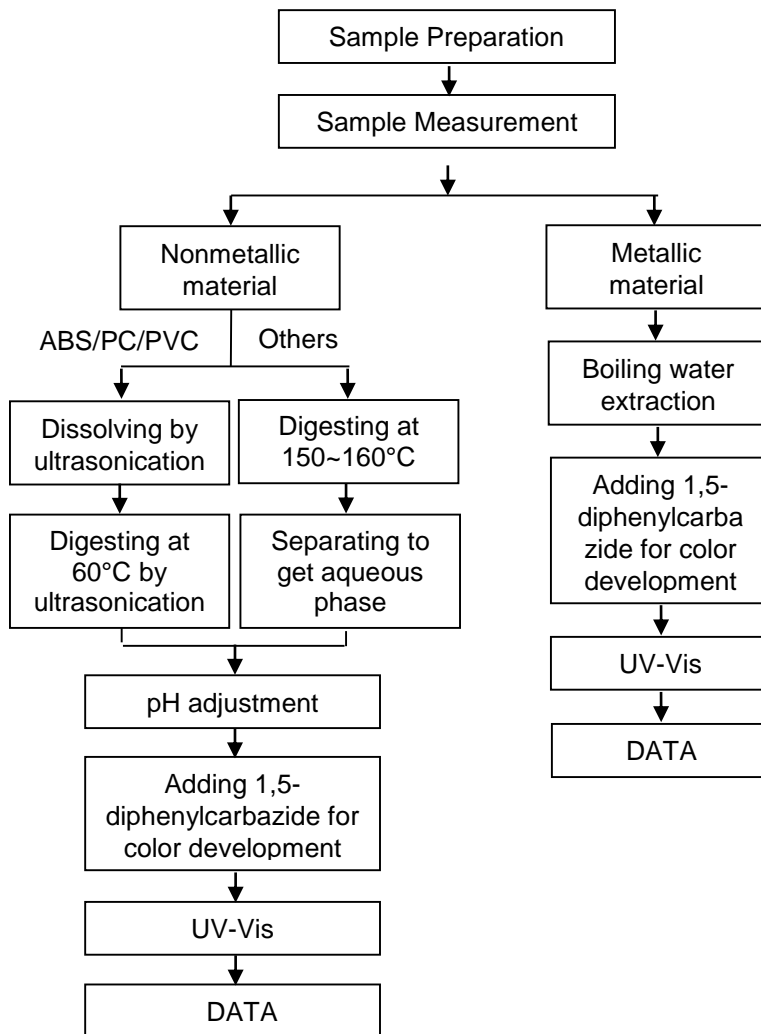
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Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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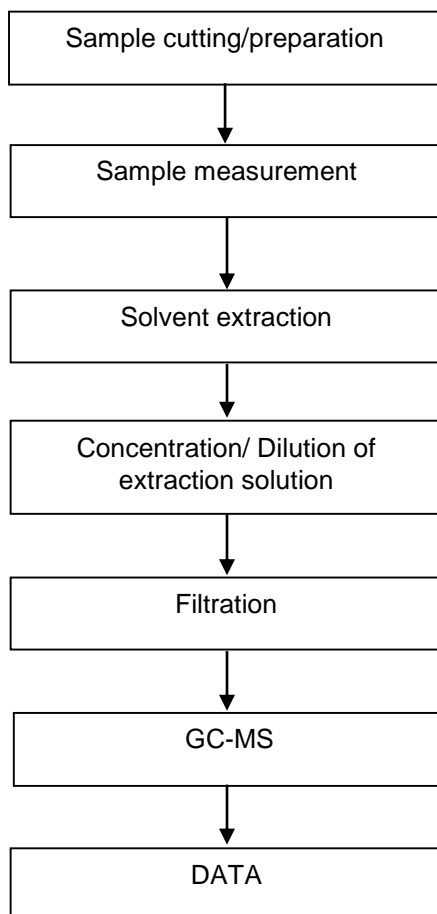
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PBB/PBDE Testing Flow Chart



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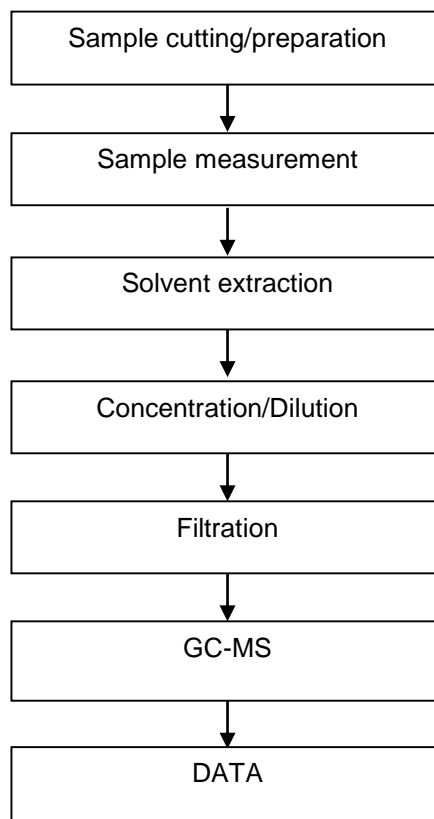
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Phthalates Testing Flow Chart



