TEST REPORT

REPORT NO. : (8825)056-0099
DATE : Aug 20, 2025
PAGE : 1 OF 13

Applicant Name: **PARTICLE INDUSTRIES,INC**

Applicant Address: 325 9TH STREET, SAN FRANCISCO, CA 94103, UNITED STATES OF AMERICA

Date of Submission: FEB 25, 2025

Test Period: FEB 25, 2025 TO AUG 20, 2025

Sample Description: M1 ENCLOSURE

Style No. : M1ENCLEA
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

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REMARK

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

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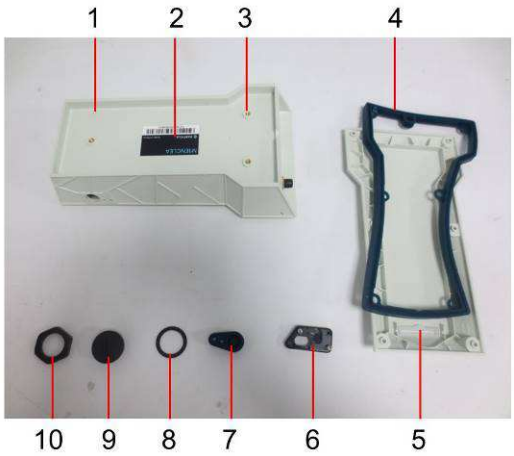
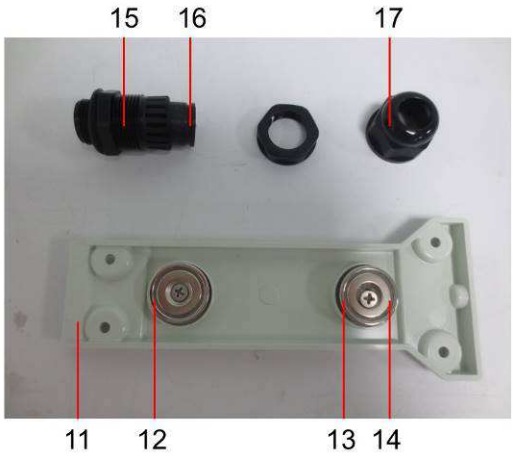
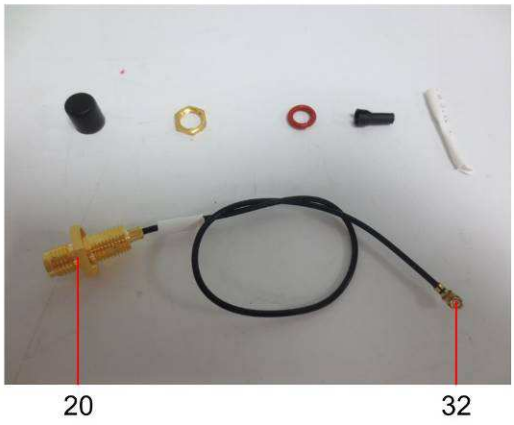
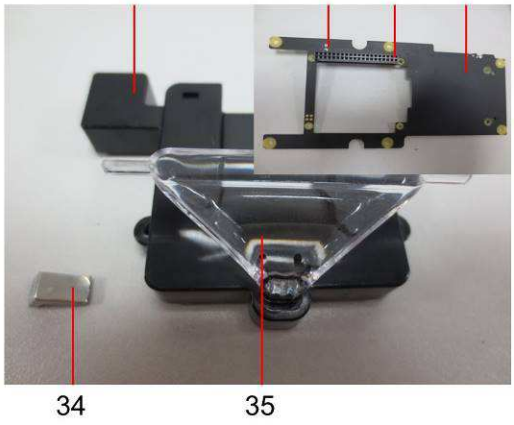
Photo of the Submitted Sample

