TEST REPORT

REPORT NO. : **(8825)057-0074**
DATE : **May 22, 2025**
PAGE : **1 OF 15**

Applicant Name:	**ZHIWEI ROBOTICS CORP.**
Applicant Address:	ROOM 603, 2 BOYUN ROAD, PUDONG, SHANGHAI P.R.
Date of Submission:	FEB 26, 2025
Test Period:	FEB 26, 2025 TO MAY 22, 2025
Sample Description:	DFR0992-EN UNIHIKER K10 /DFR0992行空板 K10
Style No. :	DFR0992-EN/DFR0992
Sample Size:	4

BUREAU VERITAS SHENZHEN CO.,LTD
DONGGUAN BRANCH

Lisa Bai
Analytical lab technical ass. manager

RT/ Olivia Yin

REMARK

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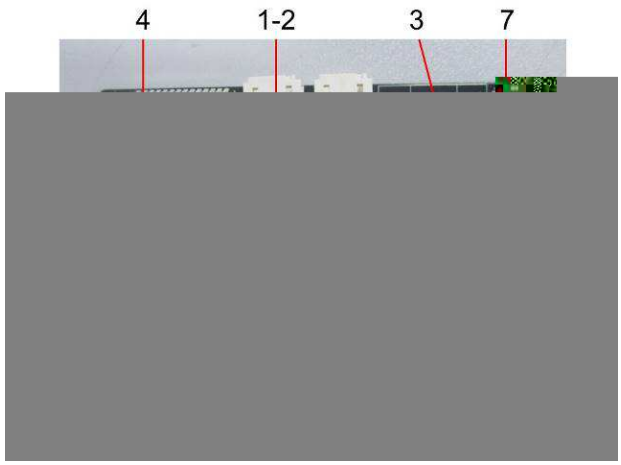
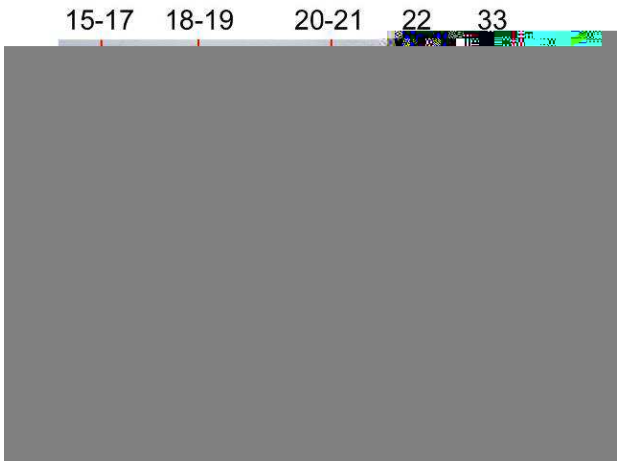
SUMMARY OF TEST RESULTS

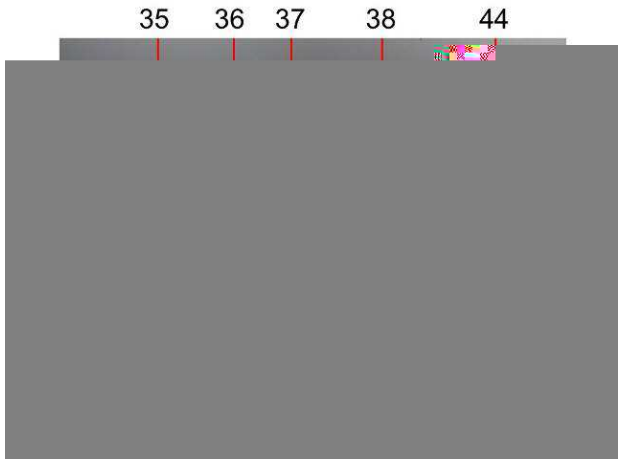
TEST REQUESTED	CONCLUSION	REMARK
European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendment Directive (EU)2015/863	PASS	-

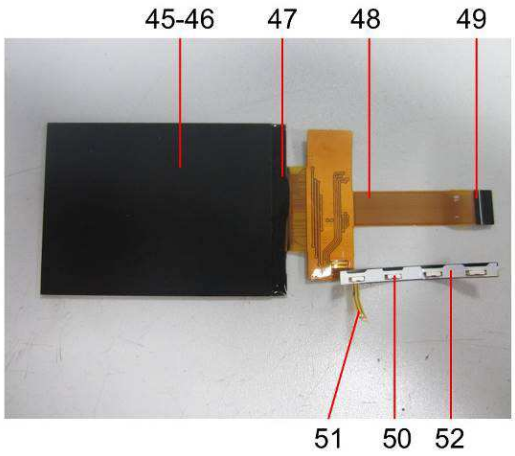
Photo of the Submitted Sample

Photo of Test Item(s)









