

Test Report

No.T51810292509TC

Date: DEC 20, 2018

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The following samples were submitted and identified by/on behalf of the client as:

TOY CAR SERIES

Item No. : LM8011-DZ-1, LM8012-DZ-1, LM8013-DZ-1, LM8014-DZ-1, LM8015-DZ-1, LM8016-DZ-1, LM8011-YZ-1, LM8012-YZ-1, LM8013-YZ-1, LM8014-YZ-1, LM8015-YZ-1, LM8016-YZ-1, LM8011-SZ-1, LM8012-SZ-1, LM8013-SZ-1, LM8014-SZ-1, LM8015-SZ-1, LM8016-SZ-1, LM8011-SC-P, LM8012-SC-P, LM8013-SC-P, LM8014-SC-P, LM8015-SC-P, LM8016-SC-P, LM8011-DC, LM8012-DC, LM8013-DC, LM8014-DC, LM8015-DC, LM8016-DC, LM8011-YC, LM8012-YC, LM8013-YC, LM8014-YC, LM8015-YC, LM8016-YC, LM8021-DZ-1-LM8022-DZ-1-LM8023-DZ-1-LM8024-DZ-1, LM8021-YZ-1-LM8022-YZ-1-LM8023-YZ-1-LM8024-YZ-1, LM8021-SZ-1-LM8022-SZ-1-LM8023-SZ-1-LM8024-SZ-1, LM8021-SC-P-LM8022-SC-P-LM8023-SC-P-LM8024-SC-P, LM8021-DC-LM8022-DC-LM8023-DC-LM8024-DC, LM8021-YC-LM8022-YC-LM8023-YC-LM8024-YC, LM8017-DZ-1-LM8017-YZ-1-LM8017-SZ-1-LM8017-SC-P-LM8017-DC-LM8017-YC, LM8018-LM8018-YZ-1-LM8018-SZ-1-LM8018-SC-P-LM8018-DC-LM8018-YC, LM8011-DY-1-LM8012-DY-1-LM8013-DY-1-LM8014-DY-1-LM8015-DY-1-LM8016-DY-1, LM8011-YY-1-LM8012-YY-1-LM8013-YY-1-LM8014-YY-1-LM8015-YY-1-LM8016-YY-1, LM8011-SY-1-LM8012-SY-1-LM8013-SY-1-LM8014-SY-1-LM8015-SY-1-LM8016-SY-1, LM8031-DZ-1, LM8032-DZ-1, LM8033-DZ-1, LM8034-DZ-1, LM8031-YZ-1, LM8032-YZ-1, LM8033-YZ-1, LM8034-YZ-1, LM8031-SZ-1, LM8032-SZ-1, LM8033-SZ-1, LM8034-SZ-1, LM8031-SC-P, LM8032-SC-P, LM8033-SC-P, LM8034-SC-P, LM8031-DC, LM8032-DC, LM8033-DC, LM8034-DC, LM8031-YC, LM8032-YC, LM8033-YC, LM8034-YC, LM8041-DZ-1, LM8042-DZ-1, LM8043-DZ-1, LM8044-DZ-1, LM8041-YZ-1, LM8042-YZ-1, LM8043-YZ-1, LM8041-SZ-1

Sample Receiving Date : NOV 26, 2018
 Last Submission Sample Date : DEC 14, 2018
 Testing Period : NOV 26, 2018 TO DEC 19, 2018



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Test Requested	Conclusion
1. European RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC – Certain hazardous substances	PASS

***** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****

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



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CNAS Approved Signatory



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Results:

1.1 EU Directive 2011/65/EU (RoHS, Previously 2002/95/EC) - XRF

Method: With reference to IEC 62321-3-1:2013

Analysis was performed by X-ray Fluorescence Spectrometry (XRF)

