TEST REPORT

Applicant : Razer Inc.

Address : 9 Pasteur, Suite 100, Irvine, CA92618, USA.

(The following sample(s) was (were) submitted and identified by client as)

Sample Name : Gaming Mouse

Model/Item No. : RZ01-0465,RZ01-0465XXXX-XXXX(X Can be 0-9,A-Z,or Blank)

First Test Period : From Dec. 14, 2022 to Dec. 30, 2022

Second Test Period : From Dec. 07, 2023 to Dec. 15, 2023

Third Test Period : From Dec. 31, 2024 to Jan. 09, 2025

Tests Conducted : For details refer to next page(s).

Executive Summary:

No.	TESTED SAMPLE	STANDARD / REQUIREMENT	CONCLUSION
1	Tested material(s) of submitted sample(s)	Pb, Cd, Hg, CrVI, PBBs and PBDEs - Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011on the restriction of the use of certain hazardous substances in electrical and electronic equipment amended by Commission Delegated Directive (EU) 2015/863 of 31 March 2015 and other subsequent amendments	PASS*
2	Tested material(s) of submitted sample(s)	Phthalates - Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipmentamended by Commission Delegated Directive (EU) 2015/863 of 31 March 2015 and other subsequent amendments	PASS*

Remark: * = PASS denotes the tested sample(s) is/are in compliance with the stated requirement(s).

Signed for and on behalf of

Compliance Control Institute (Guangzhou) Co., Ltd.

Approved by:

Pascal SHI/Technical Director

Compliance Control Institute (Guangzhou) Co., Ltd.

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TESTS CONDUCTED:

1 Pb, Cd, Hg, Cr (VI), PBBs and PBDEs

Test Method: IEC62321-3-1:2013, IEC62321-4:2013+A1:2017, IEC62321-5:2013, IEC62321-6:2015, IEC62321-7-1:2015, IEC 62321-7-2:2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

No.	Specimen Description	Test Results (mg/kg) (1) (2)					Conclusion	Comments
		Pb	Cd	Hg	Cr (VI)	PBBs & PBDEs		
1	Black plastic	BL	BL	BL	BL	BL	PASS	/
2	Black soft plastic	BL	BL	BL	BL	BL	PASS	/
3	Black plastic	BL	BL	BL	BL	BL	PASS	/
4	Black plastic	BL	BL	BL	BL	BL	PASS	/
5	Black coating	BL	BL	BL	BL	BL	PASS	/
6	White semitransparent plastic	BL	BL	BL	BL	BL	PASS	/
7	Black plastic	BL	BL	BL	BL	BL	PASS	/
8	White plastic	BL	BL	BL	BL	BL	PASS	/
9	White adhesive plastic	BL	BL	BL	BL	BL	PASS	/
10	Transparent plastic	BL	BL	BL	BL	BL	PASS	/
11	Black adhesive plastic with white printing	BL	BL	BL	BL	BL	PASS	/
12	Silvery metal	BL	BL	BL	BL	NA	PASS	/
13	Golden/silvery metal	BL	BL	BL	BL	NA	PASS	/
14	Green plastic	BL	BL	BL	BL	BL	PASS	/
15	Semitransparent plastic	BL	BL	BL	BL	BL	PASS	/
16	Golden metal	BL	BL	BL	BL	NA	PASS	/
17	Black plastic	BL	BL	BL	BL	BL	PASS	/

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No.	Specimen Description	Test Results (mg/kg) (1) (2)					Conclusion	Comments
		Pb	Cd	Hg	Cr (VI)	PBBs & PBDEs		
18	Black fiber	BL	BL	BL	BL	BL	PASS	/
19	Silvery metal	BL	BL	BL	BL	NA	PASS	/
20	Green PCB with white printing	BL	BL	BL	BL	BL	PASS	/
21	White plastic	BL	BL	BL	BL	BL	PASS	/
22	Red plastic	BL	BL	BL	BL	BL	PASS	/
23	Green plastic	BL	BL	BL	BL	BL	PASS	/
24	Black plastic	BL	BL	BL	BL	BL	PASS	/
25	Silvery metal	BL	BL	BL	BL	NA	PASS	/
26	Black plastic with white printing	BL	BL	BL	BL	BL	PASS	/
27	White plastic	BL	BL	BL	BL	BL	PASS	/
28	Silvery metal	BL	BL	BL	BL	NA	PASS	/
29	Silvery metal	BL	BL	BL	BL	NA	PASS	/
30	Black transparent plastic	BL	BL	BL	BL	BL	PASS	/
31	Transparent plastic	BL	BL	BL	BL	BL	PASS	/
32	Silvery metal	BL	BL	BL	BL	NA	PASS	/
33	White adhesive plastic with black printing	BL	BL	BL	BL	BL	PASS	/
34	Silvery metal	BL	BL	BL	BL	NA	PASS	/
35	White soft plastic	BL	BL	BL	BL	BL	PASS	/
36	Yellow fiber	BL	BL	BL	BL	BL	PASS	/

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No.	Specimen Description	Test Results (mg/kg) (1) (2)					Conclusion	Comments
		Pb	Cd	Hg	Cr (VI)	PBBs & PBDEs		
37	Silvery metal	BL	BL	BL	BL	NA	PASS	/
38	Black solid	BL	BL	BL	BL	BL	PASS	/
39	White plastic	BL	BL	BL	BL	BL	PASS	/
40	Black plastic	BL	BL	BL	BL	BL	PASS	/
41	Silvery metal	BL	BL	BL	BL	NA	PASS	/
42	Grey plastic	BL	BL	BL	BL	BL	PASS	/
43	Silvery metal	BL	BL	BL	BL	NA	PASS	/
44	Purple plastic	BL	BL	BL	BL	BL	PASS	/
45	Grey plastic	BL	BL	BL	BL	BL	PASS	/
46	Black plastic	BL	BL	BL	BL	BL	PASS	/
47	Golden metal	BL	BL	BL	BL	NA	PASS	/
48	Silvery metal	BL	BL	BL	BL	NA	PASS	/
49	Black plastic	BL	BL	BL	BL	BL	PASS	/
50	Bronze metal	BL	BL	BL	BL	NA	PASS	/
51	Silvery metal	BL	BL	BL	BL	NA	PASS	/
52	Black plastic	BL	BL	BL	BL	BL	PASS	/
53	Silvery metal	BL	BL	BL	BL	NA	PASS	/
54	Grey plastic	BL	BL	BL	BL	BL	PASS	/
55	Black plastic	BL	BL	BL	BL	BL	PASS	/

