

# TEST REPORT

<b><u>Applicant</u></b>	: ningbo deli tools co. ltd.
<b><u>Address</u></b>	: No. 128, Chezhan West Road, Huangtan Town, Ninghai County, Ningbo, Zhejiang, China
<b><u>Sample description</u></b>	: angle grinder
<b><u>Item no.</u></b>	: DE-JM180-1E DE-JM230-1E、DE-JM230-2E
<b><u>Manufacturer</u></b>	: ningbo deli technology Co., Ltd.
<b><u>Country of origin</u></b>	: China
<b><u>Sample received date</u></b>	: 17-Mar-2025
<b><u>Further information date</u></b>	: 09-May-2025
<b><u>Turn around time</u></b>	: 17-Mar-2025 To 12-May-2025
<b><u>Test specification</u></b>	: Total concentration of Lead, Cadmium, Mercury, Chromium VI, Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs) , Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP) , Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) in accordance with EC Directive 2011/65/EU and its amendment Directive (EU) 2015/863 (RoHS)
<b><u>Conclusion</u></b>	: Based on the analysis on the selected components of the submitted product, the test results do comply with the concentration limits as specified in Annex II to Directive 2011/65/EU and its amendment Directive (EU) 2015/863

The following test item(s) was/were performed on selected sample(s) and/or component(s) appointed by applicant.

*Samples are obtained by express delivery, Results obtained refer only to samples, products or material received in Laboratory, as described in point related to sample description, and tested in conditions shown in present report. Eurofins MTS Consumer Product Testing (Shanghai) Co., Ltd ensures that this job has been performed according to our Quality System and complying contract and legal conditions. Unless otherwise stated from the customer, regulation or the standard specification, Eurofins will apply it in accordance with ILAC G8:09/2019-(binary statement for simple acceptance rule). If you happen to have any comments, please do it by sending email to [info.sh@cpt.eurofinscn.com](mailto:info.sh@cpt.eurofinscn.com) and referring to this report number. Reproduction of this document is only valid if it is done completely and under the written permission of Eurofins MTS Consumer Product Testing (Shanghai) Co., Ltd. If you happen to have any complaints, please do it by sending email to [info.sh@cpt.eurofinscn.com](mailto:info.sh@cpt.eurofinscn.com) and referring to this report number.*



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

Signed for and on behalf of  
Eurofins MTS Consumer Product Testing (Shanghai) Co., Ltd.

Linda



Linda Jin  
Chemical Division Assistant Manager SLTH

**SAMPLE PHOTO(S)**



**EFW525033838-CG-02**

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## COMPONENT PHOTO(S)



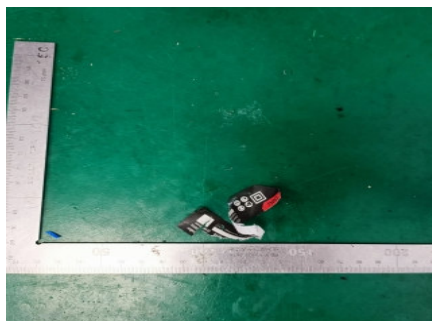
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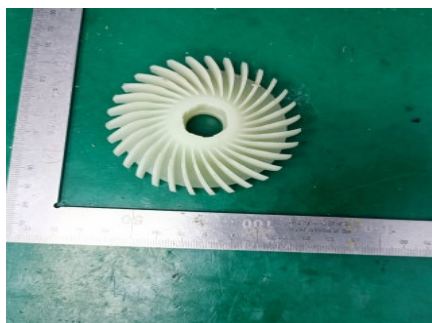
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## COMPONENT PHOTO(S)



