

Test Report

No. HKGEC1401289206

Date: 07 Jan 2015

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SAMMAX GLOBAL ENTERPRISE LIMITED.

ROOM 6, BLOCK F, 21/F, PHASE 2, SUPER LUCK INDUSTRIAL CENTRE.

NO, 57 SHA TSUI ROAD, TSUEN WAN N.T.

The following sample(s) was/were submitted and identified on behalf of the clients as : 無鉛錫線 LEAD FREE SOLDER WIRE

SGS Job No. : 2875465 - HK

Colour : 銀色 SILVER

Date of Sample Received : 19 Dec 2014

Testing Period : 19 Dec 2014 - 07 Jan 2015

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

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

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

Conclusion : Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of
SGS Hong Kong Limited.



Tam Lik To, Litto
Chemist

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
1	HKG14-012892.002	Silvery Metal

Remarks :

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

RoHS Directive 2011/65/EU

Test Method : (1) With reference to IEC 62321-5:2013 (Determination of Cadmium by ICP-OES/AAS).
 (2) With reference to IEC 62321-5:2013 (Determination of Lead by ICP-OES/AAS).
 (3) With reference to IEC 62321-4:2013 (Determination of Mercury by ICP-OES/AAS).
 (4) With reference to IEC 62321:2008 (Determination of Hexavalent Chromium by spot test / Colorimetric Method using UV-Vis).
 (5) With reference to IEC 62321:2008 (Determination of PBBs and PBDEs by GC-MS).

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	5	64
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	-	-	◇	Negative
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND

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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND

Notes :

(1) The maximum permissible limit is quoted from directive 2011/65/EU, Annex II

(2) ◇ Spot-test:

Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;

The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.

◇ Boiling-water-extraction:

Negative = Absence of CrVI coating; Positive = Presence of CrVI coating

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

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

Phthalates

Test Method : With reference to EN14372: 2004. Analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Dibutyl Phthalate (DBP)	-	%	0.003	ND
Benzylbutyl Phthalate (BBP)	-	%	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	-	%	0.003	ND
Diisononyl Phthalate (DINP)	-	%	0.010	ND
Di-n-octyl Phthalate (DNOP)	-	%	0.003	ND
Diisodecyl Phthalate (DIDP)	-	%	0.010	ND
Di-n-hexyl Phthalate (DnHP)	-	%	0.003	ND

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Notes :

- (1) DBP,BBP,DEHP Reference information: Entry 51 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC):
- i) Shall not be used as substances or in mixtures, in concentrations greater than 0,1 % by weight of the plasticised material, in toys and childcare articles.
 - ii) Toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.
- Please refer to Regulation (EC) No 552/2009 to get more detail information
- DINP, DNOP, DIDP Reference information: Entry 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC).
- i) Shall not be used as substances or in mixtures, in concentrations greater than 0.1 % by weight of the plasticised material, in toys and childcare articles which can be placed in the mouth by children.
 - ii) Such toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.
- Please refer to Regulation (EC) No 552/2009 to get more detail information

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

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