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No.	Specimen Description	Test Results (mg/kg) (1) (2)					Conclusion	Comments
		Pb	Cd	Hg	Cr (VI)	PBBs & PBDEs		
56	Blue soft plastic	BL	BL	BL	BL	BL	PASS	/
57	Silvery metal	BL	BL	BL	BL	NA	PASS	/
58	Silvery metal	BL	BL	BL	BL	NA	PASS	/
59	Silvery/golden metal	BL	BL	BL	BL	NA	PASS	/
60	Black solid	BL	BL	BL	BL	BL	PASS	/
61	Grey plastic	BL	BL	BL	BL	BL	PASS	/
62	Silvery metal	BL	BL	BL	BL	NA	PASS	/
63	Black plastic	BL	BL	BL	BL	BL	PASS	/
64	Silvery solid	BL	BL	BL	BL	BL	PASS	/
65	White plastic	BL	BL	BL	BL	BL	PASS	/
66	Silvery metal	BL	BL	BL	BL	NA	PASS	/
67	Beige LED	BL	BL	BL	BL	BL	PASS	/
68	Brown solid	BL	BL	BL	BL	BL	PASS	/
69	White ceramic with black printing	BL	BL	BL	BL	BL	PASS	/
70	Black solid	BL	BL	BL	BL	BL	PASS	/
71	Black plastic	BL	BL	BL	BL	BL	PASS	/
72	Silvery metal	BL	BL	BL	BL	NA	PASS	/
73	Silvery metal	BL	BL	BL	BL	NA	PASS	/
74	Black PCB with white printing with copper foil	BL	BL	BL	BL	BL	PASS	/

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No.	Specimen Description	Test Results (mg/kg) (1) (2)					Conclusion	Comments
		Pb	Cd	Hg	Cr (VI)	PBBs & PBDEs		
75	Black plastic	BL	BL	BL	BL	BL	PASS	/
76	Black coating	BL	BL	BL	BL	BL	PASS	/
77	White semitransparent plastic	BL	BL	BL	BL	BL	PASS	/
78	Black transparent soft plastic	BL	BL	BL	BL	BL	PASS	/
79	Light black metal	BL	BL	BL	BL	NA	PASS	/
80	Green plastic	BL	BL	BL	BL	BL	PASS	/
81	Black soft plastic	BL	BL	BL	BL	BL	PASS	/
82	Black fiber	BL	BL	BL	BL	BL	PASS	/
83	Black soft plastic	BL	BL	BL	BL	BL	PASS	/
84	Black plastic	BL	BL	BL	BL	BL	PASS	/
85	Green plastic with black printing	BL	BL	BL	BL	BL	PASS	/
86	Black soft plastic	BL	BL	BL	BL	BL	PASS	/
87	Green plastic	BL	BL	BL	BL	BL	PASS	/
88	White semitransparent plastic with multicolor printing	BL	BL	BL	BL	BL	PASS	/
89	Black plastic	BL	BL	BL	BL	BL	PASS	/
90	White plastic	BL	BL	BL	BL	BL	PASS	/
91	Black adhesive plastic with grey printing	BL	BL	BL	BL	BL	PASS	/
92	Transparent plastic	BL	BL	BL	BL	BL	PASS	/
93	Black transparent plastic	BL	BL	BL	BL	BL	PASS	/

TEST REPORT

No.	Specimen Description	Test Results (mg/kg) (1) (2)					Conclusion	Comments
		Pb	Cd	Hg	Cr (VI)	PBBs & PBDEs		
94	Silvery/gold metal	BL	BL	BL	BL	NA	PASS	/
95	White semitransparent plastic	BL	BL	BL	BL	BL	PASS	/
96	Golden metal	BL	BL	BL	BL	NA	PASS	/
97	Silvery metal	BL	BL	BL	BL	NA	PASS	/
98	Green PCB with white printing	BL	BL	BL	BL	BL	PASS	/
99	Red plastic	BL	BL	BL	BL	BL	PASS	/
100	White plastic	BL	BL	BL	BL	BL	PASS	/
101	Green plastic	BL	BL	BL	BL	BL	PASS	/
102	Black plastic	BL	BL	BL	BL	BL	PASS	/
103	Silvery metal	BL	BL	BL	BL	NA	PASS	/
104	Black plastic	BL	BL	BL	BL	BL	PASS	/
105	White plastic	BL	BL	BL	BL	BL	PASS	/
106	Silvery metal	BL	BL	BL	BL	NA	PASS	/
107	Silvery metal	BL	BL	BL	BL	NA	PASS	/
108	Yellow fiber	BL	BL	BL	BL	BL	PASS	/
109	White adhesive plastic	BL	BL	BL	BL	BL	PASS	/
110	Silvery metal	BL	BL	BL	BL	NA	PASS	/
111	White soft plastic	BL	BL	BL	BL	BL	PASS	/
112	White semitransparent plastic	BL	BL	BL	BL	BL	PASS	/

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No.	Specimen Description	Test Results (mg/kg) (1) (2)					Conclusion	Comments
		Pb	Cd	Hg	Cr (VI)	PBBs & PBDEs		
113	Black solid	BL	BL	BL	BL	BL	PASS	/
114	White plastic	BL	BL	BL	BL	BL	PASS	/
115	Black plastic	BL	BL	BL	BL	BL	PASS	/
116	Silvery metal	BL	BL	BL	BL	NA	PASS	/
117	Grey plastic	BL	BL	BL	BL	BL	PASS	/
118	Silvery metal	BL	BL	BL	BL	NA	PASS	/
119	Purple plastic	BL	BL	BL	BL	BL	PASS	/
120	Grey plastic	BL	BL	BL	BL	BL	PASS	/
121	Black plastic	BL	BL	BL	BL	BL	PASS	/
122	Golden metal	BL	BL	BL	BL	NA	PASS	/
123	Silvery metal	BL	BL	BL	BL	NA	PASS	/
124	Black plastic	BL	BL	BL	BL	BL	PASS	/
125	Bronze metal	BL	BL	BL	BL	NA	PASS	/
126	Silvery metal	BL	BL	BL	BL	NA	PASS	/
127	Black plastic	BL	BL	BL	BL	BL	PASS	/
128	Silvery metal	BL	BL	BL	BL	BL	PASS	/
129	Grey plastic	BL	BL	BL	BL	BL	PASS	/
130	Black plastic	BL	BL	BL	BL	BL	PASS	/
131	Blue soft plastic	BL	BL	BL	BL	BL	PASS	/

