



**BUREAU
VERITAS**

TEST REPORT

LAB NO. : (8823)083-0002
DATE : Apr 25, 2023
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Applicant Name: NINGBO REALWAY ELECTRICAL CO.,LTD
Applicant Address: NO.38, XIANGQIAO ROAD, LANGXIA, YUYAO,NINGBO,CHINA.
Date of Submission: MAR 23, 2023
Test Period: MAR 23, 2023 TO APR 25, 2023
Sample Description: DEHUMIDIFIER
Style No. : SEE ATTACHMENT
Sample Size : 1

SUMMARY OF TEST RESULTS

TEST ON REQUESTED COMPONENT(S)	CONCLUSION	REMARK
European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendment Directive (EU)2015/863 on certain component	PASS	-



BUREAU VERITAS SHENZHEN CO.,LTD
DONGGUAN BRANCH

Lisa Bai
Analytical lab Senior Supervisor

RT/ Carmen Xiong

REMARK

If there are questions or concerns on this report, please contact the following persons:

Report Enquiry: (86) 0769 89952999 Ext. 8175 CPSAnalytical.DG@bureauveritas.com

Business Contact: (86) 0769 85893595

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ATTACHMENT:

Style No(s):

DH100A, DH100B, DH100C, DH100D, DH200A, DH200B, DH200C, DH200D, DH300A, DH300B, DH300C, DH300D, DH400A, DH400B, DH400C, DH400D, DH500A, DH500B, DH500C, DH500D, DH500E, DH500F, DH500G, DH500H, DH500I, DH650A, DH650B, DH650C, DH650D, DH700A, DH700B, DH700C, DH700D, DH800A, DH800B, DH800C, DH800D, DH900A, DH900B, DH900C, DH900D, DH1000A, DH1000B, DH1000C, DH1000D, DH1100A, DH1100B, DH1100C, DH1100D, DH1200A, DH1200B, DH1200C, DH1200D, DH1300A, DH1300B, DH1300C, DH1300D, DH1400A, DH1400B, DH1400C, DH1400D, DH1500A, DH1500B, DH1500C, DH1500D, DH1600A, DH1600B, DH1600C, DH1600D, DH1800A, DH1800B, DH1800C, DH1800D, DH2000A, DH2000B, DH2000C, DH2000D, DH2000E, DH2000F, DH2000G, DH2000H, DH2000I, DH2200A, DH2200B, DH2200C, DH2200D, DH2500A, DH2500B, DH2500C, DH2500D, DH3000A, DH3000B, DH3000C, DH3000D, REAL10A, REAL10B, REAL10C, REAL10D, REAL10E, REAL12A, REAL12B, REAL12C, REAL12D, REAL12E

Photo of the Submitted Sample

Sample picture (as received)

Attention! Only selected sample(s) was tested at the request from client. The detail is listed in specific component description in result page.



Sample picture with tested

Photo of the Submitted Sample



Photo of the Submitted Sample



Photo of the Submitted Sample



Photo of Test Item(s)

