

Test Report

No. NGBEC1501628301

Date: 26 May 2015

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YUEQING DAIER ELECTRON CO.,LTD

YUEQING CITY, ZHEJIANG PROVINCE LIUSHI ZHEN XI REN DANG INDUSTRIAL ZONE

The following sample(s) was/were submitted and identified on behalf of the clients as : PBT; PC; PA66; Brass; Iron; Steel wire; Stainless steel

SGS Job No. : NP15-001210 - NB

Model No. : KW1-103

Date of Sample Received : 15 May 2015

Testing Period : 15 May 2015 - 20 May 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) 001~003, 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.

Based on the performed tests on submitted sample(s) 004~007, the results of Lead, Mercury, Cadmium, Hexavalent chromium 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-CSTC Standards Technical Services Co., Ltd. Ningbo Branch



Iris Xiao

Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	NGB15-016283.001	Black solid
SN2	NGB15-016283.002	Green solid
SN3	NGB15-016283.003	Black solid
SN4	NGB15-016283.004	Copper metal
SN5	NGB15-016283.005	Silvery metal
SN6	NGB15-016283.006	Gray metal
SN7	NGB15-016283.007	Silvery metal

Remarks :

- (1) 1 mg/kg = 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.
 - (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
 - (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
 - (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by 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	001	002	003
Cadmium (Cd)	100	mg/kg	2	ND	ND	35
Lead (Pb)	1000	mg/kg	2	ND	ND	13
Mercury (Hg)	1000	mg/kg	2	ND	ND	ND
Hexavalent Chromium (CrVI)	1000	mg/kg	2	ND	ND	ND
Sum of PBBs	1000	mg/kg	-	ND	ND	ND
Monobromobiphenyl	-	mg/kg	5	ND	ND	ND
Dibromobiphenyl	-	mg/kg	5	ND	ND	ND
Tribromobiphenyl	-	mg/kg	5	ND	ND	ND
Tetrabromobiphenyl	-	mg/kg	5	ND	ND	ND
Pentabromobiphenyl	-	mg/kg	5	ND	ND	ND
Hexabromobiphenyl	-	mg/kg	5	ND	ND	ND



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Test Item(s)	Limit	Unit	MDL	001	002	003
Heptabromobiphenyl	-	mg/kg	5	ND	ND	ND
Octabromobiphenyl	-	mg/kg	5	ND	ND	ND
Nonabromobiphenyl	-	mg/kg	5	ND	ND	ND
Decabromobiphenyl	-	mg/kg	5	ND	ND	ND
Sum of PBDEs	1000	mg/kg	-	ND	ND	ND
Monobromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Dibromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Tribromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Octabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Decabromodiphenyl ether	-	mg/kg	5	ND	ND	ND

Notes :

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

RoHS Directive 2011/65/EU

Test Method : (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
 (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
 (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
 (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by spot test / Colorimetric Method using UV-Vis.

Test Item(s)	Limit	Unit	MDL	004	005	006
Cadmium (Cd)	100	mg/kg	2	ND	ND	ND
Lead (Pb)	1000	mg/kg	2	53	ND	ND
Mercury (Hg)	1000	mg/kg	2	ND	ND	ND
Hexavalent Chromium (CrVI)	-	-	◇	Negative	Negative	Negative

Test Item(s)	Limit	Unit	MDL	007
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	-	-	◇	Negative



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Notes :

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

(2) ◇Spot-test:

Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) 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 Cr(VI) coating

Positive = Presence of Cr(VI) coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

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.