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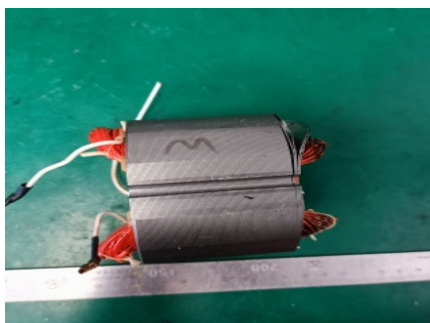
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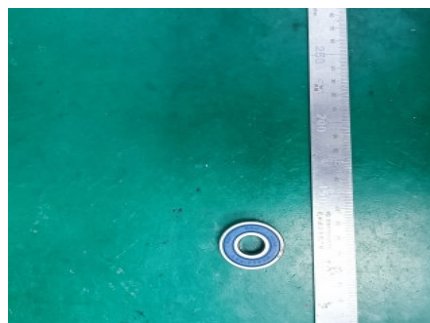
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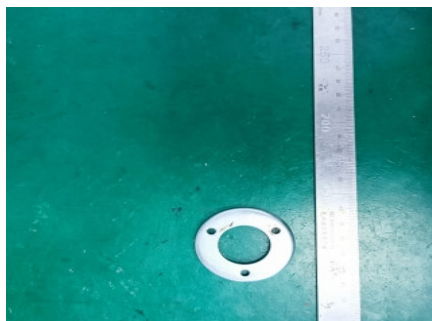
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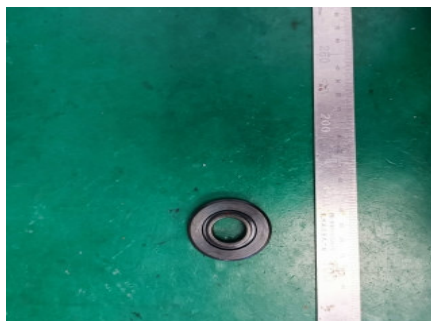
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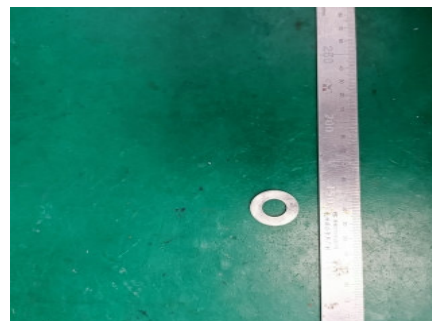
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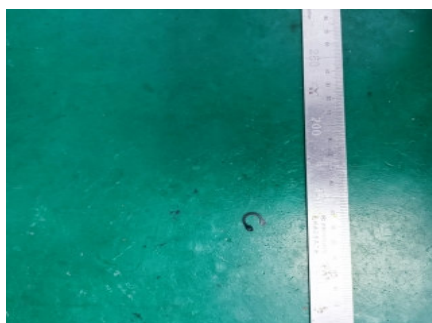
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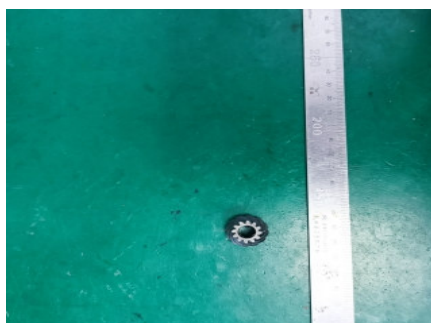
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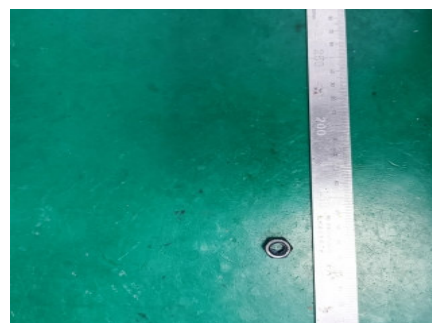
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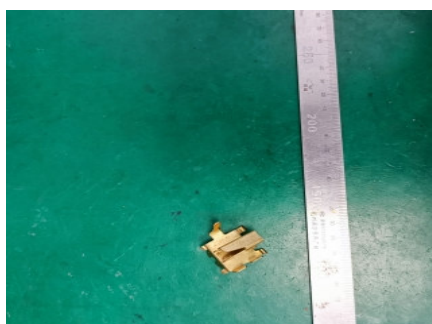
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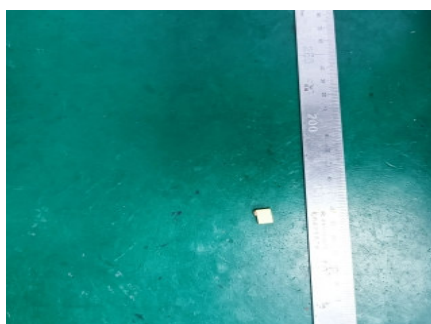
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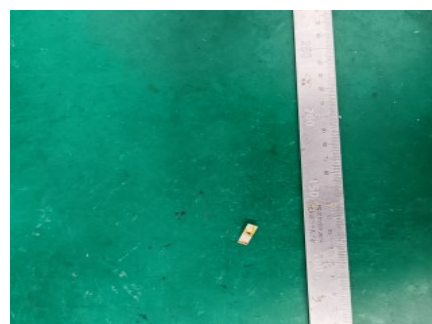
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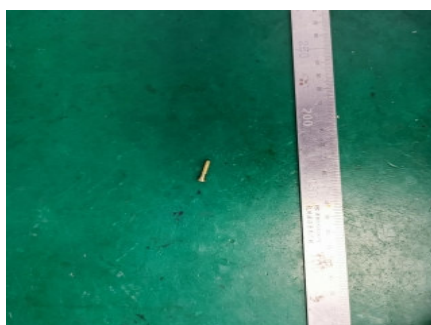
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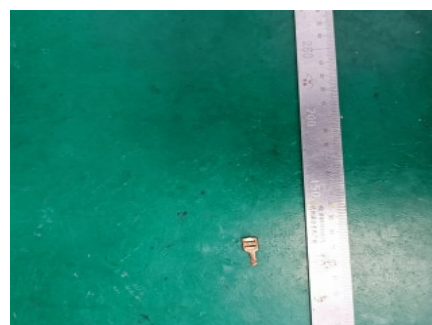
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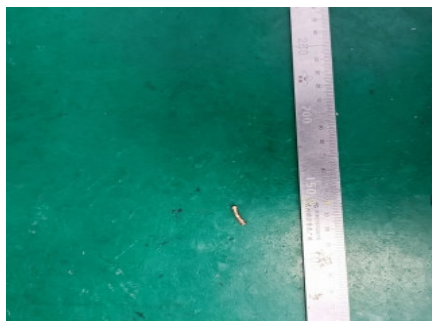