No.	Specimen Description	Result(s)					Comment
		Cd	Pb	Hg	Br	Cr	
1	White laminated label paper w/ multi-color printing	BL	BL	BL	BL	BL	PASS
2	Red coating	BL	BL	BL	BL	BL	PASS
3	Black coating	BL	BL	BL	BL	BL	PASS
4	White coating	BL	BL	BL	BL	BL	PASS
5	Yellow coating	BL	BL	BL	BL	BL	PASS
6	Blue coating	BL	BL	BL	BL	BL	PASS
7	Grey coating	BL	BL	BL	BL	BL	PASS
8	Silvery coating	BL	BL	BL	BL	BL	PASS
9	Blue plastic shell	BL	BL	BL	BL	BL	PASS
10	White plastic shell	BL	BL	BL	BL	BL	PASS
11	Grey plastic shell	BL	BL	BL	BL	BL	PASS
12	Black plastic shell	BL	BL	BL	X	BL	Refer to chemical method
13	Black plastic (The seat)	BL	BL	BL	BL	BL	PASS
14	Black rubber (Wheel)	BL	BL	BL	BL	BL	PASS
15	Blue plastic (Wheel)	BL	BL	BL	BL	BL	PASS
16	Translucent red plastic (Lights)	BL	BL	BL	BL	BL	PASS
17	Translucent blue plastic (Lights)	BL	BL	BL	BL	BL	PASS
18	Grey plastic screw	BL	BL	BL	BL	BL	PASS



No.	Specimen Description	Result(s)					Comment
		Cd	Pb	Hg	Br	Cr	
19	White plastic gear	BL	BL	BL	BL	BL	PASS
20	Green plastic shell	BL	BL	BL	BL	BL	PASS
21	Red plastic shell	BL	BL	BL	BL	BL	PASS
22	Red plastic (Wheel)	BL	BL	BL	BL	BL	PASS
23	Yellow plastic shell	BL	BL	BL	BL	BL	PASS
24	Yellow plastic (Wheel)	BL	BL	BL	BL	BL	PASS
25	White paper card w/ multi-color printing	BL	BL	BL	BL	BL	PASS
26	Transparent plastic shell (Van)	BL	BL	BL	BL	BL	PASS
27	Red plastic shell (Van)	BL	BL	BL	BL	BL	PASS
28	Grey plastic (The handle)	BL	BL	BL	BL	BL	PASS
29	White plastic (Warning sign)	BL	BL	BL	BL	BL	PASS
30	Yellow plastic shell (Warning sign)	BL	BL	BL	BL	BL	PASS
31	Green plastic shell (Warning sign)	BL	BL	BL	BL	BL	PASS
32	Blue plastic shell (Warning sign)	BL	BL	BL	BL	BL	PASS
33	Black plastic shell (Battery compartment)	BL	BL	BL	X	BL	Refer to chemical method
34	Silvery metal electrode plate (Battery compartment)	BL	BL	BL	NA	BL	PASS
35	Silvery metal spring (Battery compartment)	BL	BL	BL	NA	BL	PASS
36	Silvery metal solder (Battery compartment) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
37	Silvery metal shaft	BL	BL	BL	NA	BL	PASS
38	Brown capacitor body w/ black printing (Submitted on Dec 14, 2018)	BL	BL	BL	BL	BL	PASS



No.	Specimen Description	Result(s)					Comment
		Cd	Pb	Hg	Br	Cr	
39	Silvery metal pin (Brown capacitor) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
40	Green inductor body w/ multi-color printing	BL	BL	BL	X	BL	Refer to chemical method
41	Silvery metal pin (Green inductor) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
42	Transparent LED body (Submitted on Dec 14, 2018)	BL	BL	BL	X	BL	Refer to chemical method
43	Silvery metal pin (Transparent LED) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
44	Silvery crystal oscillator body	BL	BL	BL	BL	BL	PASS
45	Silvery metal pin (Silvery crystal oscillator) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
46	Black plastic terminal (Push switch)	BL	BL	BL	X	BL	Refer to chemical method
47	Silvery metal quadrate plate (Push switch)	BL	BL	BL	NA	BL	PASS
48	Copper & silvery metal round plate (Push switch)	BL	BL	BL	NA	BL	PASS
49	Black plastic frame (Push switch)	BL	BL	BL	X	BL	Refer to chemical method
50	Silvery metal pin (Push switch)	BL	BL	BL	NA	BL	PASS
51	Black plastic frame (Speaker)	BL	BL	BL	X	BL	Refer to chemical method
52	Transparent plastic slice (Speaker)	BL	BL	BL	BL	BL	PASS
53	Copper metal coil (Speaker)	BL	BL	BL	NA	BL	PASS
54	Iridescent " T " shaped metal part (Speaker)	BL	BL	BL	NA	X	Refer to chemical method