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No.	Specimen Description	Test Results (mg/kg) (1) (2)					Conclusion	Comments
		Pb	Cd	Hg	Cr (VI)	PBBs & PBDEs		
132	Silvery metal	BL	BL	BL	BL	NA	PASS	/
133	Silvery metal	BL	BL	BL	BL	NA	PASS	/
134	Silvery/gold metal	BL	BL	BL	BL	NA	PASS	/
135	Black solid	BL	BL	BL	BL	BL	PASS	/
136	Grey plastic	BL	BL	BL	BL	BL	PASS	/
137	Silvery metal	BL	BL	BL	BL	NA	PASS	/
138	Black plastic	BL	BL	BL	BL	BL	PASS	/
139	Silvery solid	BL	BL	BL	BL	BL	PASS	/
140	White plastic	BL	BL	BL	BL	BL	PASS	/
141	Silvery metal	BL	BL	BL	BL	NA	PASS	/
142	Beige LED	BL	BL	BL	BL	BL	PASS	/
143	Brown solid	BL	BL	BL	BL	BL	PASS	/
144	White ceramic with black printing	BL	BL	BL	BL	BL	PASS	/
145	Black solid	BL	BL	BL	BL	BL	PASS	/
146	Black plastic	BL	BL	BL	BL	BL	PASS	/
147	Silvery metal	BL	BL	BL	BL	NA	PASS	/
148	Yellow adhesive plastic with white/black printing	BL	BL	BL	BL	BL	PASS	/
149	Silvery metal	BL	BL	BL	BL	NA	PASS	/
150	Black PCB with white printing with copper foil	BL	BL	BL	BL	BL	PASS	/

TEST REPORT

No.	Specimen Description	Test Results (mg/kg) (1) (2)					Conclusion	Comments
		Pb	Cd	Hg	Cr (VI)	PBBs & PBDEs		
151	White semitransparent plastic	BL	BL	BL	BL	BL	PASS	/
152	Silvery metal	BL	BL	BL	BL	NA	PASS	/

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Remark:

(1) ① The test results shown as “BL” are obtained by EDXRF for primary screening (for Cr (VI), the EDXRF screening result is expressed as Cr, and for PBBs and PBDEs, the EDXRF screening results are expressed as Br), and the test results shown as exact data are obtained by further wet chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr (VI)) and GC-MS (for PBBs and PBDEs).

② The EDXRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.

Unit: mg/kg

Element	Polymer	Metal	Composite Materials
Cd	BL ≤(70-3σ)< X <(130+3σ)≤ OL	BL ≤(70-3σ)< X <(130+3σ)≤ OL	LOD < X <(150+3σ)≤ OL
Pb	BL ≤(700-3σ)< X <(1300+3σ)≤ OL	BL ≤(700-3σ)< X <(1300+3σ)≤ OL	BL ≤(500-3σ)< X <(1500+3σ)≤ OL
Hg	BL ≤(700-3σ)< X <(1300+3σ)≤ OL	BL ≤(700-3σ)< X <(1300+3σ)≤ OL	BL ≤(500-3σ)< X <(1500+3σ)≤ OL
Br	BL ≤ (300-3σ)< X	NA	BL ≤ (250-3σ)< X
Cr	BL ≤ (700-3σ)< X	BL ≤ (700-3σ)< X	BL ≤ (500-3σ)< X

③ OL = Over Limit, BL = Below Limit, X = Inconclusive, NA = Not Applicable.

Units and limits:

Restricted Substances	Pb	Cd	Hg	Cr (VI)	PBBs	PBDEs
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit	1000	100	1000	1000	1000	1000

(2) ① mg/kg = ppm = 0.0001%, N.D. = Not Detected (Less than RL).

② Unit and RL (Reporting limit) in wet chemical test.

Restricted Substances	Pb	Cd	Hg	Cr (VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RL	2	2	2	2	5	5

③ According to IEC 62321-7-1:2015, result on Cr (VI) for metal sample is shown as Positive/Negative.

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

Storage condition and production date of the tested sample are unavailable and thus results of Cr (VI) represent status of the sample at the time of testing.

TEST REPORT

2 Phthalates (DBP, BBP, DEHP, DIBP) content

Test Method: IEC 62321-8:2017, analyzed by Gas Chromatography-Mass Spectrometry (GC-MS).

Substances	DBP	BBP	DEHP	DIBP	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit (mg/kg)	1000	1000	1000	1000	
RL (mg/kg)	30	30	30	30	
No.	Test Results (mg/kg)				
1+3+4	N.D.	N.D.	N.D.	N.D.	PASS
2+35+56	N.D.	N.D.	N.D.	N.D.	PASS
5	N.D.	N.D.	N.D.	N.D.	PASS
6+7+8	N.D.	N.D.	N.D.	N.D.	PASS
9+10+11	N.D.	N.D.	N.D.	N.D.	PASS
14+15+17	N.D.	N.D.	N.D.	N.D.	PASS
20+74	N.D.	N.D.	N.D.	N.D.	PASS
21+22	N.D.	N.D.	N.D.	N.D.	PASS
23+24	N.D.	N.D.	N.D.	N.D.	PASS
26+27+30	N.D.	N.D.	N.D.	N.D.	PASS
31+33+39	N.D.	N.D.	N.D.	N.D.	PASS
40+42+44	N.D.	N.D.	N.D.	N.D.	PASS
45+46+49	N.D.	N.D.	N.D.	N.D.	PASS
52+54+55	N.D.	N.D.	N.D.	N.D.	PASS
61+63	N.D.	N.D.	N.D.	N.D.	PASS
65+71	N.D.	N.D.	N.D.	N.D.	PASS
75+77	N.D.	N.D.	N.D.	N.D.	PASS
76	N.D.	N.D.	N.D.	N.D.	PASS
78+81+83	N.D.	N.D.	N.D.	N.D.	PASS
80+84+85	N.D.	N.D.	N.D.	N.D.	PASS
86+87+88	N.D.	N.D.	N.D.	N.D.	PASS
89+90+91	N.D.	N.D.	N.D.	N.D.	PASS
92+93	N.D.	N.D.	N.D.	N.D.	PASS

TEST REPORT

Substances	DBP	BBP	DEHP	DIBP	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit (mg/kg)	1000	1000	1000	1000	
RL (mg/kg)	30	30	30	30	
No.	Test Results (mg/kg)				
95+105+109	N.D.	N.D.	N.D.	N.D.	PASS
98+150	N.D.	N.D.	N.D.	N.D.	PASS
99+100+101	N.D.	N.D.	N.D.	N.D.	PASS
102+104	N.D.	N.D.	N.D.	N.D.	PASS
111+131	N.D.	N.D.	N.D.	N.D.	PASS
112+114	N.D.	N.D.	N.D.	N.D.	PASS
115+117+119	N.D.	N.D.	N.D.	N.D.	PASS
120+121+124	N.D.	N.D.	N.D.	N.D.	PASS
127+129+130	N.D.	N.D.	N.D.	N.D.	PASS
136+138+140	N.D.	N.D.	N.D.	N.D.	PASS
146+148+151	N.D.	N.D.	N.D.	N.D.	PASS

Remark:

1. mg/kg = milligram per kilogram (ppm).
2. RL = Reporting Limit.
3. N.D. = Not Detected (Less than RL).

