

No. NGBEC1904322213

Date: 02 Sep 2019

Page 1 of 8

NINGBO DEGSON ELECTRICAL CO., LTD NO.1585 XIAOLIN ROAD XIAOLIN TOWN CIXI NINGBO CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : PA66 Black

SGS Job No. :	NP19-003709 - NB
Date of Sample Received :	27 Aug 2019
Testing Period :	27 Aug 2019 - 02 Sep 2019
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) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch

Viao

Iris Xiao Approved Signatory



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No. NGBEC1904322213

Page 2 of 8

Test Results :

Test Part Description :

Specimen No.	cimen No. SGS Sample ID	
SN1	NGB19-043222.013	Black plastic

#### Remarks :

(1) 1 mg/kg = 0.0001%(2) MDL = Method Detection Limit

- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

#### RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC62321-5:2013, IEC62321-7-2:2017, IEC 62321-6:2015 and IEC62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	MDL	<u>013</u>
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Sum of PBBs	1000	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	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
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



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Test Report	No. NGBEC1904322213		Date: 02 Sep 2019		Page 3 of 8
<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>013</u>	
Heptabromodiphenyl ether	-	mg/kg	5	ND	
Octabromodiphenyl ether	-	mg/kg	5	ND	
Nonabromodiphenyl ether	-	mg/kg	5	ND	
Decabromodiphenyl ether	-	mg/kg	5	ND	
Di-butyl Phthalate (DBP)	1000	mg/kg	50	ND	
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND	
Bis(2-ethylhexyl) Phthalate(DEHP)	1000	mg/kg	50	ND	
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND	

#### Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
  - IEC 62321 series is equivalent to EN 62321 series

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(2) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

(3) The restriction of DEHP, BBP, DBP and DIBP shall not apply to toys which are already subject to the restriction of DEHP, BBP, DBP and DIBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.'



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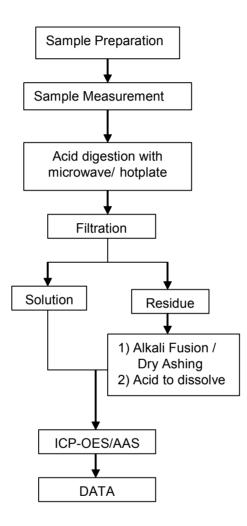
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Page 4 of 8

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## Pb / Cd / Hg Testing Flow Chart

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





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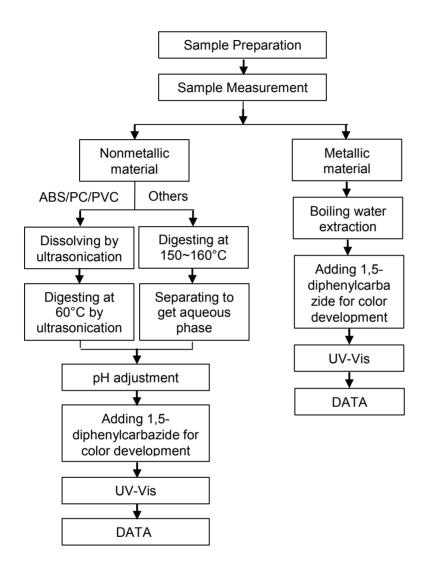
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### Hexavalent Chromium (Cr(VI)) Testing Flow Chart





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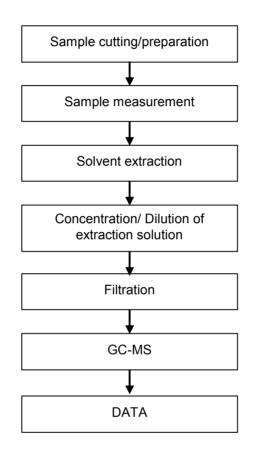
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### **PBBs/PBDEs Testing Flow Chart**





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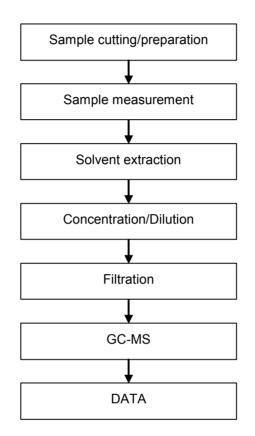
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### **Phthalates Testing Flow Chart**





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