No.	Specimen Description	Result(s)					Comment
		Cd	Pb	Hg	Br	Cr	
55	Iridescent metal washer (Speaker)	BL	BL	BL	NA	X	Refer to chemical method
56	Black magnet (Speaker)	BL	BL	BL	NA	BL	PASS
57	Cream hardboard w/ green printing (Speaker) (Submitted on Dec 14, 2018)	BL	BL	BL	X	BL	Refer to chemical method
58	Silvery metal solder (Speaker) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
59	Black plastic terminal (Switch)	BL	BL	BL	BL	BL	PASS
60	Black metal shell (Switch)	BL	BL	BL	NA	BL	PASS
61	Dull silvery metal spring (Switch)	BL	BL	BL	NA	BL	PASS
62	Silvery " U " shaped metal part (Switch)	BL	BL	BL	NA	BL	PASS
63	Brown hard board w/ red printing (Switch)	BL	BL	BL	BL	BL	PASS
64	Silvery metal pin (Switch) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
65	Black plastic terminal (Big switch)	BL	BL	BL	BL	BL	PASS
66	Silvery metal shell (Big switch)	BL	BL	BL	NA	BL	PASS
67	Silvery metal bead (Big switch) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
68	Dull silvery metal spring (Big switch) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
69	Silvery " U " shaped metal part (Big switch)	BL	BL	BL	NA	BL	PASS
70	Brown hard board (Big switch)	BL	BL	BL	BL	BL	PASS
71	Silvery metal pin (Big switch)	BL	BL	BL	NA	BL	PASS
72	Red plastic cover (Motor)	BL	BL	BL	BL	BL	PASS



No.	Specimen Description	Result(s)					Comment
		Cd	Pb	Hg	Br	Cr	
73	Silvery metal shell (Motor)	BL	BL	BL	NA	BL	PASS
74	Cream plastic piece (Motor)	BL	BL	BL	BL	BL	PASS
75	Coppery metal brush (Motor) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
76	Translucent cream plastic bushing (Motor)	BL	BL	BL	BL	BL	PASS
77	Silvery metal tube plate (Motor)	BL	OL	BL	NA	BL	Refer to chemical method
78	Silvery metal washer (Motor) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
79	Golden metal washer (Motor)	BL	BL	BL	NA	BL	PASS
80	Red washer (Motor)	BL	BL	BL	BL	BL	PASS
81	White plastic washer (Motor)	BL	BL	BL	BL	BL	PASS
82	Silvery metal shaft (Motor)	BL	BL	BL	NA	BL	PASS
83	Dull silvery " U" shaped metal part (Motor)	BL	BL	BL	NA	BL	PASS
84	Silvery metal rotor (Motor)	BL	BL	BL	NA	X	Refer to chemical method
85	Green plastic rotor (Motor)	BL	BL	BL	BL	BL	PASS
86	Coppery metal coil (Motor)	BL	BL	BL	NA	BL	PASS
87	Black magnet (Motor)	BL	BL	BL	NA	BL	PASS
88	Kelly coating on magnet (Motor)	BL	BL	BL	BL	BL	PASS
89	Silvery metal solder (Motor) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
90	Black chip IC (16 pins)	BL	BL	BL	BL	BL	PASS
91	Black chip IC (8 pins)	BL	BL	BL	BL	BL	PASS