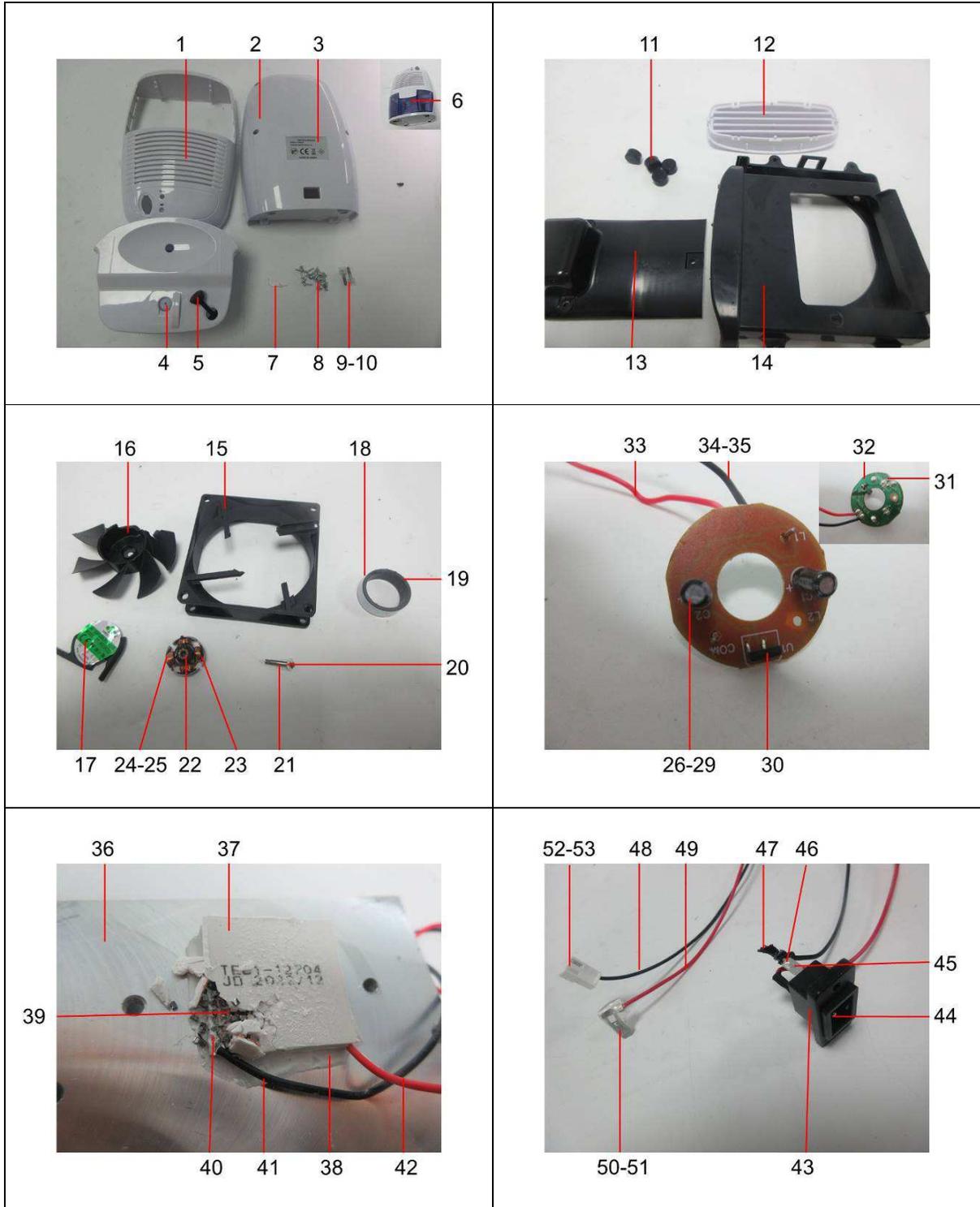
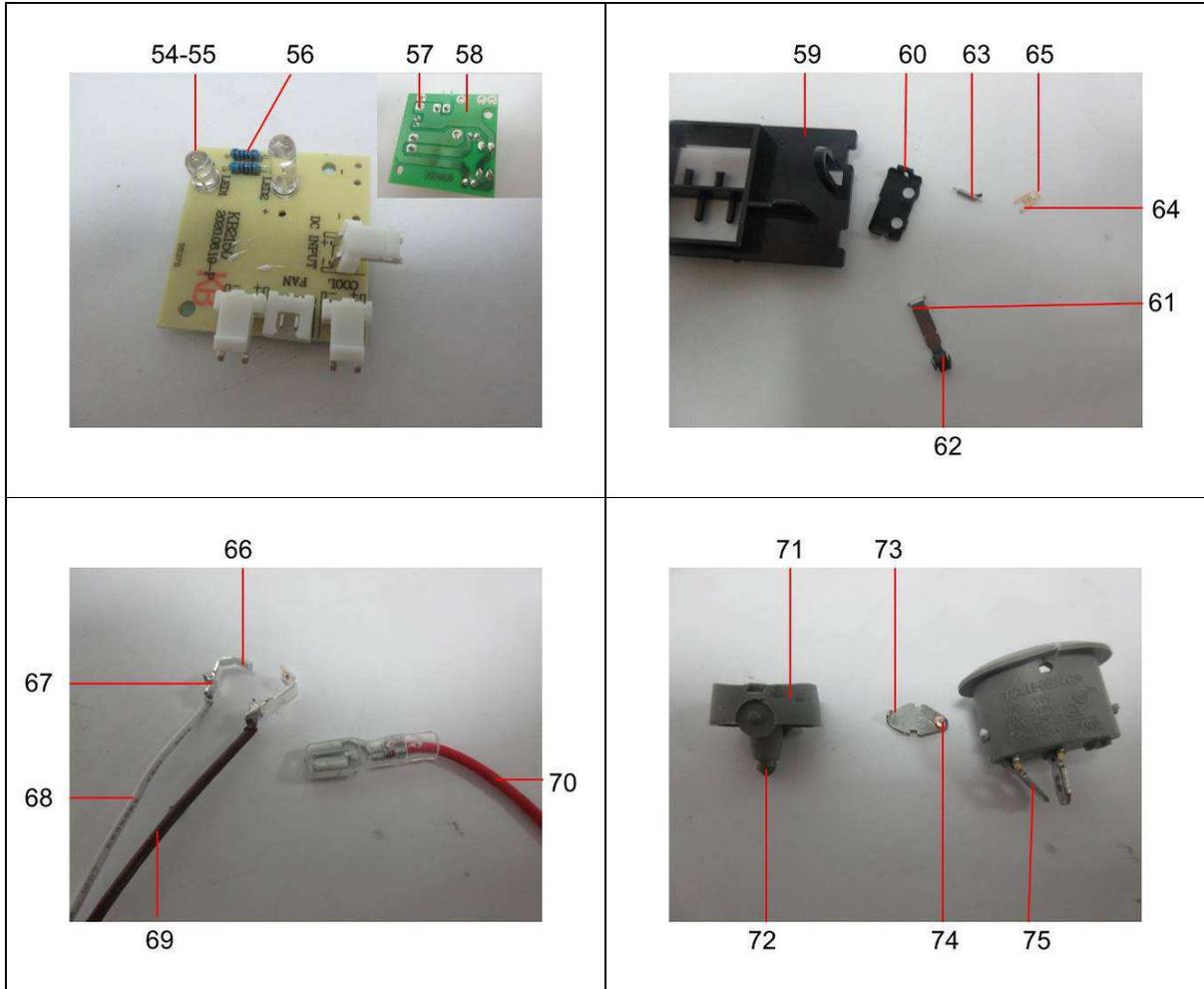


