

Verification Report No.: SHAEC23009252501 Date: Aug 14, 2023 Page 1 of 9

Client Name: Jiangsu DINGS' Intelligent Control Technology Co., Ltd.

Client Address: No.355 Longjin Road, Lucheng street, Changzhou Economic Development Zone

Sample Name: Brush motor

Tested Basic Model No.: 80ZYT102D24-1

The above sample(s) and information were provided by the client.

SGS Job No.: SP23-011626 Sample Receiving Date: Jun 30, 2023

Verification Period: Jun 30, 2023 ~ Jul 15, 2023

Verification Requested: With reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

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

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

Test Result Summary:

Test Items	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive	
2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated	
biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl)	Pass
phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and	
Diisobutyl phthalate (DIBP)	

Signed for and on behalf of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Jessica Chen Approved Signatory





essica Chen

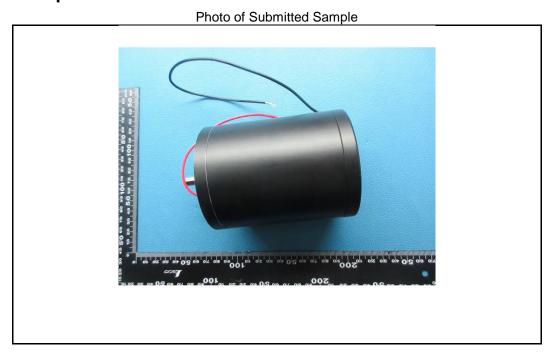
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Verification Method(s):

- 1. With reference to IEC 62321-2:2021, disassembly and disjointment were performed for the submitted samples.
- 2. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by the photos in this report.
- (1) With reference to IEC 62321-3-1:2013, screening by EDXRF spectroscopy.
- (2) Wet chemical test method: With reference to IEC 62321-4:2013+A1:2017, IEC62321-5:2013, IEC 62321-7-1:2015, IEC 62321-7-2:2017, ISO 17075-1:2017, IEC 62321-6:2015 and IEC62321-8:2017, analyzed by ICP-OES,UV-Vis and GC-MS.



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Verification Part Description:

	erification Part Description:								
SN ID	Sample No.	SGS Sample ID	Description						
SN1	A1	SHA23-0092525-0001.C001	Black metal (cover plate)						
SN2	A2	SHA23-0092525-0001.C002	Silvery metal (fixed board)						
SN3	A3	SHA23-0092525-0001.C003	Silvery metal (shell)						
SN4	A4	SHA23-0092525-0001.C004	Black magnet						
SN5	A5	SHA23-0092525-0001.C005	Beige plastic (fixed piece)						
SN6	A6	SHA23-0092525-0001.C006	Silvery metal (guide vane)						
SN7	A7	SHA23-0092525-0001.C007	Black metal (washer)						
SN8	A8	SHA23-0092525-0001.C008	Silvery metal (washer)						
SN9	A9	SHA23-0092525-0001.C009	Black metal (screw)						
SN10	A10	SHA23-0092525-0001.C010	Silvery metal (washer)						
SN11	A11	SHA23-0092525-0001.C011	Silvery metal (screw)						
SN12	A12	SHA23-0092525-0001.C012	Black rubber (gasket)						
SN13	A13	SHA23-0092525-0001.C013	Brown metal (elastic piece)						
SN14	A14	SHA23-0092525-0001.C014	Copper-colored metal						
SN15	A15	SHA23-0092525-0001.C015	Copper-colored carbon brush						
SN16	A16	SHA23-0092525-0001.C016	Copper-colored metal (guide vane)						
SN17	A17	SHA23-0092525-0001.C017	Beige solid (fixed block)						
SN18	A18	SHA23-0092525-0001.C018	Blue adhesive (gasket cement)						
SN19	A19	SHA23-0092525-0001.C019	Black metal (buckle)						
SN20	A20	SHA23-0092525-0001.C020	Copper-colored metal (enamelled wire)						
SN21	A21	SHA23-0092525-0001.C021	Silvery metal (silicon plate)						
SN22	A22	SHA23-0092525-0001.C022	Beige plastic (boot)						
SN23	A23	SHA23-0092525-0001.C023	Silvery metal (connecting rod)						
SN24	A24	SHA23-0092525-0001.C024	Silvery metal (bearing)						
SN25	A25	SHA23-0092525-0001.C025	Silvery metal (bearing)						
SN26	A26	SHA23-0092525-0001.C026	Brown plastic (bearing)						
SN27	A27	SHA23-0092525-0001.C027	Silvery metal (bearing)						
SN28	A28	SHA23-0092525-0001.C028	Silvery metal (bearing)						
SN29	A29	SHA23-0092525-0001.C029	Silvery/Black adhesive plastic (label)						
SN30	A30	SHA23-0092525-0001.C030	Black plastic (wire sheath) (wire harness)						
SN31	A31	SHA23-0092525-0001.C031	Red plastic (wire sheath) (wire harness)						
SN32	A32	SHA23-0092525-0001.C032	Silvery metal (wire core) (wire harness)						
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Verification Result(s):

In accordance with the result of material risk assessment, the following disjointed parts in the submitted sample have been verified. (Unless otherwise specified, the unit is mg/kg).