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TO-220HF-3L、TO-220HF-2L、TO-220F-3L、TO-220F、TO-220F3、TO-220FL、TO-220FTS、TO-220FS、TO-220F-2R、TO-220MF-DG-3L、TO-220MF-DGLP-3L、TO-220FP、TO-220MF-SG-3L、TO-220FDS、TO-220NF-DG-3L、TO-220NF-SG-3L、TO-220FWS、TO-220FC、TO-220FJ、TO-220SF-3L、TO-220FW、TO-220FJ Ag、TO-220F-3L Ag、TO-220FL Ag、TO-220FP Ag
TO-220FB3、TO-220FB4、TO-220FB5、TO-220HD、TO-220HW、TO-220C、TO-220CB、TO-263-M、TO-220R、TO-220AB-DU-3L、TO-220AB、TO-220AB-M、TO-220IR-3L、TO-220NB-5L、TO-220IX-3L、SOD-59、TO-220-2L、TO-220-5L、TO-220-6L、TO-220-7L、TO-220HDM、TO-220-2R、TO-220HWG、TO-220FB-LP-3L、TO-220HDMT、TO-220JK、TO-220FB sr、TO-220H、TO-220H-3L、TO-220FBY、TO-220HJH、TO-220HJA、TO-220HBK、TO-220Thick、TO-220FB-3L、TO-220G、TO-220FB-3L Ni、TO-220IX-3L Ni、TO-220IR-3L Ni、TO-220H Ag、TO-220FB-LP-3L Ni、A-TO-220FB-3L_12 Ni、A-TO-220IX-3L_12 Ni
TO-263R、TO-263-DU-3L、TO-263NB-5L、TO-263-5L、TO-263HD、TO-263LF、TO-263-7L、TO-263-2R、TO-263HY-3L、TO-263LP-3L、TO-263-2-212、TO-263-2-214、TO-263HDM、TO-263FB、TO-220MF3、TO-263HDT、TO-263US-7L、TO-263LV-7L、TO-263CB、TO-263S-5L、TO-263-2-212 Ni、TO-263-3L、TO-263-3L Ag、TO-263NB-5L Ag、TO-263YP、TO-263E、TO-263AB
TO-3P、TO-3PN、TO-3PB、TO-3PB-1、TO-3PB-2、TO-3PF-3L、TO-3PN Ni、A-TO-3PN-3L_12 Ni
TO-247-2L、TO-247-3L、TO-247-4L、TO-247Plus-3L、TO-247Plus-4L、TO-247N-3L、TO-247AC-3L、TO-247H-3L、TO-247H-3L Ag、TO-247-3L Ni、TO-247-4L Ni、TO-247Plus-3L Ni、TO-247Plus-4L Ni、A-TO-247-3L_12 Ni、A-TO-247-4L_12 Ni、TO-264
DPAK、DPAK-D、TO-252-4R、TO-252-4RA、IPAK、NIPAK、IPAK-LP、IPAK-LP-2L、IPAK-3、TO-252-6R、TO-252-2L-6R、TO-252-4RDP、IPAK-LP Ag、IPAK-LP Ni、DPAK Ag、TO-252-4R Ag、TO-252-6R Ag、TO-252-2L-6R Ag、TO-252-4RDP Ag
HZIP-25B、Clip-PPAK5X6、Clip-PPAK3X3、Clip-TOLL*、DFN5x6-CLIP*、TOLL、TOLT、STOLL



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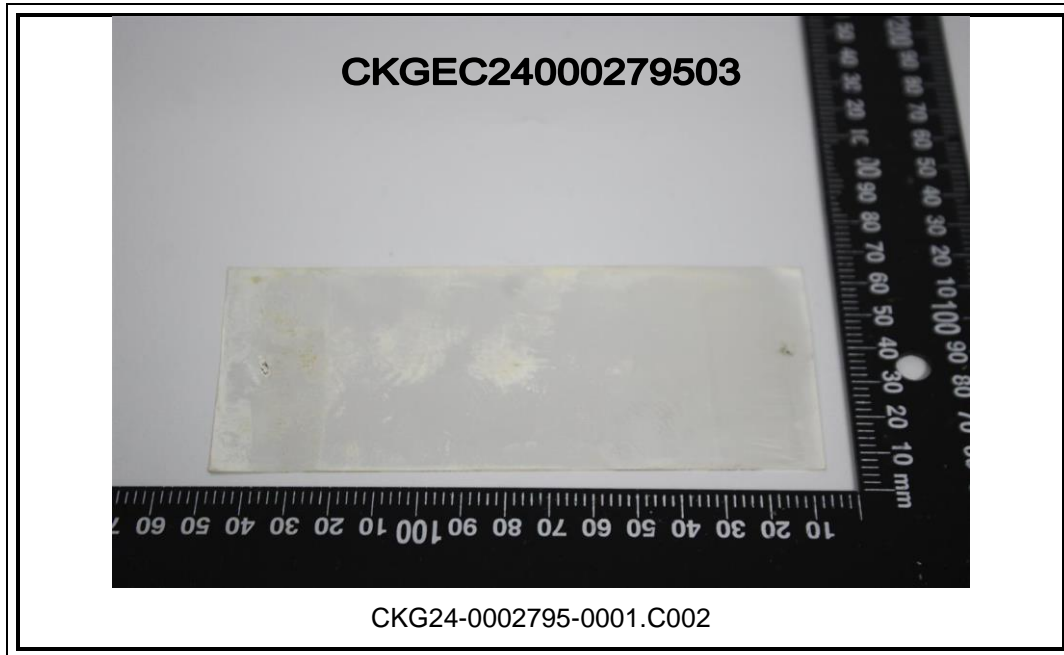
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