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TEST REPORT

Sample Photos

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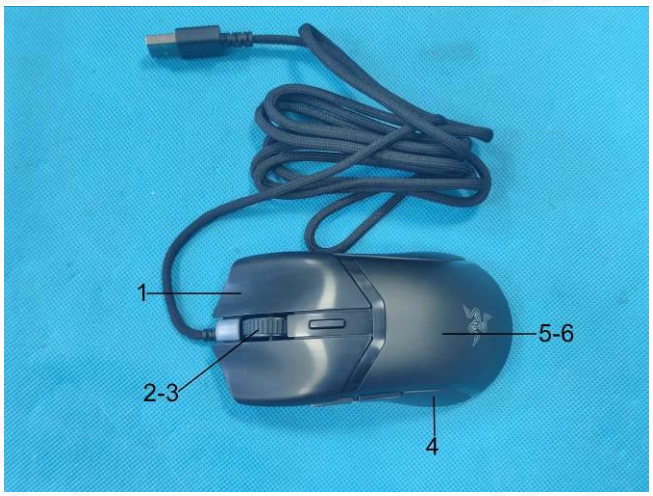
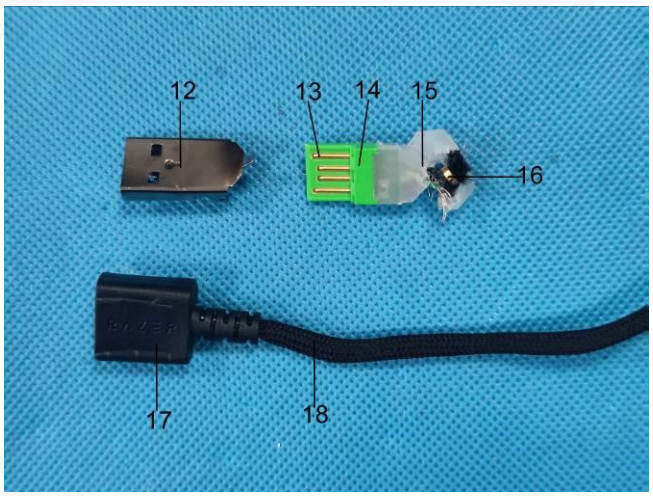
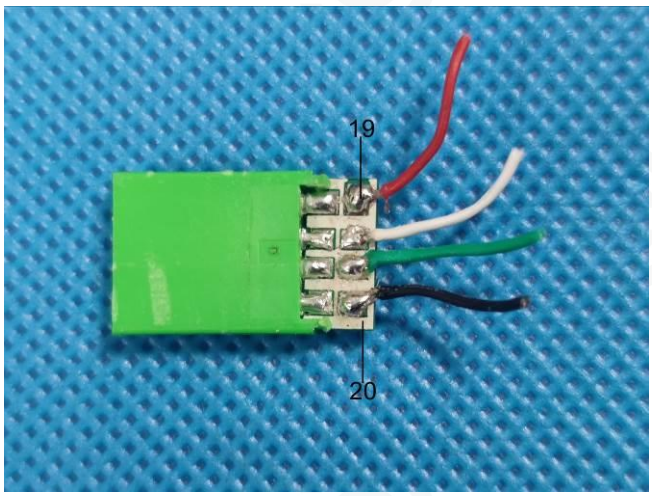
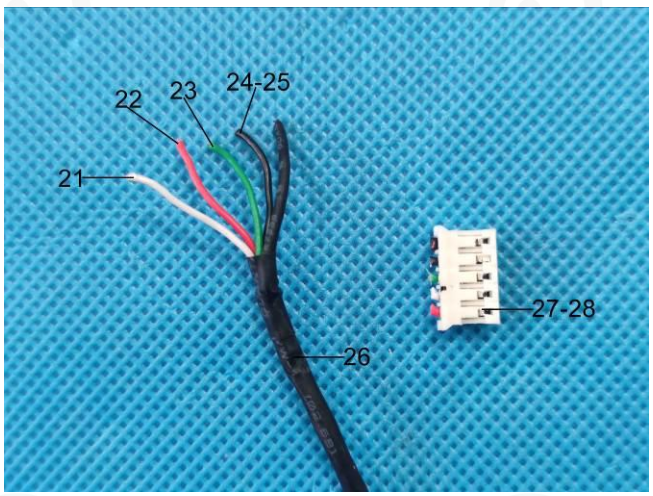
TEST REPORT