Photo of Test Item(s)





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Component Description List

Test Item(s)	Component Description(s)	Location	Style(s)
1	White plastic	Housing	-
2	White plastic	Base, housing	-
3	Black/silvery printed transparent plastic	Sticker	-
4	Transparent soft plastic	Bottle	-
5	Black soft plastic	Gasket	-
6	Blue/transparent plastic	Housing	-
7	White plastic	Belt	-
8	Bright silvery metal	screw	-
9	Silvery metal	Screw	-
10	White/transparent plastic	Holder, screw	-
11	Black soft plastic	Gasket	-
12	White plastic	Housing	-
13	Black plastic	Housing	-
14	Black plastic	Holder, heat	-
15	Black plastic	Housing, motor	-
16	Black plastic	Gear, motor	-
17	Green/black/silvery printed transparent plastic	Sticker, motor	-
18	Silvery metal	Case, motor	-
19	Black magnet	Magnet, motor	-
20	White plastic	Ring, motor	-
21	Silvery metal	Shaft, motor	-
22	Copper metal	Bearing, motor	-
23	Black plastic	Insulator, motor	-
24	Silvery metal	Plate, motor	-
25	Copper metal	Coil, motor	-
26	Grey printed black plastic	Sleeve, electrolytic capacitor, PCB, motor	-
27	Silvery body	Electrolytic capacitor, PCB, motor	-
28	Black soft plastic	Base, electrolytic capacitor, PCB, motor	-
29	Silvery metal	Pin, electrolytic capacitor, PCB, motor	-
30	Black body	EC, PCB, motor	-
31	Silvery solder	Solder, PCB, motor	-
32	Green/brown PCB	PCB, motor	-
33	Red soft plastic	Wire insulation, cable, motor	-
34	Black soft plastic	Wire insulation, cable, motor	-
35	Silvery metal	Wire, cable, motor	-
36	Silvery metal	Holder, heat	-
37	Black printed white ceramic	Ceramic, housing, heater	-