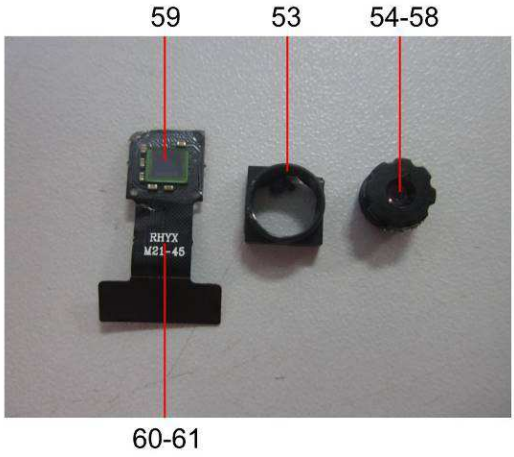
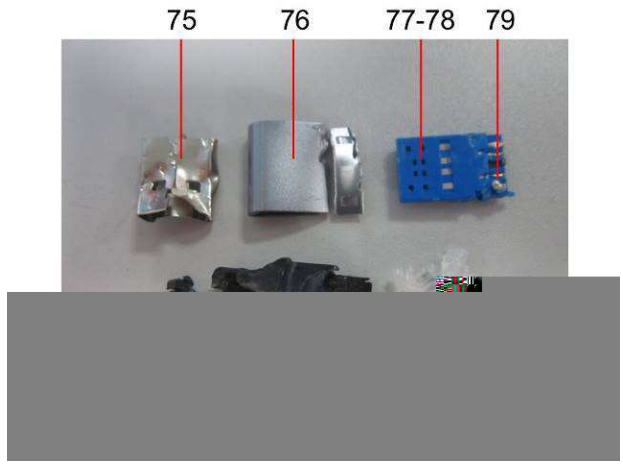
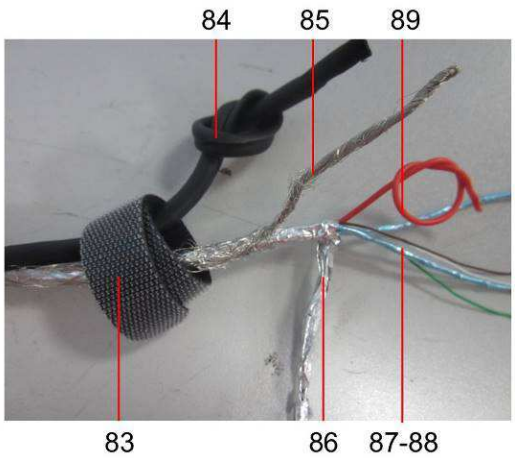
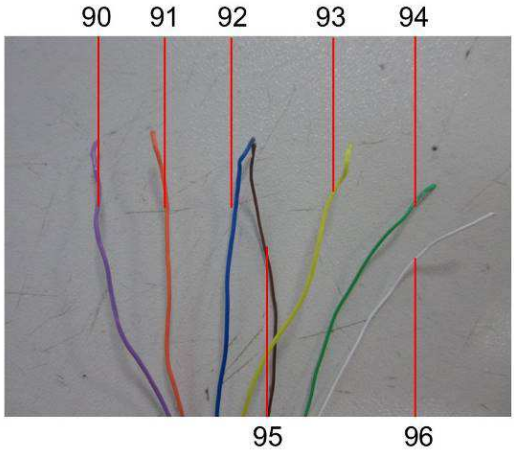
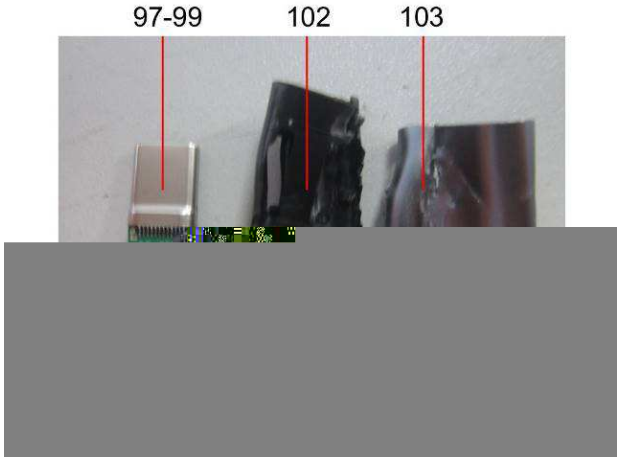