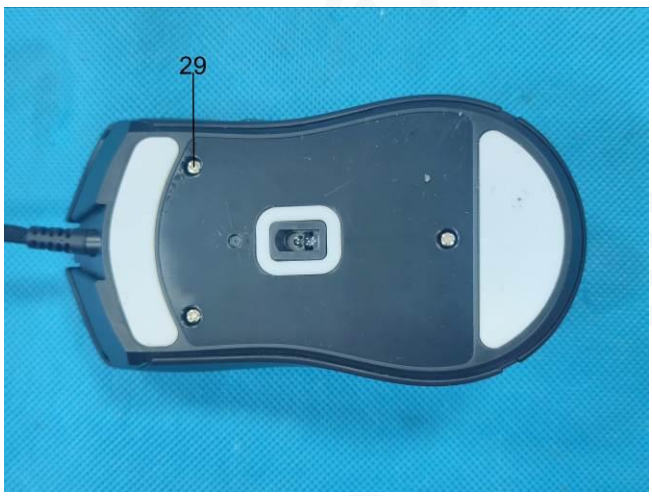
Tested Parts Photos











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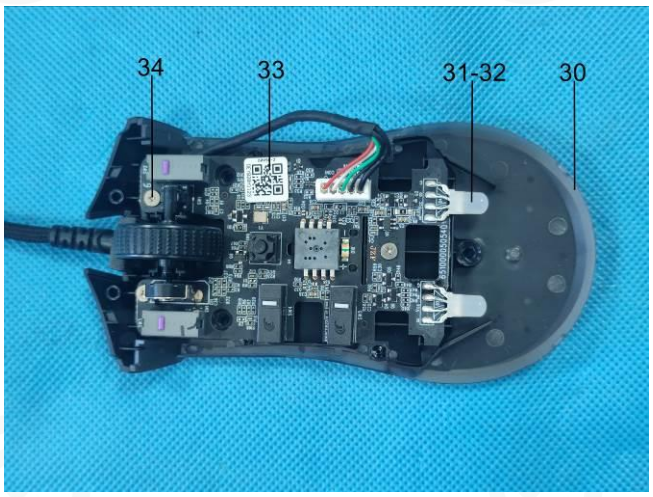
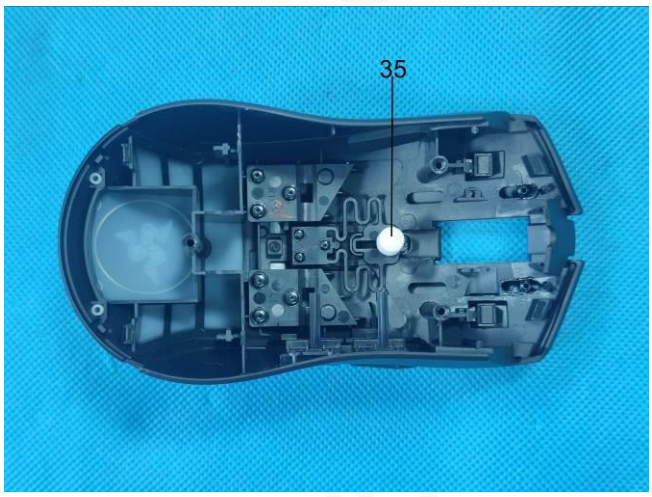
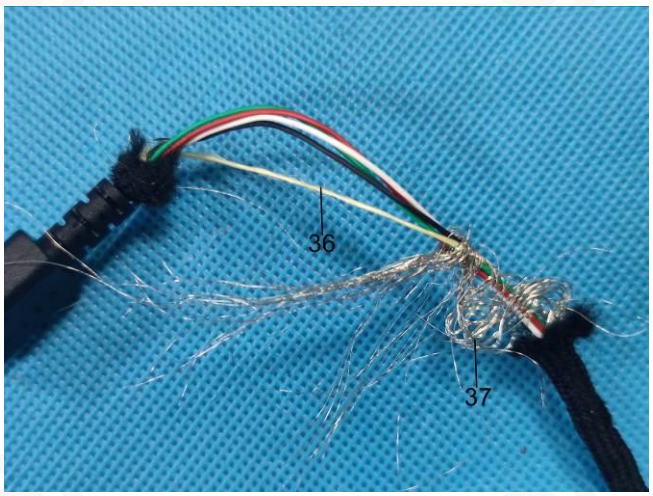
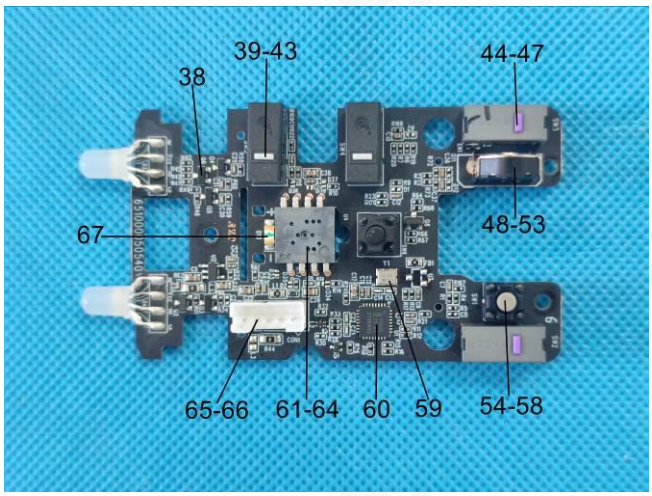
TEST REPORT

