



Test Report

UTLR24027333

Date: Feb.21, 2024

Password:PW1451

Page: 1 of 9

Applicant: Qidong Shili Electromechanical Co., Ltd.

Address: No. 1 Industrial Park, Lusigang Town, Qidong City, Jiangsu Province

The following samples were submitted and identified on behalf of the clients as

Sample Name: electric cordless screw driver

Model No: LSD001

Series Name : LSD001 / LSD002 / LSD003 / LSD004 / LSD005/LSD006/ LSD007
/LSD008/LSD009

Sample Received Date: Feb.04,2024, Feb.18,2024

Test Period: Feb.04,2024 to Feb.18,2024&Feb.21,2024

Test Method: Please refer to next page(s).

Test Result: Please refer to next page(s).

CONCLUSION :

According to client's request to conduct below tests in the selected parts of the submitted sample:

TEST ITEM

RESULT

1.RoHS Directive 2011/65/EU Annex II amending Annex(EU)2015/863 and amending Annex (EU)2017/2102

-Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs and PBDEs Content

PASS

-Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate(DBP),

PASS

Diisobutyl phthalate(DIBP) Content



Authorized Signatory

Title: Lab Manager

For and on behalf of

Dongguan Universal Testing Technology Co., Ltd.

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Photos of submitted sample



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Test Result(s):

Part No.	Part Description
P1	Black metal head
P2	Black plastic
P3	Black short screw
P4	Black soft plastic
P5	Black long screw
P6	Battery: Blue film with black printing
P7	Red wire coat
P8	Black wire coat
P9	Button: Black plastic with silver coating
P10	Transparent silicone
P11	Black heat shrink tubing
P12	Pin
P13	Transparent LED
P14	Silver metal shaft
P15	Battery: Silver wire core
P16	Battery: Silver battery
P17	Battery: Silver contacts
P18	Battery: Military green paper tape adhesive
P19	Black sponge with adhesive
P20	Green PCB
P21	Soldering
P22	Red elastic leather
P23	Black elastic leather
P24	Motor: Silver aluminum shell
P25	Motor: Yellow transparent plastic
P26	Button: Gold metal
P27	Button: Silver metal
P28	Charging port: Silver metal
P29	Black chip resistor
P30	Black components

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1.RoHS Directive 2011/65/EU and its amending Directive (EU)2015/863 & Directive (EU)2017/2102

ROHS Restricted Substances	Limit(w/w)
Lead(Pb)	0.1%
Cadmium(Cd)	0.01%
Mercury(Hg)	0.1%
Hexavalent Chromium(Cr VI)	0.1%
Polybromobiphenyls (PBBs)	0.1%
Polybromodiphenyl ethers (PBDEs)	0.1%
Di-(2-ethylhexyl) phthalate(DEHP)	0.1%
Benzylbutyl phthalate(BBP)	0.1%
Dibutyl phthalate(DBP)	0.1%
Diisobutyl phthalate(DIBP)	0.1%

1.1.Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs and PBDEs Content –RoHS Directive 2011/65/EU and its amending Directive (EU)2015/863 & Directive (EU)2017/2102

Method(s) Used: Please refer to Annex B

PRELIMINARY SCREENING ASSESSMENT

Part No.	Result(s)(mg/kg)				
	Lead	Cadmium	Mercury	Chromium	Bromine
P1	BL	BL	BL	X	NA
P2	BL	BL	BL	BL	BL
P3	BL	BL	BL	BL	NA
P4	BL	BL	BL	BL	BL
P5	BL	BL	BL	BL	NA
P6	BL	BL	BL	BL	BL
P7	BL	BL	BL	BL	BL
P8	BL	BL	BL	BL	BL
P9	BL	BL	BL	X	BL
P10	BL	BL	BL	BL	BL
P11	BL	BL	BL	BL	BL
P12	BL	BL	BL	BL	NA
P13	BL	BL	BL	BL	X
P14	BL	BL	BL	BL	NA
P15	BL	BL	BL	BL	NA
P16	BL	BL	BL	BL	NA
P17	BL	BL	BL	BL	NA
P18	BL	BL	BL	BL	BL
P19	BL	BL	BL	BL	BL

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P20	BL	BL	BL	BL	BL
P21	BL^	BL	BL	BL	NA
P22	BL	BL	BL	BL	BL
P23	BL	BL	BL	BL	BL
P24	BL	BL	BL	X	NA
P25	BL	BL	BL	BL	BL
P26	BL	BL	BL	BL	NA
P27	BL	BL	BL	X	NA
P28	BL	BL	BL	BL	NA
P29	BL	BL	BL	BL	BL
P30	BL	BL	BL	BL	BL

Note(s):

- 1.mg/kg = milligram(s) per kilogram = ppm = part(s) per million
- 2.BL=Below limit; OL=Over limit; NA=Not applicable; X=further chemical testing needed
- 3.APPENDIX A for interpretation of EDXRF results(Standard IEC62321-3-1)
- 4.^ the first resubmission sample were received on Feb.18, 2024.