Photo of Test Item(s)









Component Description List

Test Item(s)	Component Description(s)	Location	Style(s)
1	Black body	IC, PCB	-
2	Silvery/coppery metal	Plate, IC, PCB	-
3	Black body	SMD IC, PCB	-
4	Brown body	SMD capacitor, PCB	-
5	Black printed white body	SMD resistor, PCB	-
6	Black body	SMD transistor, PCB	-
7	White body	SMD LED, PCB	-
8	Black body	SMD diode, PCB	-
9	Coppery metal	Plate, diode, PCB	-
10	Silvery solder	Solder inside, diode, PCB	-
11	Silvery metal	Cover, plug, PCB	-
12	Black plastic	Pin holder, plug, PCB	-
13	Silvery metal	Spring, plug, PCB	-
14	Silvery metal	Pin, plug, PCB	-
15	Silvery metal	Contact plate, type-c plug, PCB	-
16	Black plastic	Pin holder, type-c plug, PCB	-
17	Silvery/golden metal	Pin, type-c plug, PCB	-
18	Silvery metal	Cover, PCB	-
19	Silvery/golden body	EC, PCB	-
20	Beige plastic	Socket, PCB	-
21	Silvery metal	Pin, socket, PCB	-
22	Black foam with adhesive	Foam, PCB	-
23	Yellow/transparent with adhesive	Adhesive tape, plug, PCB	-
24	Silvery metal	Plug, PCB	-
25	Black plastic	Touch switch, PCB	-
26	White plastic	Touch switch, PCB	-
27	Silvery metal	Touch switch, PCB	-
28	Silvery metal	Contact plate, touch switch, PCB	-
29	Black plastic	Socket, PCB	-
30	White plastic	Base, socket, PCB	-
31	Silvery metal	Pin, socket, PCB	-
32	Silvery body	EC, PCB	-
33	Silvery solder	Solder, PCB	-
34	Black PCB	PCB	-
35	Black plated silvery metal	Frame, display screen	-
36	Silvery metal	Frame, display screen	-
37	Translucent plastic with adhesive	Diaphragm, frame, display screen	-

Test Item(s)	Component Description(s)	Location	Style(s)
38	White plastic	Diaphragm, display screen	-
39	Translucent plastic	Board, display screen	-
40	White plastic	Frame, display screen	-
41	White/translucent plastic	Diaphragm, display screen	-
42	Silver plastic	Diaphragm, display screen	-
43	Silver/translucent plastic	Diaphragm, display screen	-
44	Black plastic with adhesive	Adhesive tape, display screen	-
45	Black/translucent plastic	Diaphragm, display screen	-
46	Black/grey plated transparent glass	Display screen	-
47	Blue glue	Glue, display screen	-
48	Brown FPC	FPC, display screen	-
49	Black plastic	Plate, FPC, display screen	-
50	White body	SMD LED, FPC, display screen	-
51	Silvery solder	Solder, FPC, display screen	-
52	White/brown FPC	FPC, display screen	-
53	Black plastic	Case, camera	-
54	Black plastic	Case, lens, camera	-
55	Transparent plastic	Slice, camera	-
56	Transparent glass	Filter, lens, camera	-
57	Black plastic	Ring, lens, camera	-
58	Black plated silvery metal	Ring, lens, camera	-
59	Iridescent body	Sensor, FPC, camera	-
60	Silvery metal	Base, FPC, camera	-
61	Black FPC	FPC, camera	-
62	Black plastic	Case, speaker	-
63	Black plastic	Frame,	-
64	Black fabric	Net, speaker	-
65	Silvery magnet	Magnet, speaker	-
66	Silvery metal	Case, speaker	-
67	Transparent plastic	Diaphragm, speaker	-
68	Coppery metal	Coil, speaker	-
69	Silvery metal	Base, speaker	-
70	Silvery solder	Solder, speaker	-
71	Black soft plastic	Wire insulation, cable, speaker	-
72	Red soft plastic	Wire insulation, cable, speaker	-
73	White plastic	Socket, cable, speaker	-
74	Silvery metal	Pin, socket, cable, speaker	-
75	Silvery metal	Contact plate, USB plug, adapter	-
76	Grey coated silvery metal	Cover, USB plug, adapter	-
77	Blue plastic	Pin holder, USB plug, adapter	-