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Test Item(s)	A1	A2	A3	A4	A5	A6	A7	A8
Cd	BL							
Pb	BL							
Hg	BL							
Cr(VI)▼	BL	BL	BL	ND	BL	BL	ND	ND
PBBs				BL	BL			
PBDEs				BL	BL			
DBP					BL			
BBP					BL			
DEHP					BL			
DIBP					BL			
Conclusion	PASS							

Test Item(s)	A9	A10	A11	A12	A13	A14	A15	A16
Cd	BL							
Pb	BL							
Hg	BL							
Cr(VI)▼	ND	ND	ND	BL	ND	BL	BL	BL
PBBs				BL			BL	
PBDEs				BL			BL	
DBP				BL			BL	
BBP				BL			BL	
DEHP				BL			BL	
DIBP				BL			BL	
Conclusion	PASS							

Test Item(s)	A17	A18	A19	A20	A21	A22	A23	A24
Cd	BL							
Pb	BL							
Hg	BL							
Cr(VI)▼	BL	BL	ND	BL	ND	BL	ND	ND
PBBs	BL	BL		BL		BL		
PBDEs	BL	BL		BL		BL		
DBP	BL	BL		BL		BL		
BBP	BL	BL		BL		BL		
DEHP	BL	BL		BL		BL		
DIBP	BL	BL		BL		BL		
Conclusion	PASS							

Test Item(s)	A25	A26	A27	A28	A29	A30	A31	A32
Cd	BL							
Pb	BL							
Hg	BL							
Cr(VI)▼	ND	BL	BL	ND	BL	BL	BL	BL



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Test Item(s)	A25	A26	A27	A28	A29	A30	A31	A32
PBBs		BL			BL	BL	BL	
PBDEs		BL			BL	BL	BL	
DBP		BL			BL	BL	BL	
BBP		BL			BL	BL	BL	
DEHP		BL			BL	BL	BL	
DIBP		BL			BL	BL	BL	
Conclusion	PASS							



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Notes:

(1) Interpretation of screening results by X-ray fluorescence spectrometry (XRF):

(a) Screening limits in mg/kg for regulated elements in various matrices according to IEC 62321-1:2013 Annex A as below table.

Element	Polymer	Metal	Composite Materials
Cd	BL≤(70-3σ) <x<(130+3σ)≤ol< td=""><td>BL≤(70-3σ)<x<(130+3σ)≤ol< td=""><td>LOD<x<(150+3σ)≤ol< td=""></x<(150+3σ)≤ol<></td></x<(130+3σ)≤ol<></td></x<(130+3σ)≤ol<>	BL≤(70-3σ) <x<(130+3σ)≤ol< td=""><td>LOD<x<(150+3σ)≤ol< td=""></x<(150+3σ)≤ol<></td></x<(130+3σ)≤ol<>	LOD <x<(150+3σ)≤ol< td=""></x<(150+3σ)≤ol<>
Pb	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(700-3σ)<x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(500-3σ) <x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<>
Hg	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(700-3σ)<x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(500-3σ) <x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<>
Br	BL ≤ (300-3σ)< X	Not applicable	BL ≤ (250-3σ)< X
Cr	BL ≤ (700-3σ)< X	BL ≤ (700-3σ)< X	BL ≤ (500-3σ)< X

- (b) If the maximum allowed level restricts PBB/PBDE and Cr(VI) rather than Br and Cr, the exceptions are the XRF determinations of Br and Cr. If the quantitative results for the elements Br and/or are higher than the limit (for Br calculated based on the stoichiometry of Br in the most common congeners of PBB/PBDE), the sample is "inconclusive".
- (c) Results are obtained by EDXRF for primary screening, LOD = Limit of Detection, BL = Below Limit, OL= Over Limit, IN (The symbol X marks the region)=Inconclusive, where further investigation is necessary, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs/PBDEs) are recommended to be performed.
- (d) The EDXRF screening test for RoHS elements The reading may be different to the actual content in the sample be of non-uniformity composition.
- (2) Screening results of Phthalates (PHTH) are for primary screening, and further chemical testing by GC -MS (for DBP, BBP, DEHP and DIBP) are recommended to be performed if the concentration exceeds the below warning value (unit: mg/kg).