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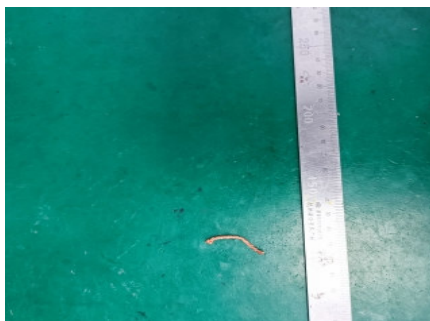
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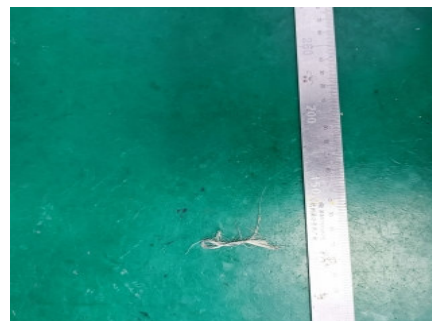
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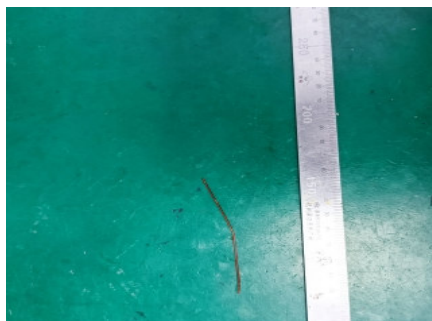
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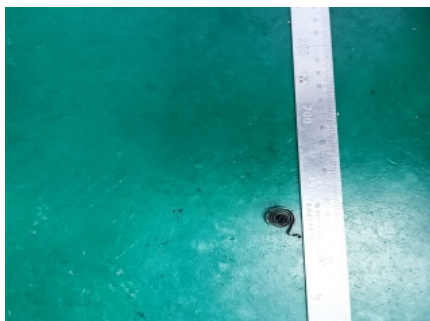
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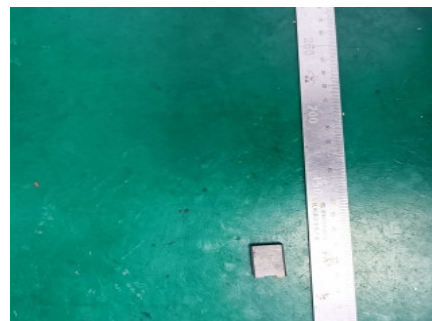
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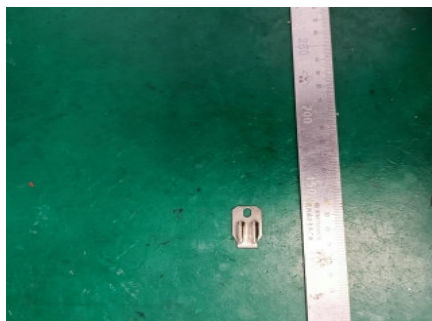
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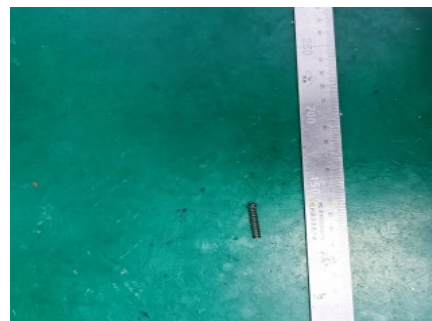
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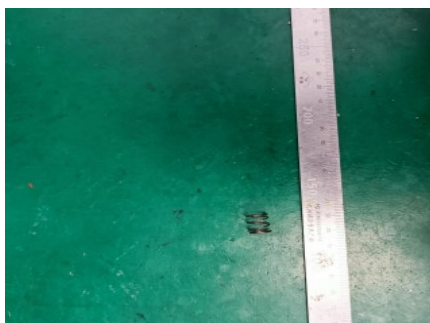