Test Item(s)	Component Description(s)	Location	Style(s)
78	Silvery/coppery metal	Pin, USB plug, adapter	-
79	Silvery solder	Solder, USB plug, adapter	-
80	Translucent plastic	Filler, USB plug, adapter	-
81	Black soft plastic	Cover, USB plug, adapter	-
82	Black plastic	Base, USB plug, adapter	-
83	Transparent plastic with black fabric	Ribbon, cable, adapter	-
84	Black soft plastic	Wire jacket, cable, adapter	-
85	Silvery metal	Wire, cable, adapter	-
86	Silvery metal	Foil, cable, adapter	-
87	Blue plated silvery metal	Foil, cable, adapter	-
88	Transparent plastic	Diaphragm, foil, cable, adapter	-
89	Red soft plastic	Wire insulation, cable, adapter	-
90	Purple soft plastic	Wire insulation, cable, adapter	-
91	Orange soft plastic	Wire insulation, cable, adapter	-
92	Blue soft plastic	Wire insulation, cable, adapter	-
93	Yellow soft plastic	Wire insulation, cable, adapter	-
94	Green soft plastic	Wire insulation, cable, adapter	-
95	Brown soft plastic	Wire insulation, cable, adapter	-
96	White soft plastic	Wire insulation, cable, adapter	-
97	Silvery metal	Contact plate, type-c plug, adapter	-
98	Black plastic	Pin holder, type-c plug, adapter	-
99	Silvery metal	Pin, type-c plug, adapter	-
100	Silvery solder	Solder, PCB, type-c plug, adapter	-
101	Green PCB	PCB, type-c plug, adapter	-
102	Black soft plastic	Cover, type-c plug, adapter	-
103	Grey coated silvery metal	Cover, type-c plug, adapter	-

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 2015/863/EU

Test Method : See Appendix.

See Analytes and their corresponding Maximum Allowable Limit in Appendix

-	Result (s)						
Parameter	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr VI)	PBBs	PBDEs	Conclusion
Limit (mg/kg):	1000	1000	100	1000/ Negative	1000	1000	-
Test Item(s)	-	-	-	-	-	-	-
1	BL	BL	BL	BL	BL	BL	PASS
2	BL	BL	BL	BL	NA	NA	PASS
3	BL	BL	BL	BL	BL	BL	PASS
4	BL	BL	BL	BL	BL	BL	PASS
5	BL	BL	BL	BL	BL	BL	PASS
6	BL	BL	BL	BL	BL	BL	PASS
7	BL	BL	BL	BL	BL	BL	PASS
8	BL	BL	BL	BL	BL	BL	PASS
9	BL	BL	BL	BL	NA	NA	PASS
10	OL	BL	BL	BL	NA	NA	EXEMPTED#
11	BL	BL	BL	Negative*	NA	NA	PASS
12	BL	BL	BL	BL	BL	BL	PASS
13	BL	BL	BL	BL	NA	NA	PASS
14	BL	BL	BL	BL	NA	NA	PASS
15	BL	BL	BL	Negative*	NA	NA	PASS
16	BL	BL	BL	BL	BL	BL	PASS
17	BL	BL	BL	BL	NA	NA	PASS
18	BL	BL	BL	BL	NA	NA	PASS
19	BL	BL	BL	BL	BL	BL	PASS
20	BL	BL	BL	BL	BL	BL	PASS
21	BL	BL	BL	BL	NA	NA	PASS
22	BL	BL	BL	BL	BL	BL	PASS
23	BL	BL	BL	BL	BL	BL	PASS
24	24980*	BL	BL	BL	NA	NA	EXEMPTED#
25	BL	BL	BL	BL	BL	BL	PASS
26	BL	BL	BL	BL	BL	BL	PASS
27	BL	BL	BL	BL	NA	NA	PASS
28	BL	BL	BL	Negative*	NA	NA	PASS