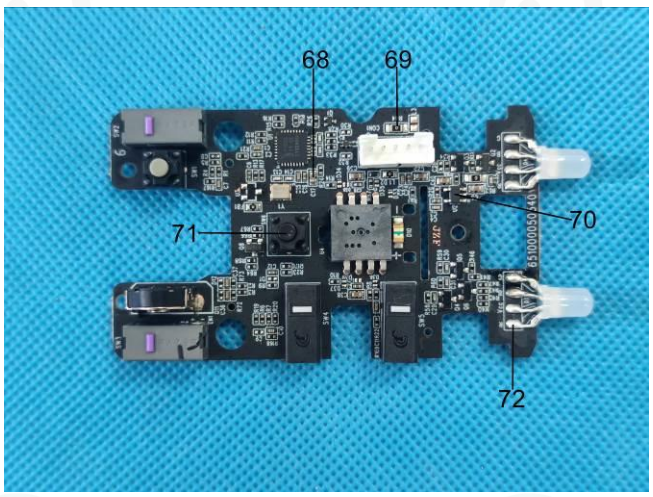
Tested Parts Photos

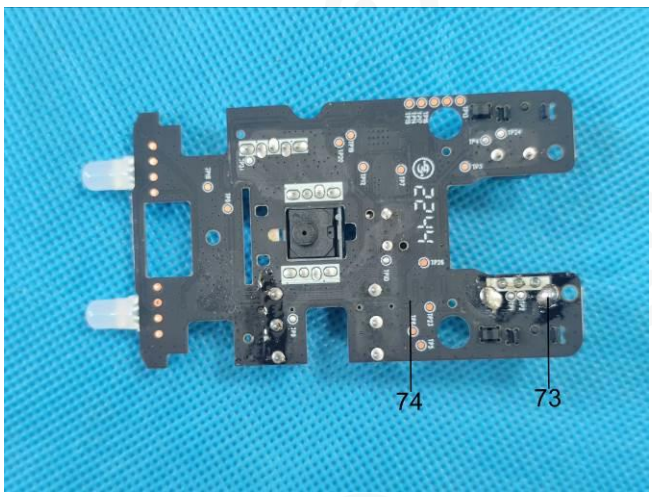












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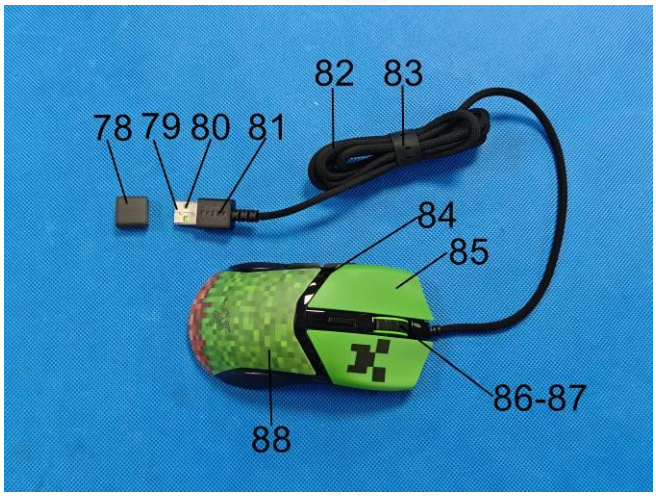
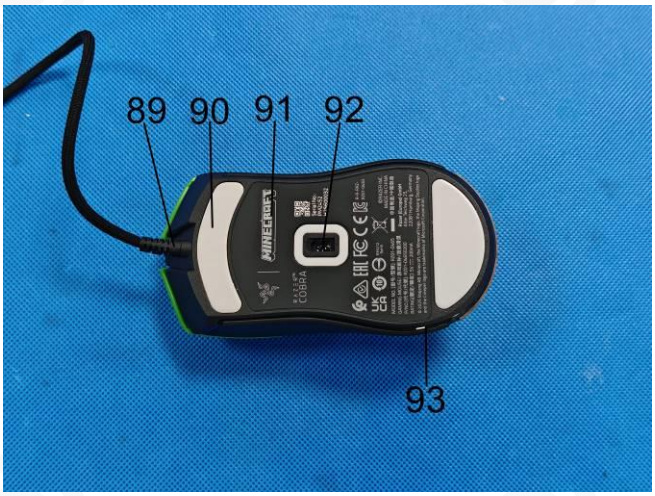
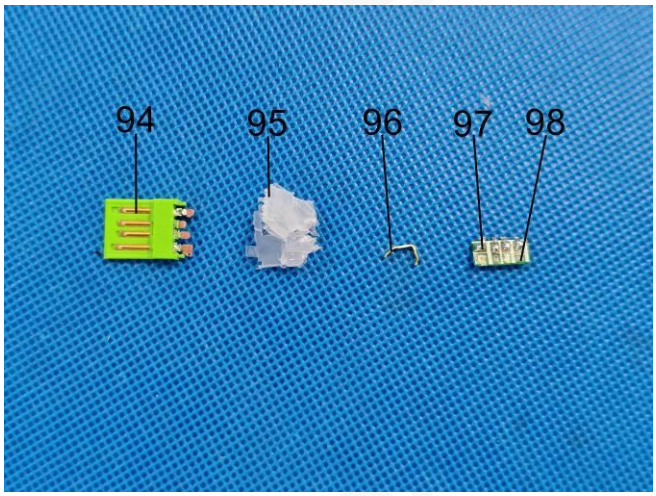
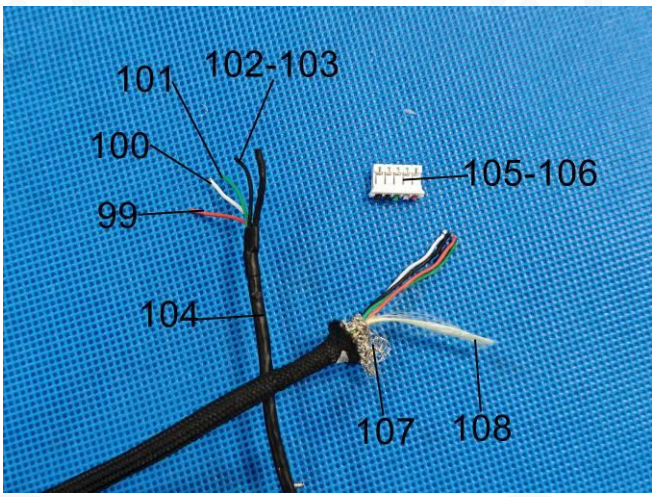
TEST REPORT

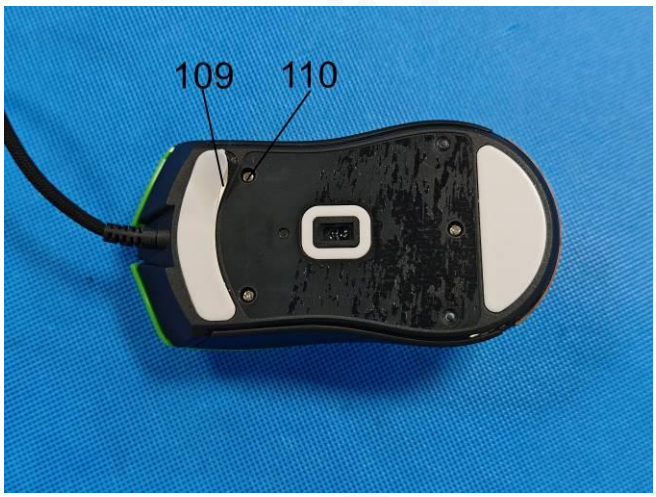
Tested Parts Photos











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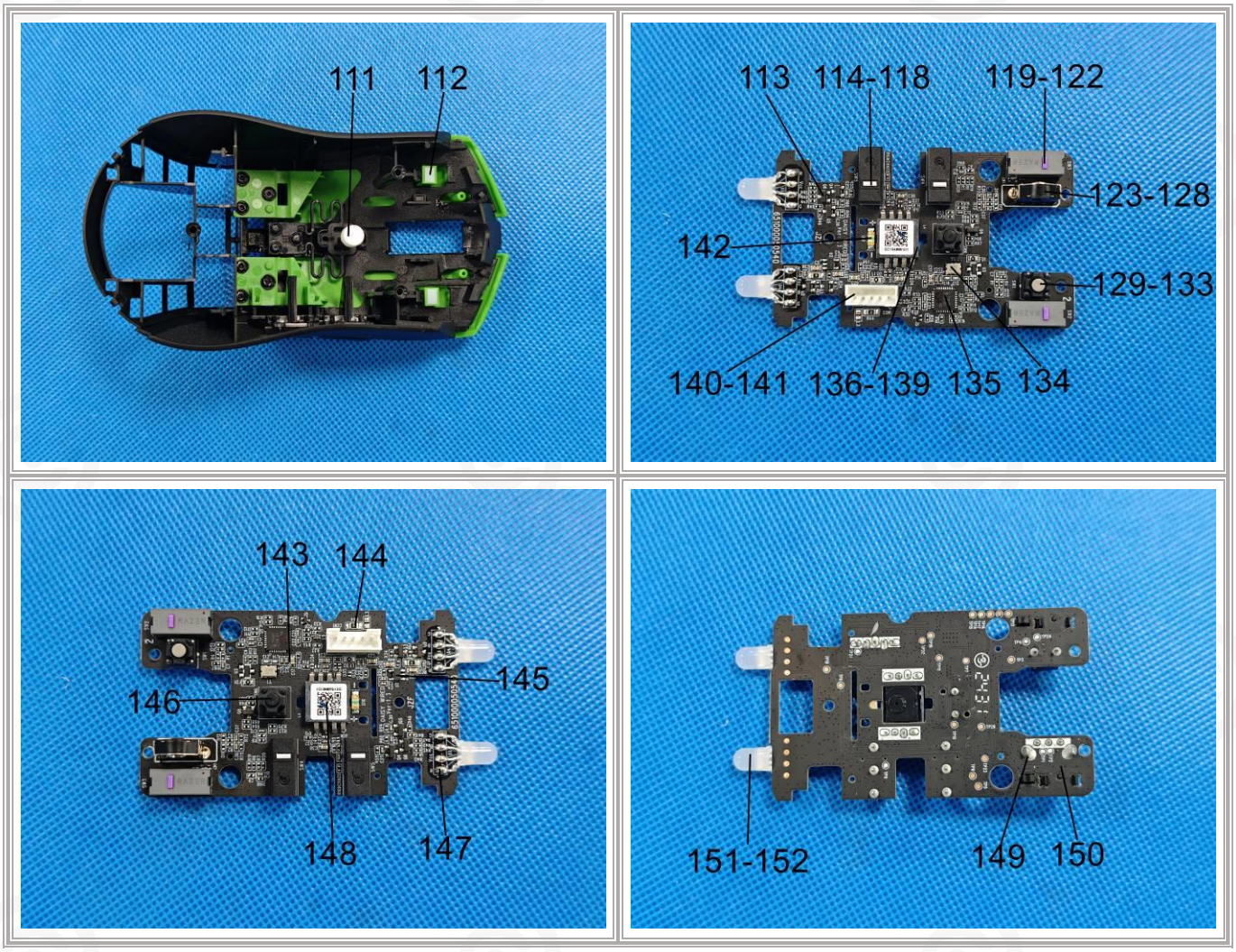