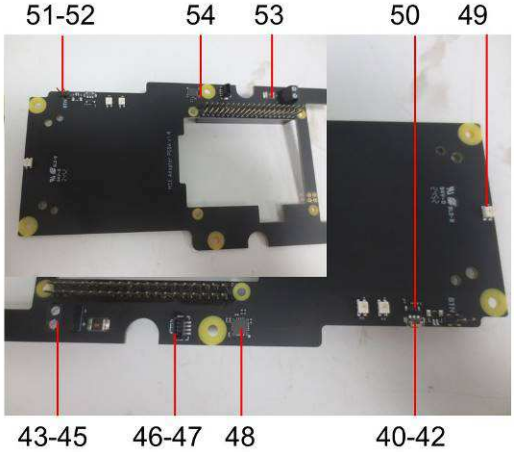
Photo of Test Item(s)











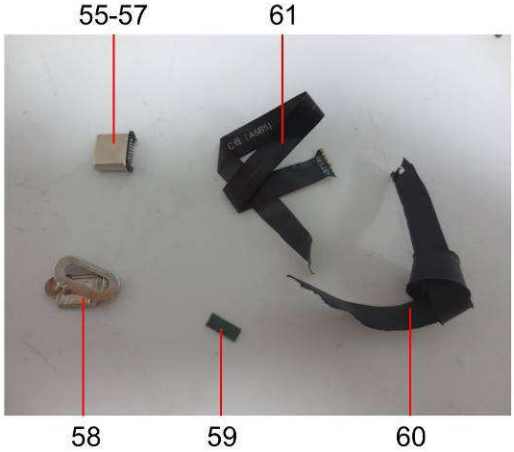
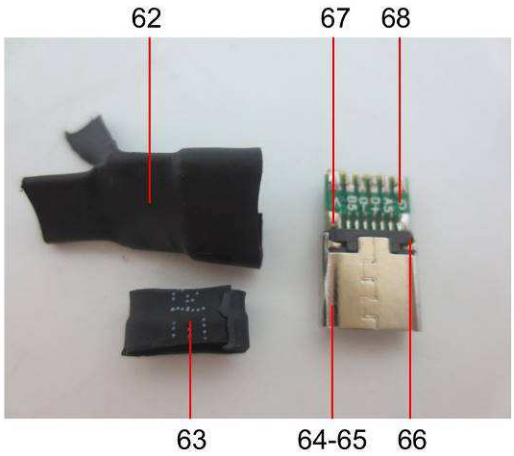
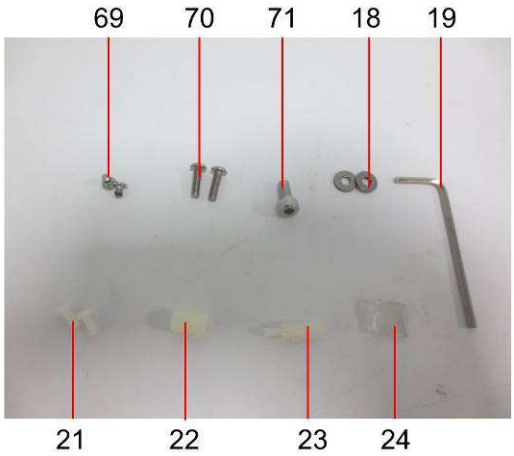
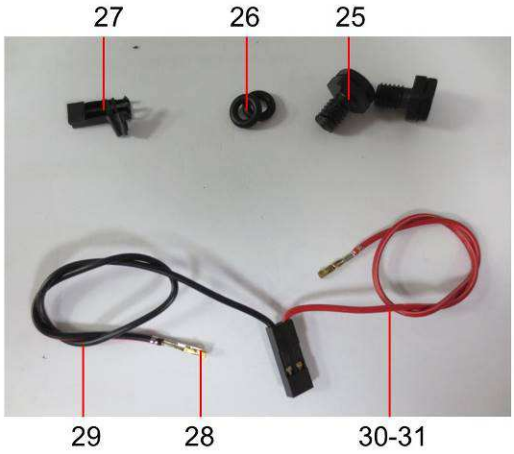


Photo of Test Item(s)