-	**Result (s)**						
Parameter	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr VI)	PBBs	PBDEs	Conclusion
Limit (mg/kg):	1000	1000	100	1000/ Negative	1000	1000	-
Test Item(s)	-	-	-	-	-	-	-
29	BL	BL	BL	BL	BL	BL	PASS
30	BL	BL	BL	BL	BL	BL	PASS
31	BL	BL	BL	BL	NA	NA	PASS
32	BL	BL	BL	BL	BL	BL	PASS
33	BL	BL	BL	BL	NA	NA	PASS
34	BL	BL	BL	BL	BL*	BL*	PASS
35	BL	BL	BL	BL	NA	NA	PASS
36	BL	BL	BL	Negative*	NA	NA	PASS
37	BL	BL	BL	BL	BL	BL	PASS
38	BL	BL	BL	BL	BL	BL	PASS
39	BL	BL	BL	BL	BL	BL	PASS
40	BL	BL	BL	BL	BL	BL	PASS
41	BL	BL	BL	BL	BL	BL	PASS
42	BL	BL	BL	BL	BL	BL	PASS
43	BL	BL	BL	BL	BL	BL	PASS
44	BL	BL	BL	BL	BL	BL	PASS
45	BL	BL	BL	BL	BL	BL	PASS
46	BL	BL	BL	BL	NA	NA	PASS
47	BL	BL	BL	BL	BL	BL	PASS
48	BL	BL	BL	BL	BL	BL	PASS
49	BL	BL	BL	BL	BL	BL	PASS
50	BL	BL	BL	BL	BL	BL	PASS
51	BL	BL	BL	BL	NA	NA	PASS
52	BL	BL	BL	BL	BL	BL	PASS
53	BL	BL	BL	BL	BL	BL	PASS
54	BL	BL	BL	BL	BL	BL	PASS
55	BL	BL	BL	BL	BL	BL	PASS
56	BL	BL	BL	BL	NA	NA	PASS
57	BL	BL	BL	BL	BL	BL	PASS
58	26180*	BL	BL	BL	NA	NA	EXEMPTED#
59	BL	BL	BL	BL	BL	BL	PASS
60	BL	BL	BL	Negative*	NA	NA	PASS
61	BL	BL	BL	BL	BL	BL	PASS
62	BL	BL	BL	BL	BL	BL	PASS
63	BL	BL	BL	BL	BL	BL	PASS
64	BL	BL	BL	BL	BL	BL	PASS
65	BL	BL	BL	BL	NA	NA	PASS

-	**Result (s)**						
Parameter	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr VI)	PBBs	PBDEs	Conclusion
Limit (mg/kg):	1000	1000	100	1000/ Negative	1000	1000	-
Test Item(s)	-	-	-	-	-	-	-
66	BL	BL	BL	BL	NA	NA	PASS
67	BL	BL	BL	BL	BL	BL	PASS
68	BL	BL	BL	BL	NA	NA	PASS
69	BL	BL	BL	BL	NA	NA	PASS
70	BL	BL	BL	BL	NA	NA	PASS
71	BL	BL	BL	BL	BL	BL	PASS
72	BL	BL	BL	BL	BL	BL	PASS
73	BL	BL	BL	BL	BL	BL	PASS
74	BL	BL	BL	BL	NA	NA	PASS
75	BL	BL	BL	BL	NA	NA	PASS
76	BL	BL	BL	BL	NA	NA	PASS
77	BL	BL	BL	BL	BL*	BL*	PASS
78	BL	BL	BL	BL	NA	NA	PASS
79	BL	BL	BL	BL	NA	NA	PASS
80	BL	BL	BL	BL	BL	BL	PASS
81	BL	BL	BL	BL	BL	BL	PASS
82	BL	BL	BL	BL	BL	BL	PASS
83	BL	BL	BL	BL	BL	BL	PASS
84	BL	BL	BL	BL	BL	BL	PASS
85	BL	BL	BL	BL	NA	NA	PASS
86	BL	BL	BL	BL	NA	NA	PASS
87	BL	BL	BL	BL	NA	NA	PASS
88	BL	BL	BL	BL	BL	BL	PASS
89	BL	BL	BL	BL	BL	BL	PASS
90	BL	BL	BL	BL	BL	BL	PASS
91	BL	BL	BL	BL	BL	BL	PASS
92	BL	BL	BL	BL	BL	BL	PASS
93	BL	BL	BL	BL	BL	BL	PASS
94	BL	BL	BL	BL	BL	BL	PASS
95	BL	BL	BL	BL	BL	BL	PASS
96	BL	BL	BL	BL	BL	BL	PASS
97	BL	BL	BL	Negative*	NA	NA	PASS
98	BL	BL	BL	BL	BL	BL	PASS
99	BL	BL	BL	Negative*	NA	NA	PASS
100	BL	BL	BL	BL	NA	NA	PASS
101	BL	BL	BL	BL	BL*	BL*	PASS
102	BL	BL	BL	BL	BL	BL	PASS