REMARK: This report replaces CCI221200208EN-1R1, which will be automatically nullified on the date of issuance of this report.

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Appendix

EXEMPTION LIST (ANNEX III TO RoHS DIRECTIVE)

1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):
1(a)	For general lighting purposes < 30W: 2.5mg (Expires on 24 February 2023)
1(b)	For general lighting purposes ≥ 30W and <50W: 3.5mg (Expires on 24 February 2023)
1(c)	For general lighting purposes ≥ 50W and <150W: 5mg (Expires on 24 February 2023)
1(d)	For general lighting purposes ≥ 150W: 15mg (Expires on 24 February 2023)
1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≤17mm: 5mg (Expires on 24 February 2023)
1(f)-I	For lamps designed to emit mainly light in the ultraviolet spectrum: 5 mg (Expires on 24 February 2027)
1(f)-II	For special purposes: 5 mg (Expires on 24 February 2025)
1(g)	For general lighting purposes < 30 W with a lifetime equal or above 20000 h: 3,5 mg (Expires on 24 August 2023)
2(a)	Mercury in double-capped linear fluorescent lamps for general lighting purples not exceeding (per lamp):
2(a)(1)	Tri-band phosphor with normal lifetime and a tube diameter < 9mm (e.g. T2): 4mg (Expires on 24 February 2023)
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter ≥ 9mm and ≤ 17mm (e.g. T5): 3mg (Expires on 24 August 2023)
2(a)(3)	Tri-band phosphor with normal lifetime and a tube diameter > 17mm and ≤ 28mm (e.g. T8): 3.5mg (Expires on 24 August 2023)
2(a)(4)	Tri-band phosphor with normal lifetime and a tube diameter > 28mm (e.g. T12): 3.5mg (Expires on 24 February 2023)
2(a)(5)	Tri-band phosphor with long lifetime (≥ 25000h): 5mg (Expires on 24 February 2023)
2(b)	Mercury in other fluorescent lamps not exceeding (per lamp):
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter > 17mm (e.g. T9): 15mg (Expires on 24 February 2023; 10 mg may be used per lamp from 25 February 2023 until 24 February 2025)
2(b)(4)-I	Lamps for other general lighting and special purposes (e.g. induction lamps): 15mg (Expires on 24 February 2025)
2(b)(4)-II	Lamps emitting mainly light in the ultraviolet spectrum: 15 mg (Expires on 24 February 2027)
2(b)(4)-III	Emergency lamps: 15 mg (Expires on 24 February 2027)
3	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes used in EEE placed on the market before 24 February 2022 not exceeding (per lamp):
3(a)	Short length (≤ 500mm): 3.5mg (Expires on 24 February 2025)
3(b)	Medium length (> 500m and ≤ 1500mm): 5mg (Expires on 24 February 2025)
3(c)	Long length (> 1500mm): 13mg (Expires on 24 February 2025)
4(a)	Mercury in other low pressure discharge lamps (per lamp): 15mg (Expires on 24 February 2023)
4(a)-I	Mercury in low pressure non-phosphor coated discharge lamps, where the application requires the main range of the lamp-spectral output to be in the ultraviolet spectrum: up to 15 mg mercury may be used per lamp (Expires on 24 February 2027)
4(b)	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 80: P ≤ 105W: 16mg (Expires on 24 February 2027)
4(b)-I	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60: P ≤ 155W: 30mg (Expires on 24 February 2023)
4(b)-II	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60: 155W < P ≤ 405W: 40mg (Expires on 24 February 2023)
4(b)-III	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60: P > 405W: 40mg (Expires on 24 February 2023)
4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):
4(c)-I	P≤ 155W: 20mg (Expires on 24 February 2027)
4(c)-II	155W < P ≤405W: 25mg (Expires on 24 February 2027)
4(c)-III	P > 405W: 25mg (Expires on 24 February 2027)
4(e)	Mercury in metal halide lamps (MH) (Expires on 24 February 2027)
4(f)-I	Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex (Expires on 24 February 2025)
4(f)-II	Mercury in high pressure mercury vapour lamps used in projectors where an output ⩾ 2000 lumen ANSI is required (Expires on 24 February 2027)
4(f)-III	Mercury in high pressure sodium vapour lamps used for horticulture lighting (Expires on 24 February 2027)
4(f)-IV	Mercury in lamps emitting light in the ultraviolet spectrum (Expires on 24 February 2027)
5(b)	Lead in glass of fluorescent tubes not exceeding 0.2% by weight
6(a)-I	Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight and in batch hot dip galvanised steel components containing up to 0,2 % lead by weight (Renew was requested)
6(b)-I	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling (Renew was requested)
6(b)-II	Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight (Renew was requested)
6(c)	Copper alloy containing up to 4% lead by weight. (Renew was requested for categories 1-7 and 10 and for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)
7(a)	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) (Applies to categories 1-7 and 10 (except applications covered under point 24) and renew was requested. For categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments, renew was requested. For category 8 *in vitro* diagnostic medical devices expires on 21 July 2023. For category 9 industrial monitoring and control instruments, and for category 11 expires on 21 July 2024.)