Test Items	CAS No.	Polymer/ Composite Materials
Dibutyl Phthalate (DBP)	84-74-2	BL ≤ 600< X
Benzylbutyl Phthalate (BBP)	85-68-7	BL ≤ 600< X
Bis(2-ethylhexyl) Phthalate (DEHP)	117-81-7	BL ≤ 600< X
Diisobutyl Phthalate (DIBP)	84-69-5	BL ≤ 600< X

- (3) Interpretation of results by chemical tests:
 - (a) mg/kg = 0.0001%, MDL=Method detection Limit, ND = Not Detected (<MDL), --- = Not Applicable.
 - (b) Unit and MDL in wet chemical test

Test Items	Pb	Cd	Hg	DBP	BBP	DEHP	DIBP
Unit	mg/kg						
MDL	10	10	10	100	100	100	100

The MDL for single compound of PBBs and PBDEs is 100 mg/kg.

MDL of Cr(VI) for polymer, composite and leather sample is 10 mg/kg.

MDL of Cr(VI) for metal sample is 0.10 µg/cm².

- (c) ▼ =Metal sample
 - a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm². The sample coating is considered to contain Cr(VI).
 - b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-Cr(VI) based coating
 - c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive-unavoidable coating variations may influence the determination



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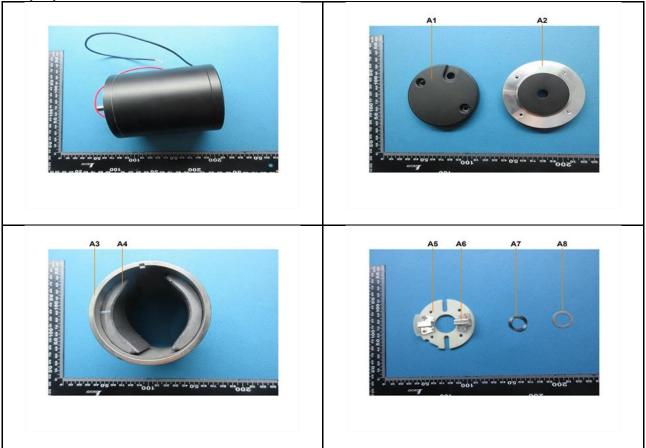
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Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

- (4) Restricted substances and maximum concentration values tolerated by weight in homogeneous materials under RoHS Directive: Cd: 0.01%, Pb/Hg/Cr(VI)/PBBs/PBDEs/DEHP/DBP/BBP/DIBP: 0.1%. The limit is quoted from RoHS Directive (EU) 2015/863.
- (5) IEC 62321 series is equivalent to EN 62321 series.

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

Sample photos:



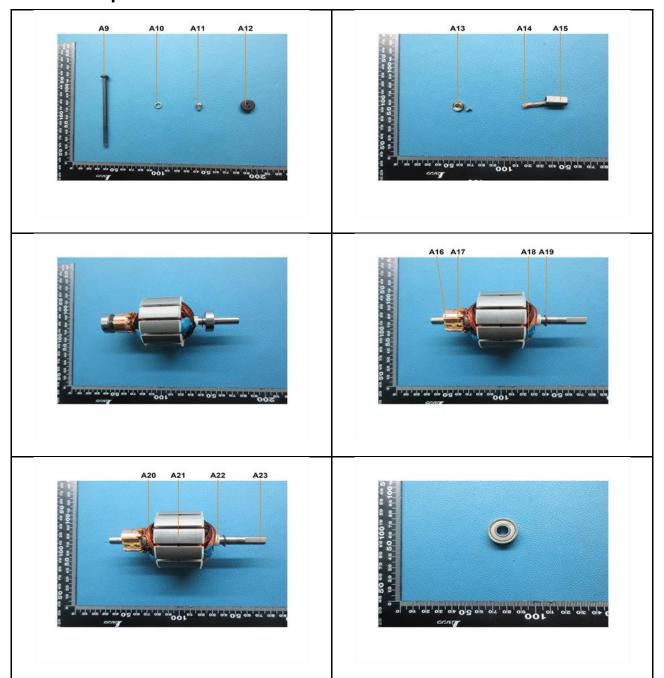


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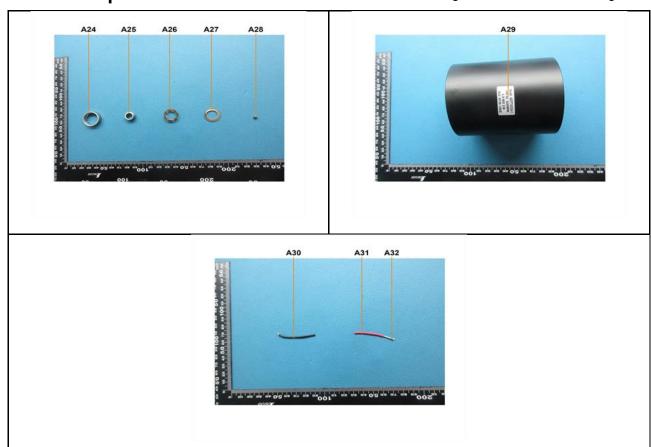


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