Component Description List

Test Item(s)	Component Description(s)	Location	Style(s)
1	Beige plastic	Housing	
2	Multi-color coated transparent plastic with adhesive	Sticker	
3	Golden metal	Nut	
4	Green soft plastic	Gasket	
5	Transparent plastic	Lamp holder	
6	Black plastic	Holder	
7	Blue soft plastic	Button	
8	Black soft plastic	Ring	
9	Black plastic	Cover	
10	Black plastic	Nut	
11	Beige plastic	Holder	
12	Translucent soft plastic	Gasket, holder	
13	Silvery metal	Ring, holder	
14	Silvery magnet	Magnet, holder	
15	Black plastic	Connector	
16	Black soft plastic	Gasket, connector	
17	Black plastic	Cover, connector	
18	Silvery metal	Ring	
19	Silvery metal	Screwdriver	
20	White plastic	Pin holder, socker, wire insulation, cable	
21	White plastic	Screw	
22	Beige plastic	Nut	
23	Beige plastic	Screw	
24	Transparent adhesive	Adhesive	
25	Black plastic	Screw	
26	Black soft plastic	Ring, screw	
27	Black plastic	Socket, wire insulation, cable	
28	Golden/silvery metal	Pin, socket, wire insulation, cable	
29	Black soft plastic	Wire insulation, cable	
30	Red soft plastic	Wire insulation, cable	
31	Silvery metal	Wire insulation, cable	
32	White plastic	Pin holder, socker, wire insulation, cable	
33	Black plastic	Cover, PCB	
34	Silver coasted grey plastic	Fitting, PCB	
35	Transparent plastic	Fitting, PCB	
36	Black plastic	Socket, PCB	
37	Golden metal	Pin, socket, PCB	

Test Item(s)	Component Description(s)	Location	Style(s)
38	Silvery solder	Solder, PCB	
39	Black PCB	PCB	
40	Blue plastic	Touch switch, PCB	
41	Silvery metal	Touch switch, PCB	
42	Black plastic	Touch switch, PCB	
43	Bright silvery metal	Screw, socket, PCB	
44	Black plastic	Socket, PCB	
45	Silvery metal	Pin, socket, PCB	
46	Black plastic	Socket, PCB	
47	Silvery/coppery metal	Pin, socket, PCB	
48	Black body	SMD IC, PCB	
49	White body	SMD LED, PCB	
50	Black body	SMD diode, PCB	
51	Black plastic	Socket, PCB	
52	Golden metal	Pin, socket, PCB	
53	Black/orange printed white body	SMD resistor, PCB	
54	Black body	SMD transistor, PCB	
55	Silvery metal	Cover, type c plug, FPC	
56	Silvery metal	Pin, type c plug, FPC	
57	Black plastic	Pin holder, type c plug, FPC	
58	Silvery metal	Cover, FPC	
59	Green paper with adhesive	Tape, cover, FPC	
60	Black soft plastic	Sleeve, FPC	
61	White printed black FPC	FCP	
62	Black soft plastic	Sleeve, type c plug, FPC	
63	Grey printed black soft plastic	Sleeve, type c plug, FPC	
64	Silvery metal	Cover, type c plug, FPC	
65	Silvery/golden metal	Pin, type c plug, FPC	
66	Black plastic	Pin holder, type c plug, FPC	
67	Silvery solder	Solder, PCB, type c plug, FPC	
68	Green PCB	PCB, type c plug, cable, FPC	
69	Silvery metal	Small screw	
70	Silvery metal	Screw	
71	Bright silvery metal	Big screw	