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Component Description List

Test Item(s)	Component Description(s)	Location	Style(s)
38	White glue	Glue, heater	-
39	Grey/coppery ceramic	Ceramic, heater	-
40	Silvery solder	Solder, heater	-
41	Black soft plastic	Wire insulation, cable, heater	-
42	Red soft plastic	Wire insulation, cable, heater	-
43	Black plastic	Socket	-
44	Silvery metal	Pin, socket	-
45	Silvery metal	Contact plate, socket	-
46	Silvery solder	Solder, socket	-
47	Black soft plastic	Heat sink tube, socket	-
48	Black soft plastic	Wire insulation, cable, socket	-
49	Red soft plastic	Wire insulation, cable, socket	-
50	Transparent soft plastic	sleeve, holder, cable	-
51	Silvery metal	Holder, cable	-
52	White plastic	Socket	-
53	Silvery metal	Pin, socket	-
54	Translucent plastic	LED, PCB	-
55	Silvery metal	Pin, LED, PCB	-
56	Multi-color printed blue body	Resistor, PCB	-
57	Silvery solder	Solder, PCB	-
58	Green/yellow PCB	PCB	-
59	Black plastic	Holder, switch	-
60	Black plastic	Housing, switch	-
61	Silvery metal	Button, switch	-
62	Black plastic	Ring, switch	-
63	Silvery metal	Spring, switch	-
64	Coppery metal	Contact plate, switch	-
65	Coppery/silvery metal	Point, contact plate, switch	-
66	Bright silvery metal	Contact plate, switch	-
67	Silvery solder	Solder, switch	-
68	Grey printed white soft plastic	Wire insulation, cable, switch	-
69	Brown soft plastic	Wire insulation, cable, switch	-
70	Red soft plastic	Wire insulation, cable, switch	-
71	Grey plastic	Housing, switch	-
72	Silvery metal	Connector, switch	-
73	Silvery metal	Contact plate, switch	-
74	Coppery/silvery metal	Point, contact plate, switch	-
75	Silvery/golden metal	Contact plate, switch	-



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TEST RESULT

Compliance Test – European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendment Directive (EU)2015/863

Test Method : See Appendix.

-	Result (s)									
Parameter	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr VI)	PBBs & PBDEs	BBP	DBP	DEHP	DIBP	Conclusion
Unit	mg/kg									-
Test Item(s)	-	-	-	-	-	-	-	-	-	-
1	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
2	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
3	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
4	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
5	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
6	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
7	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
8	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
9	BL	BL	BL	Negative*	NA	NA	NA	NA	NA	PASS
10	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
11	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
12	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
13	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
14	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
15	BL	BL	BL	BL	BL*	BL*	BL*	BL*	BL*	PASS
16	BL	BL	BL	BL	BL*	BL*	BL*	BL*	BL*	PASS
17	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
18	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
19	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
20	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
21	BL	BL	BL	Negative*	NA	NA	NA	NA	NA	PASS
22	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
23	BL	BL	BL	BL	BL*	BL*	BL*	BL*	BL*	PASS
24	BL	BL	BL	Negative*	NA	NA	NA	NA	NA	PASS
25	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
26	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
27	BL	BL	BL	BL	BL	NA	NA	NA	NA	PASS
28	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
29	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS



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-	Result (s)									
Parameter	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr VI)	PBBs & PBDEs	BBP	DBP	DEHP	DIBP	Conclusion
Unit	mg/kg									-
Test Item(s)	-	-	-	-	-	-	-	-	-	-
30	31*	BL	BL	BL	NA	NA	NA	NA	NA	PASS
31	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
32	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
33	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
34	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
35	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
36	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
37	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
38	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
39	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
40	BL*	BL	BL	BL	NA	NA	NA	NA	NA	PASS
41	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
42	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
43	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
44	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
45	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
46	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
47	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
48	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
49	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
50	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
51	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
52	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
53	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
54	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
55	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
56	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
57	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
58	BL	BL	BL	BL	BL*	BL*	BL*	BL*	BL*	PASS
59	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
60	BL	BL	BL	BL	BL*	BL*	BL*	BL*	BL*	PASS
61	BL	BL	BL	Negative*	NA	NA	NA	NA	NA	PASS
62	BL	BL	BL	BL	BL*	BL*	BL*	BL*	BL*	PASS
63	BL	BL	BL	Negative*	NA	NA	NA	NA	NA	PASS
64	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS



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-	Result (s)									
Parameter	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr VI)	PBBs & PBDEs	BBP	DBP	DEHP	DIBP	Conclusion
Unit	mg/kg									-
Test Item(s)	-	-	-	-	-	-	-	-	-	-
65	BL	BL	32210*	BL	NA	NA	NA	NA	NA	EXEMPTED#
66	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
67	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
68	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
69	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
70	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
71	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
72	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
73	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
74	BL	BL	1960	BL	NA	NA	NA	NA	NA	EXEMPTED#
75	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS

Note / Key:

BL = Below limit OL = Over limit ND = Not detected NA = Not applicable
 mg/kg = milligram(s) per kilogram = ppm = part(s) per million
 Detection Limit : See Appendix.

Remark:

- *Denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
- *Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Council Directive 2011/65/EU, Article 4(1).
- According to European Council Directive 2011/65/EU, Article 5 "Adaptation of the Annexes to scientific and technical progress", exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.
- #According to Annex III of European Council Directive 2011/65/EU, exemptions were granted a few materials and Clause 8(b)-I is reiterated here "Cadmium and its compounds in electrical contacts.". Test Item(s) 65, 74 were claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found cadmium level should be exempted.
- At the request of client, test(s) was conducted on the certain component(s) of the submitted samples(s) / submitted component(s).

APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European Parliament and Council Directive 2011/65/EU] :						
No.	Name of Analytes	Detection Limit(mg/kg)				Maximum Allowable Limit (mg/kg)
		X-ray fluorescence (XRF) ^[a]			Wet Chemistry	
		Plastic	Metal/Glass/ Ceramic	Others		
1	Lead (Pb)	100	200	200	10 ^[b]	1000
2	Cadmium (Cd)	50	50	50	10 ^[b]	100
3	Mercury (Hg)	100	200	200	10 ^[c]	1000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	See ^[d] /10 ^[e] /3 ^[f,g]	1000 / Negative ^[h]
6	Bromine (Br)	200	NA	200	NA	NA
7	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	NA	NA	NA	Each 50 ^[i]	Sum 1000
8	Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	NA	NA	NA	Each 50 ^[i]	Sum 1000
9	- Dibutyl phthalate (DBP) - Butyl benzyl phthalate (BBP) - Di-2-ethylhexyl phthalate (DEHP) - Diisobutyl phthalate (DIBP)	NA	NA	NA	Each 50 ^[j]	Each 1000



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	NA = Not applicable IEC = International Electrotechnical Commission
[a]	Test method with reference to International Standard IEC 62321-3-1: 2013.
[b]	Test method with reference to International Standard IEC 62321-5: 2013.
[c]	Test method with reference to International Standard IEC 62321-4:2013+A1:2017.
[d]	Metal - Test method with reference to International Standard IEC 62321-7-1: 2015.
[e]	Polymers and Electronics - Test method with reference to European Standard EN 62321-7-2: 2017.
[f]	Leather - Test method International Standard ISO 17075-1:2017.
[g]	Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075-1:2017.
	Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1).
[h]	While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1).
[i]	Test method with reference to International Standard IEC 62321-6: 2015.
[j]	Test method with reference to International Standard IEC 62321-8: 2017.
Testing Approach [Compliance Test for European Parliament and Council Directive 2011/65/EU] :	
The testing approach was with reference to the following document(s).	
1	International Standards IEC 62321-1: 2013 and IEC 62321-2: 2021
2	"RoHS Enforcement Guidance Document Version 1" by EU RoHS Enforcement Authorities Informal Network. (May 2006)
3	"RoHS Regulations - Government Guidance Notes" by United Kingdom Department for Business Innovation & Skills. (February 2011)
4	"Final Report to RoHS substances (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium" by Belgium Federal Public Service Health, Food Chain Safety and Environment. (November 2005)

*** End of Report ***