No.	Specimen Description	Result(s)					Comment
		Cd	Pb	Hg	Br	Cr	
92	Black chip audion (Submitted on Dec 14, 2018)	BL	BL	BL	X	BL	Refer to chemical method
93	Black chip resistor w/ white printing	BL	OL###	BL	BL	BL	PASS
94	Brown chip capacitor (Submitted on Dec 14, 2018)	BL	BL	BL	BL	BL	PASS
95	Chip LED	BL	BL	BL	BL	BL	PASS
96	Black material on PCB	BL	BL	BL	BL	BL	PASS
97	Brown PCB w/ green & white printing (Car)	BL	BL	BL	BL	BL	PASS
98	Silvery metal solder (Brown PCB of car) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
99	Brown PCB w/ green & white printing (Big) (Remote control)	BL	BL	BL	BL	BL	PASS
100	Silvery metal solder (Big Brown PCB of remote control) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
101	Brown PCB w/ green & white printing (Small) (Remote control)	BL	BL	BL	BL	BL	PASS
102	Silvery metal solder (Small brown PCB of remote control) (Submitted on Dec 14, 2018)	BL	BL	BL	NA	BL	PASS
103	Red plastic (Wire jacket) (Thick)	BL	X	BL	BL	BL	Refer to chemical method
104	Red plastic (Wire jacket) (Thin)	BL	BL	BL	BL	BL	PASS
105	Black plastic (Wire jacket) (Thick) (Submitted on Dec 14, 2018)	BL	BL	BL	BL	BL	PASS
106	Black plastic (Wire jacket) (Thin)	BL	BL	BL	BL	BL	PASS
107	White plastic (Wire jacket) (Submitted on Dec 14, 2018)	BL	BL	BL	BL	BL	PASS



No.	Specimen Description	Result(s)					Comment
		Cd	Pb	Hg	Br	Cr	
108	Blue plastic (Wire jacket) (Submitted on Dec 14, 2018)	BL	BL	BL	BL	BL	PASS
109	Green plastic (Wire jacket) (Submitted on Dec 14, 2018)	BL	BL	BL	BL	BL	PASS
110	Silvery metal core wire	BL	BL	BL	NA	BL	PASS
111	Coppery metal core wire	BL	BL	BL	NA	BL	PASS
112	Silvery metal screw	BL	BL	BL	NA	BL	PASS

RoHS Restricted Substances	Maximum Concentration Value (by weight in homogenous materials)
Lead (Pb)	0.1%
Cadmium (Cd)	0.01%
Mercury (Hg)	0.1%
Hexavalent Chromium (Cr VI)	0.1%
Polybrominated biphenyls (PBBs)	0.1%
Polybrominated diphenylethers (PBDEs)	0.1%

Remark: (1) Results were obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for CrVI) and GC/MS (for PBBs/PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013



Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	mg/kg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	mg/kg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	mg/kg	$BL \leq (300-3\sigma) < X$	--	$BL \leq (250-3\sigma) < X$
Cr	mg/kg	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

BL = Below Limit by XRF analysis

OL = Over Limit by XRF analysis

X = Inconclusive

LOD = Limit of Detection

NA = Not Applicable

1% = 10000 mg/kg = 10000 ppm

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

(3) The maximum permissible limit is quoted from the EU Directive 2011/65/EU Annex II

Note: - **###** According to the product specification provided from client, it is possible the source of lead in specimen No.93 could be from the glass/ceramic material of that electronic component which is exempted by RoHS regulatory (Directive 2011/65/EU of The European Parliament and of The Council of 8 June 2011). However, the numerical result of detected restricted substances in specimen No.93 cannot be related back to the concentration of the substances in the original homogeneous material.