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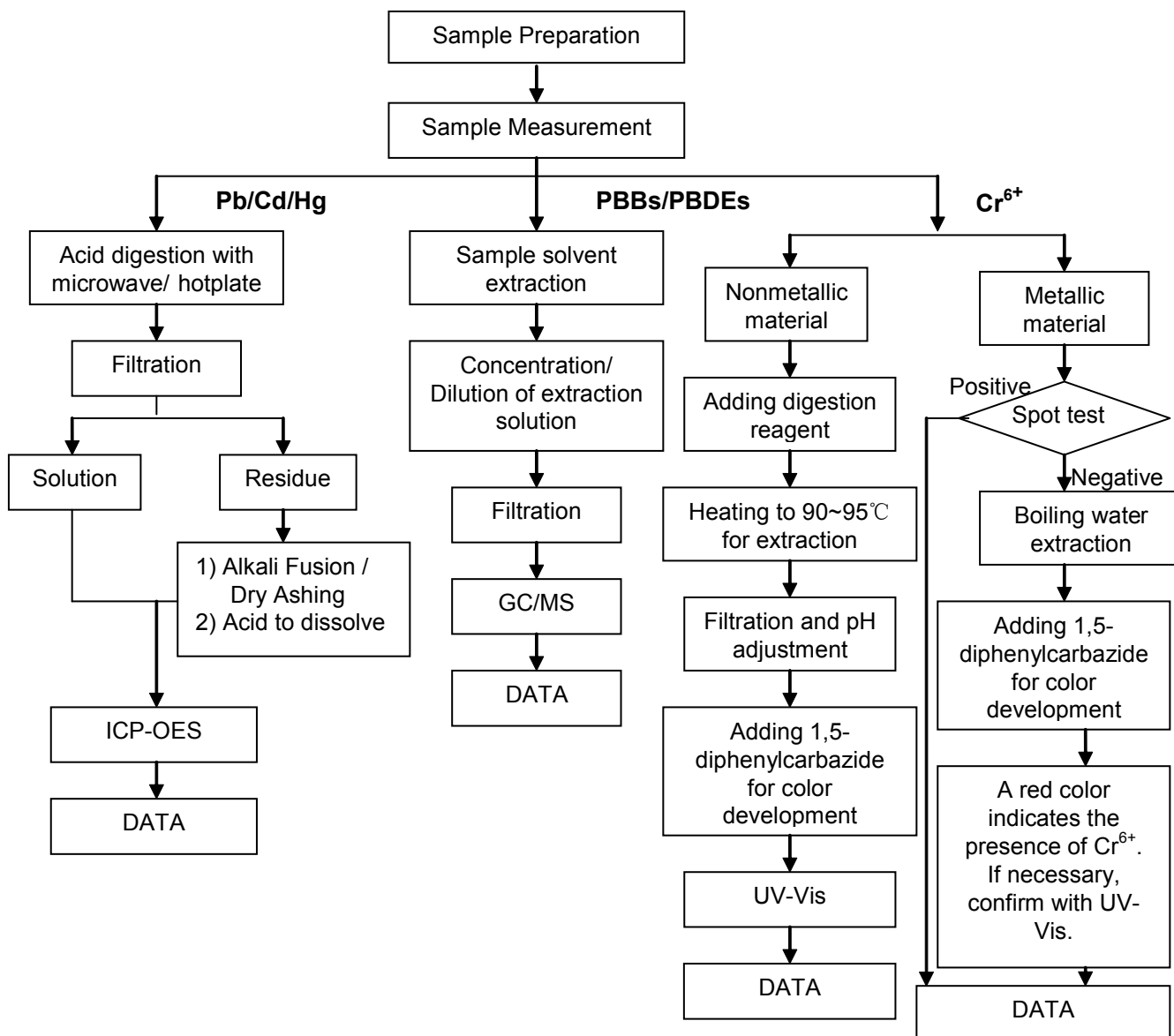
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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Martin Ding /Pearson Zhou
- 2) Name of the person in charge of testing: Iris Xiao
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ and PBBs/PBDEs test method excluded)