APPENDIX A

Element	Polymer Materials	Metallic Materials	Composite Materials
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	$BL \leq (300-3\sigma) < X$	NA	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

Note(s): Results was obtained by EDXRF for primary screening. According the APPENDIX A below, further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for CrVI) and GCMSD (for PBBs, PBDEs) have to be performed, if the XRF results is in the range defined as inconclusive (X). Further chemical testing is also proposed when results are over limit (OL) in order to have a numeral result to compare to the limits set by the Directive 2011/65/EU.

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CHEMICAL TEST

Part No.	Test item	Unit	Result	MDL	Limit	Conclusion
P9	Chromium VI(Cr VI)	mg/kg	ND	10	1000	Pass

Note:

1. MDL=Method detection limit
2. mg/kg=milligram per kilogram=ppm
3. N.D.=Not detected(<MDL)

Part No.	Test item	Result	Limit	Conclusion
P1	Chromium VI(Cr VI)	Negative	Negative	Pass
P24	Chromium VI(Cr VI)	Negative	Negative	Pass
P27	Chromium VI(Cr VI)	Negative	Negative	Pass

Note:

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 201/65/EU, Article 4(1).

Part No.	Test item	Unit	MDL	Result	Limit	Conclusion
P13	Polybromobiphenyls (PBBs)	mg/kg	50	N.D.	1000	Pass
	Polybromodiphenyl ethers (PBDEs)	mg/kg	50	N.D.	1000	Pass

Note:

1. MDL=Method detection limit
2. mg/kg=milligram per kilogram=ppm
3. N.D.=Not detected(<MDL)

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APPENDIX B

List of Analytes and their Corresponding Test Methods [European Council Directive 2011/65/EU] :		
No.	Name of Analytes	Test Method(s)
1	Lead(Pb), mercury(Hg), cadmium(Cd), total chromium(Cr) and total bromine(Br) using X-ray fluorescence spectrometry	With reference to IEC 62321-3-1:2013
2	Lead (Pb)	With reference to IEC 62321-5:2013
3	Cadmium (Cd)	
4	Mercury (Hg)	With reference to IEC 62321-4:2013/AMD1:2017
5	Chromium VI (Cr VI)	Metal :With reference to IEC 62321-7-1:2015 Polymers & Electronics :With reference to IEC 62321-7-2:2017
6	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	With reference to IEC 62321-6:2015
7	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)	
[a]	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.	

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1.2.Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate(DBP), Diisobutyl phthalate(DIBP) Content- RoHS Directive 2011/65/EU Annex II amending Annex(EU)2015/863 and amending Annex (EU)2017/2102

Test Method: With reference to IEC 62321-8:2017, analysis was performed by GC-MS.

Test Items	Unit	Result	MDL	Limit
		<u>P2+P9+P13+P18+P19+P20+P25</u>		
Di-(2-ethylhexyl) phthalate(DEHP)	mg/kg	N.D.	50	1000
Benzylbutyl phthalate(BBP)	mg/kg	N.D.	50	1000
Dibutyl phthalate(DBP)	mg/kg	N.D.	50	1000
Diisobutyl phthalate(DIBP)	mg/kg	N.D.	50	1000
Conclusion		Pass	-	-

Test Items	Unit	Result	MDL	Limit
		<u>P6+P7+P8+P11</u>		
Di-(2-ethylhexyl) phthalate(DEHP)	mg/kg	N.D.	50	1000
Benzylbutyl phthalate(BBP)	mg/kg	N.D.	50	1000
Dibutyl phthalate(DBP)	mg/kg	N.D.	50	1000
Diisobutyl phthalate(DIBP)	mg/kg	N.D.	50	1000
Conclusion		Pass	-	-

Test Items	Unit	Result	MDL	Limit
		<u>P4+P10+P22+P23</u>		
Di-(2-ethylhexyl) phthalate(DEHP)	mg/kg	N.D.	50	1000
Benzylbutyl phthalate(BBP)	mg/kg	N.D.	50	1000
Dibutyl phthalate(DBP)	mg/kg	N.D.	50	1000
Diisobutyl phthalate(DIBP)	mg/kg	N.D.	50	1000
Conclusion		Pass	-	-

Note:

1. mg/kg = milligram per kilogram= ppm.
2. MDL = Method Detection Limit.
3. N.D. = Not Detected (< MDL)
4. "+"=mixed test, data users should consider the risk of "pass" results of mixed sample