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1.2 EU Directive 2011/65/EU (RoHS, Previously 2002/95/EC) - Wet Chemical for Lead, Hexavalent Chromium, PBBs & PBDEs content

Method: With reference to IEC62321-5:2013, IEC62321-7-1:2015, IEC62321-6:2015

For Lead, analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) / Atomic Absorption Spectrometer (AAS)

For Hexavalent Chromium, analysis was performed by Ultraviolet Visible Spectrophotometer (UV-Vis)

For PBBs & PBDEs, analysis was performed by Gas Chromatography Mass Spectrometer (GC-MS)

Test Item(s)	Result (mg/kg)			MDL (mg/kg)	Permissible Limit (mg/kg)
	12	33	40		
Lead (Pb)	--	--	--	2	1000
Hexavalent Chromium (CrVI) by boiling water extraction	--	--	--	See Note	#
Sum of PBBs	ND	ND	ND	--	1000
Monobromobiphenyl	ND	ND	ND	5	--
Dibromobiphenyl	ND	ND	ND	5	--
Tribromobiphenyl	ND	ND	ND	5	--
Tetrabromobiphenyl	ND	ND	ND	5	--
Pentabromobiphenyl	ND	ND	ND	5	--
Hexabromobiphenyl	ND	ND	ND	5	--
Heptabromobiphenyl	ND	ND	ND	5	--
Octabromobiphenyl	ND	ND	ND	5	--
Nonabromobiphenyl	ND	ND	ND	5	--
Decabromobiphenyl	ND	ND	ND	5	--
Sum of PBDEs	163	31	ND	--	1000
Monobromodiphenyl ether	ND	ND	ND	5	--
Dibromodiphenyl ether	ND	ND	ND	5	--
Tribromodiphenyl ether	ND	ND	ND	5	--
Tetrabromodiphenyl ether	ND	ND	ND	5	--
Pentabromodiphenyl ether	ND	ND	ND	5	--
Hexabromodiphenyl ether	ND	ND	ND	5	--
Heptabromodiphenyl ether	ND	ND	ND	5	--
Octabromodiphenyl ether	ND	ND	ND	5	--
Nonabromodiphenyl ether	12	ND	ND	5	--
Decabromodiphenyl ether	151	31	ND	5	--
Comment	PASS	PASS	PASS	--	--



Test Item(s)	Result (mg/kg)			MDL (mg/kg)	Permissible Limit (mg/kg)
	42	46	49		
Lead (Pb)	--	--	--	2	1000
Hexavalent Chromium (CrVI) by boiling water extraction	--	--	--	See Note	#
Sum of PBBs	ND	ND	ND	--	1000
Monobromobiphenyl	ND	ND	ND	5	--
Dibromobiphenyl	ND	ND	ND	5	--
Tribromobiphenyl	ND	ND	ND	5	--
Tetrabromobiphenyl	ND	ND	ND	5	--
Pentabromobiphenyl	ND	ND	ND	5	--
Hexabromobiphenyl	ND	ND	ND	5	--
Heptabromobiphenyl	ND	ND	ND	5	--
Octabromobiphenyl	ND	ND	ND	5	--
Nonabromobiphenyl	ND	ND	ND	5	--
Decabromobiphenyl	ND	ND	ND	5	--
Sum of PBDEs	ND	68	ND	--	1000
Monobromodiphenyl ether	ND	ND	ND	5	--
Dibromodiphenyl ether	ND	ND	ND	5	--
Tribromodiphenyl ether	ND	ND	ND	5	--
Tetrabromodiphenyl ether	ND	ND	ND	5	--
Pentabromodiphenyl ether	ND	ND	ND	5	--
Hexabromodiphenyl ether	ND	ND	ND	5	--
Heptabromodiphenyl ether	ND	ND	ND	5	--
Octabromodiphenyl ether	ND	ND	ND	5	--
Nonabromodiphenyl ether	ND	ND	ND	5	--
Decabromodiphenyl ether	ND	68	ND	5	--
Comment	PASS	PASS	PASS	--	--