7(c)-I Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound (Applies to categories 1-7 and 10 (except applications covered under point 34) and renew was requested. For categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments, renew was requested. For category 8 *in vitro* diagnostic medical devices expires on 21 July 2023. For category 9 industrial monitoring and control instruments, and for category 11 expires on 21 July 2024.)

7(c)-II Lead in dielectric ceramic in capacitors for a rated voltage of 125V AC or 250V DC or higher (Does not apply to applications covered by point 7(c)-I and 7(c)-IV of this Annex. Renew was requested for categories 1-7 and 10 and for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

7(c)-IV Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors (Expires on: 21 July 2021 for categories 1-7 and 10; 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

8(b) Cadmium and its compounds in electrical contacts (Applies to categories 8, 9 and 11 and renew was requested for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments; renew was requested for category 8 *in vitro* diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

8(b)-I Cadmium and its compounds in electrical contacts used in:
- circuit breakers,
- thermal sensing controls,
- thermal motor protectors (excluding hermetic thermal motor protectors),
- AC switches rated at:
  - 6 A and more at 250 V AC and more, or
  - 12 A and more at 125 V AC and more,
- DC switches rated at 20 A and more at 18 V DC and more, and
- switches for use at voltage supply frequency ≥ 200 Hz

(Applies to categories 1 to 7 and 10 and renew was requested)

9 Hexavalent chromium as an anti-corrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75% by weight in the cooling solution (Applies to categories 8, 9 and 11 and expires on: 21 July 2021 for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 *in vitro* diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

9(a)-II Up to 0,75 % hexavalent chromium by weight, used as an anticorrosion agent in the cooling solution of carbon steel cooling systems of absorption refrigerators:
- designed to operate fully or partly with electrical heater, having an average utilised power input ≥ 75 W at constant running conditions,
- designed to fully operate with non-electrical heater.

(Applies to categories 1-7 and 10 and renew was requested)

9(b) Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications (Applies to categories 8, 9 and 11 and expires on: 21 July 2021 for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 *in vitro* diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

13(a) Lead in white glasses used for optical applications (Applies to all categories; renew was requested for categories 1 to 7 and 10; expires on: 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments and for category 11; 21 July 2021 for all other categories and subcategories)

13(b) Cadmium and lead in filter glasses and glasses used for reflectance standards (Applies to categories 8, 9 and 11 and expires on: renew was requested for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments; renew was requested for category 8 *in vitro* diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

13(b)-(I) Lead in ion coloured optical filter glass types (Applies to categories 1 to 7 and 10; renew was requested for categories 1 to 7 and 10)

13(b)-(II) Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex (Applies to categories 1 to 7 and 10; renew was requested for categories 1 to 7 and 10)

13(b)-(III) Cadmium and lead in glazes used for reflectance standards (Applies to categories 1 to 7 and 10; renew was requested for categories 1 to 7 and 10)

15 Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages (Applies to categories 8, 9 and 11 and expires on: renew was requested for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; renew was requested for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

15(a) Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies:
- a semiconductor technology node of 90 nm or larger;
- a single die of 300 mm^2 or larger in any semiconductor technology node;
- stacked die packages with die of 300 mm^2 or larger, or silicon interposers of 300 mm^2 or larger.

(Applies to categories 1 to 7 and 10 and renew was requested.)

18(b) Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP ($BaSi_2O_5$:Pb) (Expires on: renew was requested for categories 1-7 and 10; renew was requested for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

18(b)-I Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps containing phosphors such as BSP (BaSi2O5:Pb) when used in medical phototherapy equipment (Applies to categories 5 and 8, excluding applications covered by entry 34 of Annex IV, and renew was requested)

21 Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glass (Applies to categories 8, 9 and 11 and expires on: 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

24 Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors (Expires on: renew was requested for categories 1-7 and 10; renew was requested for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; renew was requested for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

25 Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring (Applies to categories 8, 9 and 11 and expires on: 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11)

29 Lead bound in crystal glass as defined in Annex 1 (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC (Expires on: renew was requested for categories 1-7 and 10; 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

32 Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes (Expires on: renew was requested for categories 1-7 and 10; renew was requested for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

34 Lead in cermet-based trimmer potentiometer elements (Applies to all categories; expires on: renew was requested for categories 1-7 and 10; renew was requested for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; renew was requested for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

37 Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body (Expires on: 21 July 2021 for categories 1-7 and 10; 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.)

39(a) Cadmium selenide in downshifting cadmium-based semiconductor nanocrystal quantum dots for use in display lighting applications (< 0,2 µg Cd per mm^2 of display screen area) (For all categories renew was requested)

41 Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (classes SH:1, SH:2, SH:3 of Directive 97/68/EC of the European Parliament and of the Council) (Applies to all categories and expires on: 31 March 2022 for categories 1 to 7, 10 and 11; 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments.)

42 Lead in bearings and bushes of diesel or gaseous fuel powered internal combustion engines applied in non-road professional use equipment:

- with engine total displacement ≥ 15 litres; or
- with engine total displacement < 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications.

(Applies to category 11, excluding applications covered by entry 6(c) of this Annex, and expires on 21 July 2024)

43 Bis(2-ethylhexyl) phthalate in rubber components in engine systems, designed for use in equipment that is not intended solely for consumer use and provided that no plasticised material comes into contact with human mucous membranes or into prolonged contact with human skin and the concentration value of bis(2-ethylhexyl) phthalate does not exceed:

(a) 30 % by weight of the rubber for

(i) gasket coatings;

(ii) solid-rubber gaskets; or

(iii) rubber components included in assemblies of at least three components using electrical, mechanical or hydraulic energy to do work, and attached to the engine.

(b) 10 % by weight of the rubber for rubber-containing components not referred to in point (a).

For the purposes of this entry, “prolonged contact with human skin” means continuous contact of more than 10 minutes duration or intermittent contact over a period of 30 minutes, per day.

(Applies to category 11 and expires on 21 July 2024.)

44 Lead in solder of sensors, actuators, and engine control units of combustion engines within the scope of Regulation (EU) 2016/1628 of the European Parliament and of the Council ([1]), installed in equipment used at fixed positions while in operation which is designed for professionals, but also used by non-professional users (Applies to category 11 and expires on 21 July 2024)

45 Lead diazide, lead styphnate, lead dipicramate, orange lead (lead tetroxide), lead dioxide in electric and electronic initiators of explosives for civil (professional) use and barium chromate in long time pyrotechnic delay charges of electric initiators of explosives for civil (professional) use (Effective from 1 November 2021. Applies to category 11 and expires on 20 April 2026)

★★★★★End of Report★★★★★

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