-	**Result (s)**						
Parameter	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr VI)	PBBs	PBDEs	Conclusion
Limit (mg/kg):	1000	1000	100	1000/ Negative	1000	1000	-
Test Item(s)	-	-	-	-	-	-	-
103	BL	BL	BL	BL	NA	NA	PASS

Note / Key:

ND = Not detected
NR = Not requested
NA = Not applicable
BL = Below limit
Detection Limit : See Appendix.
">" = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
% = percent
OL = Over limit
"<" = Less than
10000 mg/kg = 1 %

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 6(c) is reiterated here "Copper alloy containing up to 4 % lead by weight". Test Item(s) 24.58 was (were) claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found lead level should be exempted.
- #According to Annex III of European Council Directive 2011/65/EU, exemptions were granted a few materials and Clause 7(a) is reiterated here "Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).". Test Item(s) 10 was (were) claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found lead level should be exempted.

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	Metallic / 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	3[g, h] / 10[d] / See [e, j]	1000 / Negative[j]
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[f]	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[f]	Sum 1000

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] :

NA = Not applicable

[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] Polymers and Electronics - Test method with reference to International Standard IEC 62321-7-2:2017.

[e] Metal - Test method with reference to International Standard IEC 62321-7-1: 2015.

[f] Test method with reference to International Standard IEC 62321-6: 2015.

[g] Leather - Test method International Standard ISO 17075-1:2017.

[h] Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075-1:2017.

[i] The principle of this method was evaluated and supported by two studies organized by IEC TC 111 WG3. These studies were focused on detecting the presence of Cr VI in the corrosion protection coatings on metallic samples.

[j] 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). 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).

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)

TEST RESULT

BBP/DBP/DEHP/DIBP Content – 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 2015/863/EU

Test Method : With reference to International Standard IEC 62321-8:2017

Test Parameter:	BBP	DBP	DEHP	DiBP	-
Limit (%):	0.1	0.1	0.1	0.1	-
Test Item(s)	Result (%)				Conclusion
22+23+37	ND	ND	ND	ND	PASS
44+47+88	ND	ND	80	ND	PASS
71+72+81	ND	ND	ND	ND	PASS
84+89+90	ND	ND	ND	ND	PASS
91+92+93	ND	ND	ND	ND	PASS
94+95	ND	ND	ND	ND	PASS
96+102	ND	ND	ND	ND	PASS
1+3+4	ND	ND	ND	ND	PASS
5+6+7	ND	ND	ND	ND	PASS
8+12+16	ND	ND	ND	ND	PASS
19+20+25	ND	ND	ND	ND	PASS
26+29+30	ND	ND	ND	ND	PASS
32+34+38	ND	ND	ND	ND	PASS
39+40+41	ND	ND	ND	ND	PASS
42+43+45	ND	ND	ND	ND	PASS
48+49+50	ND	ND	ND	ND	PASS
52+53+54	ND	ND	ND	ND	PASS
55+57+59	ND	ND	ND	ND	PASS
61+62+63	ND	ND	ND	ND	PASS
64+67+73	ND	ND	ND	ND	PASS
77+80+82	ND	ND	ND	ND	PASS
83+98+101	ND	ND	ND	ND	PASS

Note / key:

BBP = Butyl benzyl phthalate (CAS No: 85-68-7)
DBP = Dibutyl phthalate (CAS No: 84-74-2)
DEHP = Di(2-ethylhexyl) phthalate (CAS No: 117-81-7)
DiBP = Diisobutyl phthalate (CAS No: 84-69-5)
ND = Not detected % = percent 10000 mg/kg = 1 %
BL = Below limit OL = Over limit
mg/kg = milligram(s) per kilogram
Detection Limit (%) : Each 0.005
* denotes as reported result(s) was (were) performed by wet chemistry method.

Remark:

- The amendment will be effective on 22 July 2019. For medical devices and control instruments, effective date will be 22 July 2021.
- The composite test sample(s) of the submitted samples was prepared in the manner requested by the client, when subject to the test performed.

*** End of Report ***