Test Item(s)	Result (mg/kg)			MDL (mg/kg)	Permissible Limit (mg/kg)
	51	54	55		
Lead (Pb)	--	--	--	2	1000
Hexavalent Chromium (CrVI) by boiling water extraction	--	Negative	Negative	See Note	#
Sum of PBBs	ND	--	--	--	1000
Monobromobiphenyl	ND	--	--	5	--
Dibromobiphenyl	ND	--	--	5	--
Tribromobiphenyl	ND	--	--	5	--
Tetrabromobiphenyl	ND	--	--	5	--
Pentabromobiphenyl	ND	--	--	5	--
Hexabromobiphenyl	ND	--	--	5	--
Heptabromobiphenyl	ND	--	--	5	--
Octabromobiphenyl	ND	--	--	5	--
Nonabromobiphenyl	ND	--	--	5	--
Decabromobiphenyl	ND	--	--	5	--
Sum of PBDEs	121	--	--	--	1000
Monobromodiphenyl ether	ND	--	--	5	--
Dibromodiphenyl ether	ND	--	--	5	--
Tribromodiphenyl ether	ND	--	--	5	--
Tetrabromodiphenyl ether	ND	--	--	5	--
Pentabromodiphenyl ether	ND	--	--	5	--
Hexabromodiphenyl ether	ND	--	--	5	--
Heptabromodiphenyl ether	ND	--	--	5	--
Octabromodiphenyl ether	ND	--	--	5	--
Nonabromodiphenyl ether	24	--	--	5	--
Decabromodiphenyl ether	97	--	--	5	--
Comment	PASS	PASS	PASS	--	--



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Test Item(s)	Result (mg/kg)			MDL (mg/kg)	Permissible Limit (mg/kg)
	57	77	84		
Lead (Pb)	--	10052 ^{##}	--	2	1000
Hexavalent Chromium (CrVI) by boiling water extraction	--	--	Negative	See Note	#
Sum of PBBs	ND	--	--	--	1000
Monobromobiphenyl	ND	--	--	5	--
Dibromobiphenyl	ND	--	--	5	--
Tribromobiphenyl	ND	--	--	5	--
Tetrabromobiphenyl	ND	--	--	5	--
Pentabromobiphenyl	ND	--	--	5	--
Hexabromobiphenyl	ND	--	--	5	--
Heptabromobiphenyl	ND	--	--	5	--
Octabromobiphenyl	ND	--	--	5	--
Nonabromobiphenyl	ND	--	--	5	--
Decabromobiphenyl	ND	--	--	5	--
Sum of PBDEs	ND	--	--	--	1000
Monobromodiphenyl ether	ND	--	--	5	--
Dibromodiphenyl ether	ND	--	--	5	--
Tribromodiphenyl ether	ND	--	--	5	--
Tetrabromodiphenyl ether	ND	--	--	5	--
Pentabromodiphenyl ether	ND	--	--	5	--
Hexabromodiphenyl ether	ND	--	--	5	--
Heptabromodiphenyl ether	ND	--	--	5	--
Octabromodiphenyl ether	ND	--	--	5	--
Nonabromodiphenyl ether	ND	--	--	5	--
Decabromodiphenyl ether	ND	--	--	5	--
Comment	PASS	PASS	PASS	--	--



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Test Report

No. T51810292509TC

Date: DEC 20, 2018

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Test Item(s)	Result (mg/kg)		MDL (mg/kg)	Permissible Limit (mg/kg)
	92	103		
Lead (Pb)	--	444	2	1000
Hexavalent Chromium (CrVI) by boiling water extraction	--	--	See Note	#
Sum of PBBs	ND	--	--	1000
Monobromobiphenyl	ND	--	5	--
Dibromobiphenyl	ND	--	5	--
Tribromobiphenyl	ND	--	5	--
Tetrabromobiphenyl	ND	--	5	--
Pentabromobiphenyl	ND	--	5	--
Hexabromobiphenyl	ND	--	5	--
Heptabromobiphenyl	ND	--	5	--
Octabromobiphenyl	ND	--	5	--
Nonabromobiphenyl	ND	--	5	--
Decabromobiphenyl	ND	--	5	--
Sum of PBDEs	ND	--	--	1000
Monobromodiphenyl ether	ND	--	5	--
Dibromodiphenyl ether	ND	--	5	--
Tribromodiphenyl ether	ND	--	5	--
Tetrabromodiphenyl ether	ND	--	5	--
Pentabromodiphenyl ether	ND	--	5	--
Hexabromodiphenyl ether	ND	--	5	--
Heptabromodiphenyl ether	ND	--	5	--
Octabromodiphenyl ether	ND	--	5	--
Nonabromodiphenyl ether	ND	--	5	--
Decabromodiphenyl ether	ND	--	5	--
Comment	PASS	PASS	--	--