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	BL	BL	PASS
3	30340*	BL	BL	BL	NA	NA	EXEMPTED#
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	BL	BL	PASS
10	BL	BL	BL	BL	BL	BL	PASS
11	BL	BL	BL	BL	BL	BL	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	BL	BL	BL	PASS
16	BL	BL	BL	BL	BL	BL	PASS
17	BL	BL	BL	BL	BL	BL	PASS
18	BL	BL	BL	Negative*	NA	NA	PASS
19	BL	BL	BL	BL	NA	NA	PASS
20	BL	BL	BL	BL	BL	BL	PASS
21	BL	BL	BL	BL	BL	BL	PASS
22	BL	BL	BL	BL	BL	BL	PASS
23	BL	BL	BL	BL	BL	BL	PASS
24	BL	BL	BL	BL	BL	BL	PASS
25	BL	BL	BL	BL	BL	BL	PASS
26	BL	BL	BL	BL	BL	BL	PASS
27	BL	BL	BL	BL	BL	BL	PASS
28	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)	-	-	-	-	-	-	-
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	BL	BL	PASS
34	BL	BL	BL	BL	BL	BL	PASS
35	BL	BL	BL	BL	BL	BL	PASS
36	BL	BL	BL	BL	BL*	BL*	PASS
37	380*	BL	BL	BL	NA	NA	PASS
38	BL	BL	BL	BL	NA	NA	PASS
39	BL	BL	BL	BL	BL*	BL*	PASS
40	BL	BL	BL	BL	BL	BL	PASS
41	BL	BL	BL	Negative*	NA	NA	PASS
42	BL	BL	BL	BL	BL	BL	PASS
43	BL	BL	BL	BL	NA	NA	PASS
44	BL	BL	BL	BL	BL	BL	PASS
45	BL	BL	BL	BL	NA	NA	PASS
46	BL	BL	BL	BL	BL*	BL*	PASS
47	BL	BL	BL	BL	NA	NA	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	BL*	BL*	PASS
52	BL	BL	BL	BL	NA	NA	PASS
53	BL	BL	BL	BL	BL	BL	PASS
54	BL	BL	BL	BL	BL*	BL*	PASS
55	BL	BL	BL	Negative*	NA	NA	PASS
56	BL	BL	BL	BL	NA	NA	PASS
57	BL	BL	BL	BL	BL	BL	PASS
58	BL	BL	BL	BL	NA	NA	PASS
59	BL	BL	BL	BL	BL	BL	PASS
60	BL	BL	BL	BL	BL	BL	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	Negative*	NA	NA	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	BL	BL	PASS
67	BL	BL	BL	BL	NA	NA	PASS
68	BL	BL	BL	BL	BL*	BL*	PASS
69	BL	BL	BL	Negative*	NA	NA	PASS
70	BL	BL	BL	Negative*	NA	NA	PASS
71	BL	BL	BL	Negative*	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) 3 was (were) claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found lead 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).
- The item(s) 18-19, 21-31 were provided by client dated on Aug 18, 2025.
- The item(s) 38, 45, 47 were resubmitted by client dated on Jun 23, 2025.

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
2+4+7	ND	ND	ND	ND	PASS
8	ND	ND	ND	ND	PASS
12	ND	ND	ND	ND	PASS
16	ND	ND	ND	ND	PASS
59+60+62	ND	ND	ND	ND	PASS
63+24	ND	ND	ND	ND	PASS
1+5+6	ND	ND	240	ND	PASS
9+10+11	ND	ND	ND	ND	PASS
15+17+20	ND	ND	ND	ND	PASS
32+33+34	ND	ND	ND	ND	PASS
35+36+39	ND	ND	ND	ND	PASS
40+42+44	ND	ND	ND	ND	PASS
46+48+49	ND	ND	ND	ND	PASS
50+51+53	ND	ND	ND	ND	PASS
54+57+61	ND	ND	ND	ND	PASS
66+68+21	ND	ND	ND	ND	PASS
22+23	ND	ND	ND	ND	PASS
25+27	ND	ND	ND	ND	PASS
26+29+30	ND	ND	ND	ND	PASS

TEST RESULT

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.
- At the request of client, test(s) was conducted on the certain component(s) of the submitted samples(s) / submitted component(s).
- The composite test sample(s) of the submitted samples was prepared in the manner requested by the client, when subject to the test performed.
- The item(s) 21-23, 25-27, 29-30 was/were provided by client dated on Aug 18, 2025.
- The item(s) 8 was resubmitted by client dated on Jun 23, 2025.

*** End of Report ***