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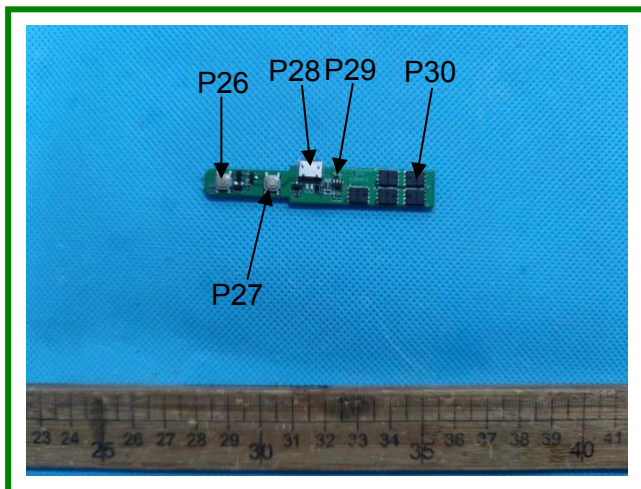
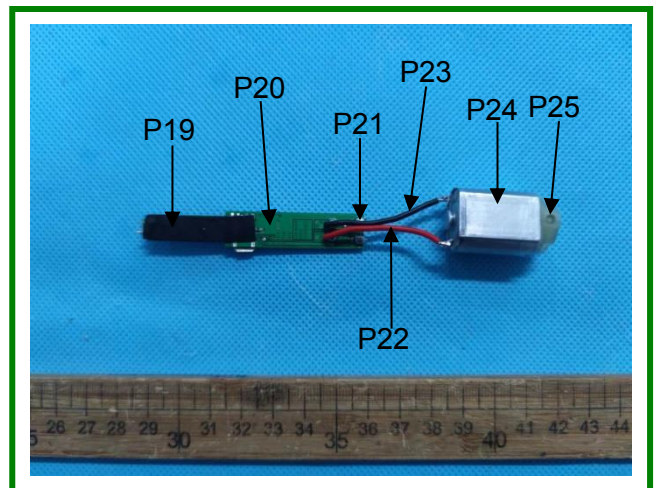
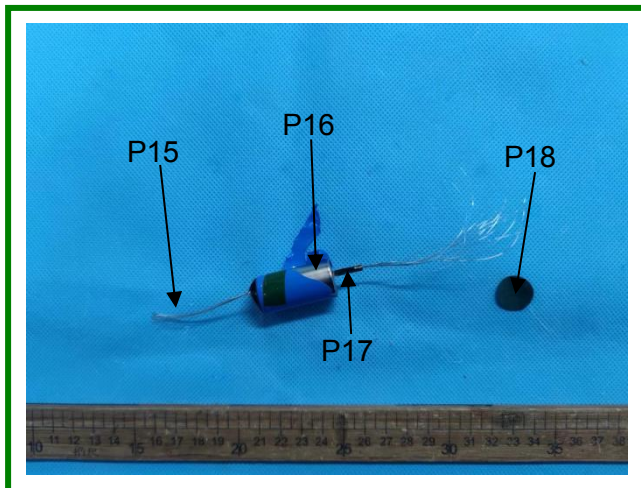
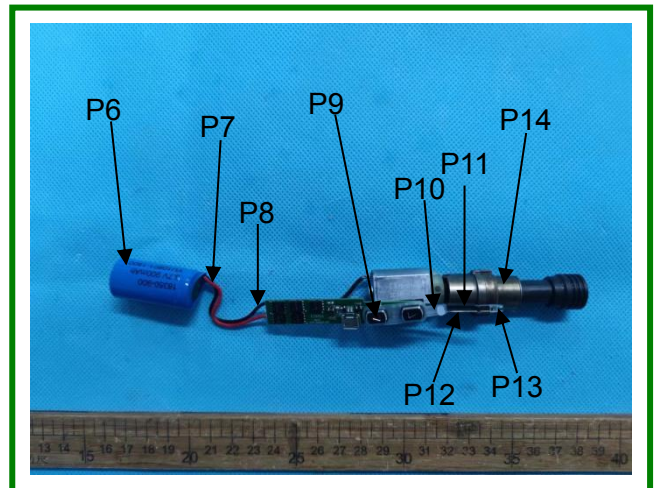
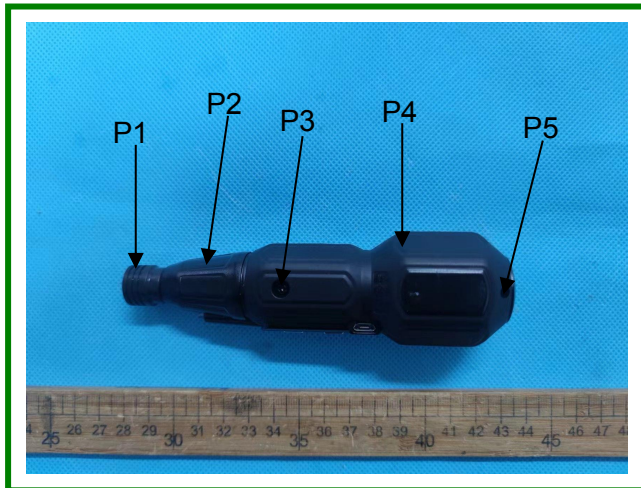
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Parts photos:



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