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- Note:
- mg/kg = milligram per kilogram
 - MDL = Method Detection Limit
 - ND = Not Detected (lower than MDL)
 - -- = Not Conducted
 - Negative = The Cr(VI) concentration is below 0.10ug/cm². The coating is considered a non- Cr(VI) based coating.
 - Positive = The Cr(VI) concentration is above 0.13ug/cm² and the statistical margin of error. The coating is considered to contain Cr(VI).
 - Inconclusive = The Cr(VI) concentration is between the value of 0.10ug/cm² to 0.13ug/cm². Unavoidable coating variations may influence the determination. Additional 3 trials should be tested, use the averaged result of the 3 trials for the final determination.
 - Storage conditions 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
 - # Positive indicates the presence of Cr(VI) on the tested areas and result be regarded as conflict with RoHS requirement. Negative indicates the absence of Cr(VI) on the tested areas and result be regarded as no conflict with RoHS requirement.
 - The maximum permissible limit is quoted from the EU Directive 2011/65/EU Annex II
 - ## According to the product specification provided from client, specimen No.77 of the submitted sample is copper alloy containing up to 40000 mg/kg Lead by weight which is exempted by RoHS regulatory (Directive 2011/65/EU of The European Parliament and of The Council of 8 June 2011).



Sample Picture (As received)

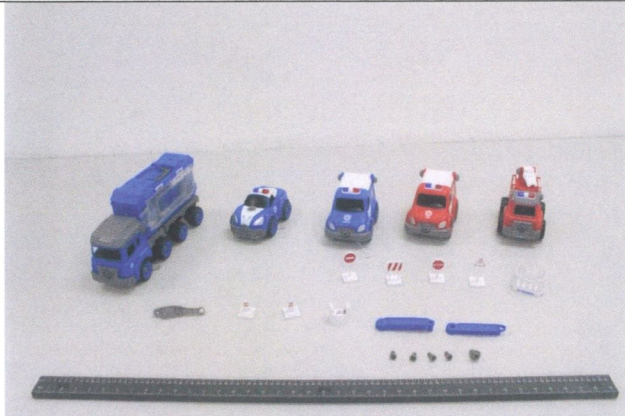
Pic.1



Pic.2



Pic.3

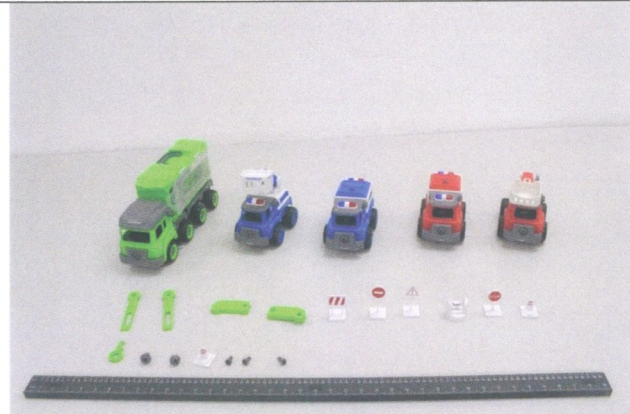


Pic.4



Sample Picture (As received)

Pic.5



Pic.6



Pic.7



SGS authenticate the photo on original report only

*** End of Report ***



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