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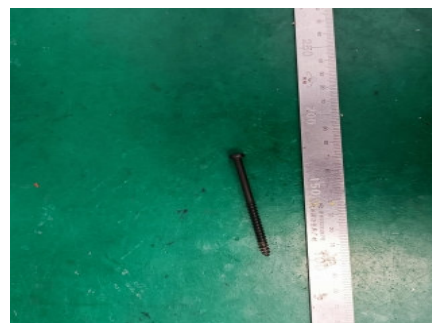
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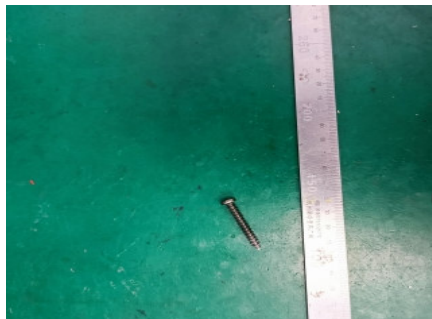
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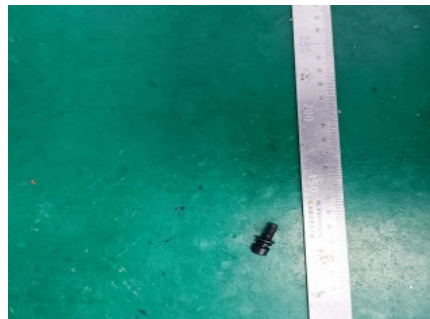
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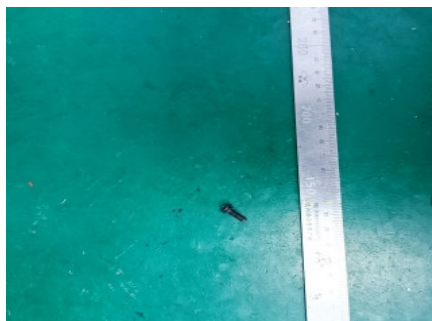
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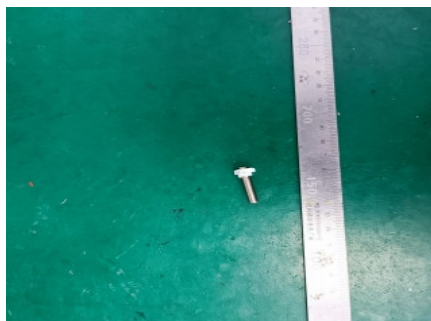
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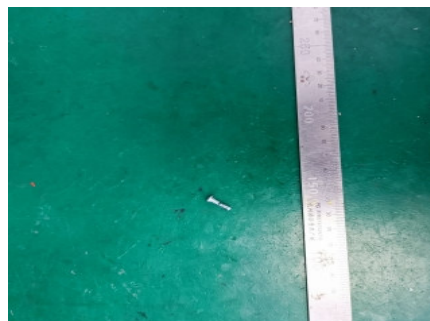
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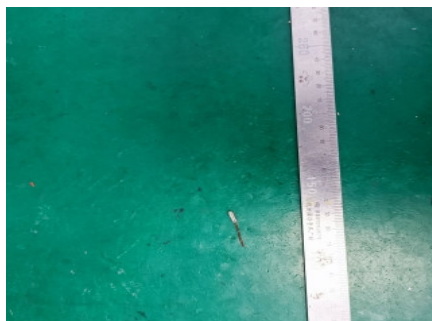
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**COMPONENT PHOTO(S)**