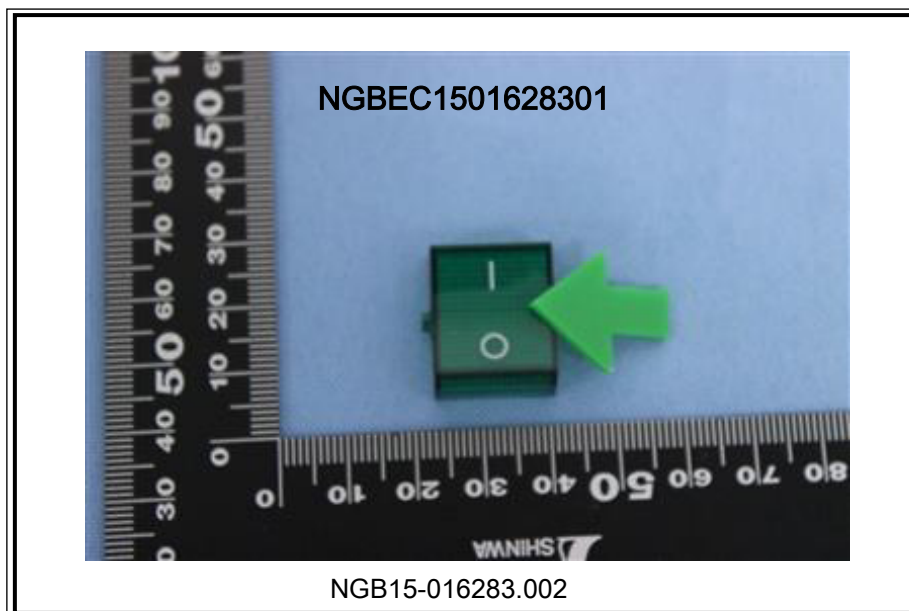
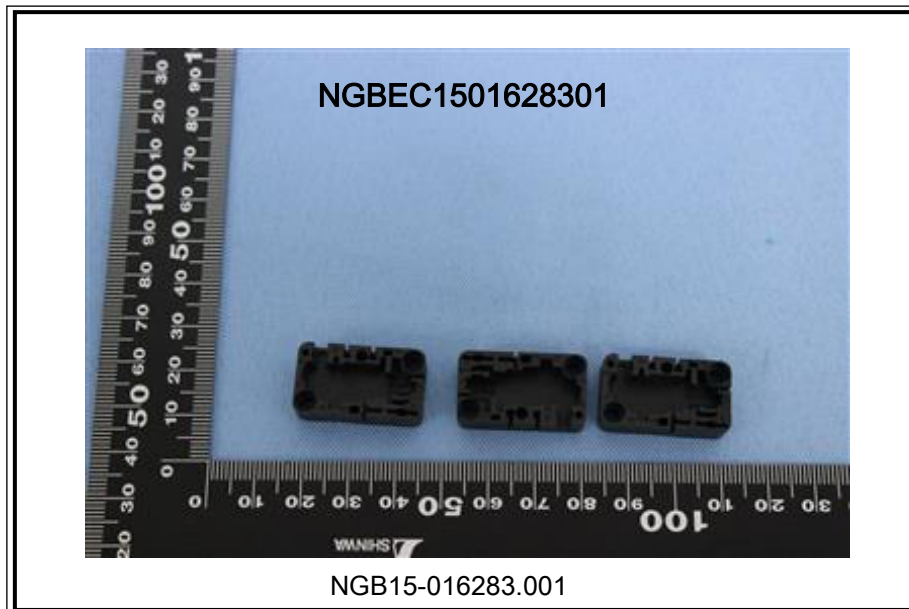
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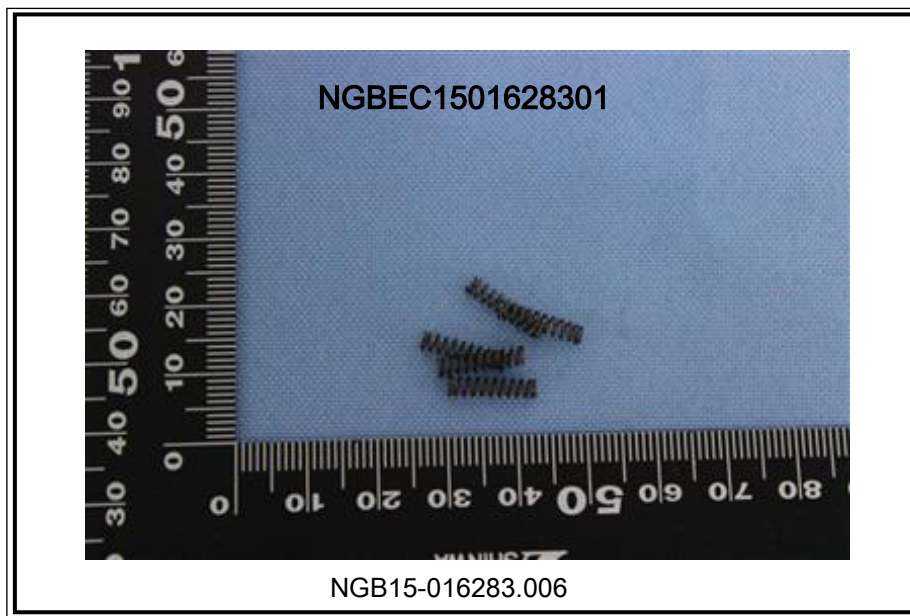
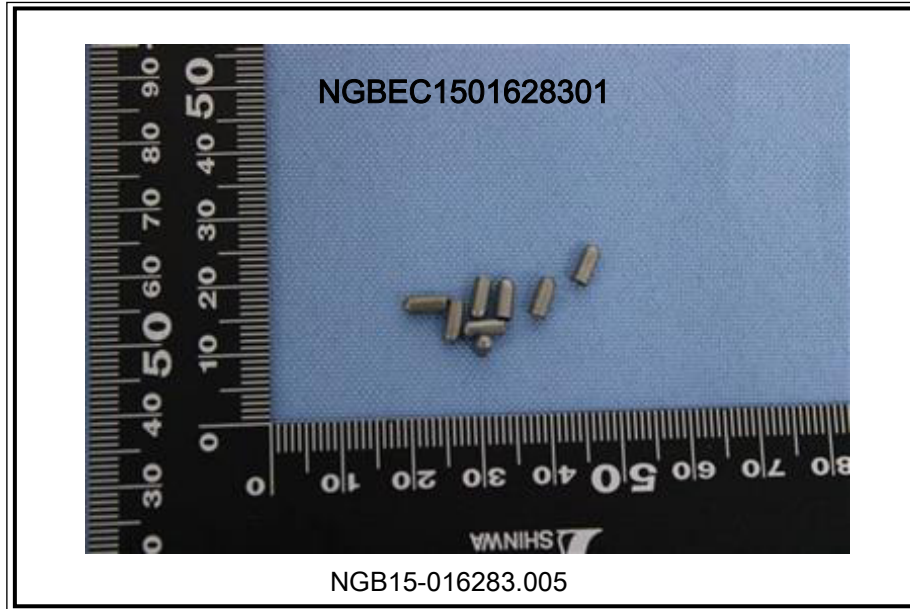
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Sample photo:

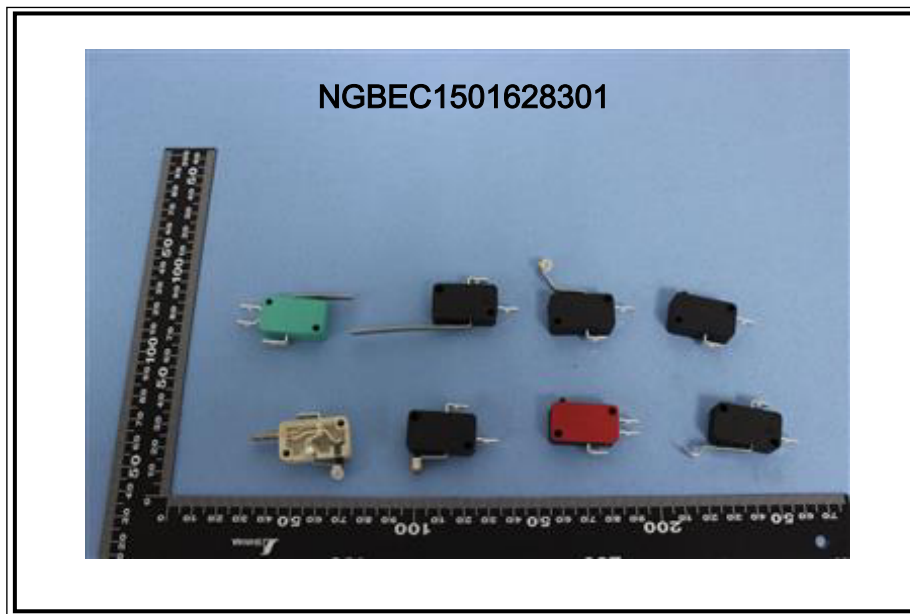












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