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## TEST RESULT

### Part 1

#### **A. Screening Test by XRF Spectroscopy**

As specified by client, to analyze the contents of Lead, Cadmium, Mercury, Chromium, Bromine in the submitted sample by XRF. Screening limits in mg/kg for regulated elements in various matrices according to IEC 62321-3-1:2013

No.	Component	Test Results (mg/kg)				
		Cd	Pb	Hg	Cr	Br
		Limit (mg/kg)				
		100	1000	1000	Cr(VI): 1000	PBB:1000 PBDE:1000
1	Red sticky paper	BL	BL	BL	BL	BL
2	Black plastic body	BL	BL	BL	BL	BL
3	Black plastic handle	BL	BL	BL	BL	BL
4	Black sticky paper	BL	BL	BL	BL	BL
5	Black plastic ring	BL	BL	BL	BL	BL
6	Black plastic shell	BL	BL	BL	BL	BL
7	Black plastic switch	BL	BL	BL	BL	BL
8	Black plastic lid	BL	BL	BL	BL	BL
9	Yellow plastic	BL	BL	BL	BL	NC
10	Beige plastic fan	BL	BL	BL	BL	BL
11	White plastic inside the plug	BL	BL	BL	BL	NC
12	Black soft plastic plug	BL	BL	BL	BL	BL
13	Brown soft plastic ring	BL	BL	BL	BL	BL
14	Black plastic button	BL	BL	BL	BL	BL
15	Black wrapped conduit	BL	BL	BL	BL	BL
16	Coffee colored wire sheath	BL	BL	BL	BL	BL
17	Black wrapped leather	BL	BL	BL	BL	BL
18	Blue wire sheath	BL	BL	BL	BL	BL
19	Black plastic base plate	BL	BL	BL	BL	BL
20	White wire sheath	BL	BL	BL	BL	BL
21	Black wire sheath	BL	BL	BL	BL	BL
22	Silver metal base	BL	BL	BL	BL	NA
23	Silver metal block	BL	BL	BL	NC	NA
24	Silver metal bearings	BL	BL	BL	NC	NA
25	Silver metal plate	BL	BL	BL	BL	NA
26	Silver metal with black coating	BL	BL	BL	BL	NA
27	Silver metal gasket	BL	BL	BL	BL	NA
28	Black metal buckle	BL	BL	BL	NC	NA
29	Silver metal gear	BL	BL	BL	NC	NA
30	Silver metal nut	BL	BL	BL	BL	NA
31	Golden metal card slot	BL	BL	BL	BL	NA
32	Golden metal block	BL	2.95x10 <sup>4</sup> (*2)	BL	BL	NA
33	Golden metal sheet	BL	BL	BL	BL	NA
34	Golden metal strip	BL	BL	BL	BL	NA
35	Golden metal screw	BL	BL	BL	NC	NA
36	Rose gold metal plug	BL	BL	BL	BL	NA
37	Rose gold metal shaft	BL	BL	BL	BL	NA
38	Copper wire	BL	BL	BL	BL	NA
39	Silver metal wire	BL	BL	BL	BL	NA

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

No.	Component	Test Results (mg/kg)				
		Cd	Pb	Hg	Cr	Br
		Limit (mg/kg)				
		100	1000	1000	Cr(VI): 1000	PBB:1000 PBDE:1000
40	Copper wire 2	BL	BL	BL	BL	NA
41	Silver metal ruler	BL	BL	BL	BL	NA
42	Carbon block	BL	BL	BL	BL	BL
43	Silver metal sheet	BL	BL	BL	BL	NA
44	Golden metal sleeve	BL	BL	BL	BL	NA
45	Black metal spring 1	BL	BL	BL	BL	NA
46	Black metal spring 2	BL	BL	BL	NC	NA
47	Black metal spring 3	BL	BL	BL	NC	NA
48	Black metal screw 1	BL	BL	BL	NC	NA
49	Black metal screw 2	BL	BL	BL	BL	NA
50	Black metal screw 3	BL	BL	BL	BL	NA
51	Black metal screw 4	BL	BL	BL	NC	NA
52	Black metal screw 5	BL	BL	BL	NC	NA
53	Silver metal plug	BL	1.11x10 <sup>4</sup> (*2)	BL	BL	NA
54	Silver metal screw	BL	BL	BL	NC	NA
55	Silver metal sleeve	BL	BL	BL	BL	NA
56	Silver metal shell	BL	BL	BL	BL	NA
57	Black metal gear	BL	BL	BL	NC	NA
58	Silver metal ring 2	BL	BL	BL	BL	NA
59	Silver metal shaft	BL	BL	BL	BL	NA
60	Gold metal on the motor	BL	BL	BL	BL	NA
61	Silver metal bearing 2	BL	BL	BL	NC	NA

\*\*\*TO BE CONTINUED\*\*\*



## TEST RESULT

Abbreviation:	Pb	denotes Lead
	Cd	denotes Cadmium
	Hg	denotes Mercury
	Cr	denotes Chromium
	Cr(VI)	denotes Chromium(VI)
	Br	denotes Bromine
	PBBs	denotes Total Polybrominated Biphenyls
	PBDEs	denotes Total Polybrominated Diphenyl Ethers
	NA	denotes Not Applicable
	NC	denotes Not Conclusive
	BL	denotes Below limit

XRF Screening limits for different materials:

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

**Note:**

BL= Below limit

X = The region where further investigation is necessary

OL = Over limit

$3\sigma$  = The repeatability of the analyzer at the action level

LOD = Limit of detection

(\*2) As a copper alloy containing up to 4% lead by weight (RoHS Exemption 6(c)).

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### B. Confirmation Test by Wet Chemistry

Tested Item(s)	Test Method	Measured Equipment	MDL
Lead (Pb) /Cadmium (Cd)	IEC 62321-5:2013	ICP-OES	10 mg/kg
Mercury (Hg)	IEC 62321-4:2013/AMD1:2017	ICP-OES	10 mg/kg
Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis	0.01µg/cm <sup>2</sup>
	IEC 62321-7-2:2017		10 mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS	50 mg/kg
Polybrominated DiphenylEthers (PBDEs)			

Component No.	Boiling-water-extraction for Cr(VI) (*1)
23	Negative
24	Negative
28	Negative
29	Negative
35	Negative
46	Negative
47	Negative
48	Negative
51	Negative
52	Negative
54	Negative
57	Negative
61	Negative

#### Remark:

(\*1) The screening result of Chromium (VI) was found in the inconclusive region, Thus the Chromium(VI) content in surface layer have been confirmed with reference to IEC 62321-7-1:2015.

Negative - The Cr(VI) concentration is below 0.10µg/cm<sup>2</sup>. The coating is considered a non-Cr(VI) based coating.

Component No.	Test Results (mg/kg)					
	Cd	Pb	Hg	Cr (VI)	PBBs	PBDEs
	Limit (mg/kg)					
	100	1000	1000	1000	1000	1000
9	-	-	-	-	ND	ND
11	-	-	-	-	ND	ND

#### Note:

The sample had been dissolved totally tested for Lead, Cadmium, Mercury.

MDL = method detection limit

ND = not detected (<MDL)

mg/kg = ppm = parts per million

µg/cm<sup>2</sup> = micrograms per square centimeter

\*\*\*TO BE CONTINUED\*\*\*

## **TEST RESULT**

### **Part 2**

Diisobutyl phthalate (DIBP), Bis (2- ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP) and Dibutyl phthalate (DBP)

Test specification : Total concentration of Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP) , Dibutyl

phthalate (DBP) and Diisobutyl phthalate (DIBP) in accordance with EC Directive 2011/65/EU and its amendment Directive (EU) 2015/863 (RoHS)

Test method : IEC 62321-8:2017

Limit : Annex II to Directive 2011/65/EU and its amendment Directive (EU) 2015/863

Component	Test Results (%)			
	DIBP	DEHP	BBP	DBP
	Limit (%)			
	0.1%	0.1%	0.1%	0.1%
1+2+3	ND	0.018	ND	ND
4+5+6	ND	0.013	ND	ND
7+8+9	ND	ND	ND	ND
10+11+12	ND	ND	ND	ND
16+17+18	ND	0.018	ND	ND
19+20+21	ND	0.015	ND	ND

**Note:**

ND = Not Detected (<0.005%)

0.1% equals to 1000 mg/kg

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

As per client's request, only the appointed materials have been tested.

\*\*\*END OF THE REPORT\*\*\*