

Date: Jan 03, 2023

Client Name: Nantong hengzhao Energy Saving Technology Co., Ltd Client Address: 188 Yongfu Road, Chongchuan District, Nantong

Sample Name: Water pipe&drainage pump Tested Basic Model No.: XKYRd-45 The above sample(s) and information were provided by the client. _____

SGS Job No.:	SP22-029578
Sample Receiving Date:	Dec 09, 2022
Verification Period:	Dec 09, 2022 - Dec 29, 2022
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.

essica Chen

Jessica Chen Approved Signatory





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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 62321-7:2015, 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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Date: Jan 03, 2023

Page 3 of 10

SN ID	Sample No.	SGS Sample ID	Description		
SN1	A1	SHA22-0046509-0001.C001	White plastic (protective shell)		
SN2	A2	SHA22-0046509-0001.C002	White plastic (washer)		
SN3	A3	SHA22-0046509-0001.C003	Black rubber (washer)		
SN4	A4	SHA22-0046509-0001.C004	White rubber (washer)		
SN5	A5	SHA22-0046509-0001.C005	Silvery metal (boot)		
SN6	A6	SHA22-0046509-0001.C006	Silvery metal (spring)		
SN7	A7	SHA22-0046509-0001.C007	Silvery metal (washer)		
SN8	A8	SHA22-0046509-0001.C008	Silvery metal (screw)		
SN9	A9	SHA22-0046509-0001.C009	Silvery metal (steel ball)		
SN10	A10	SHA22-0046509-0001.C010	Silvery metal (boot)		
SN11	A11	SHA22-0046509-0001.C011	White plastic (connecting tube)		
SN12	A12	SHA22-0046509-0001.C012	Black rubber (washer)		
SN13	A13	SHA22-0046509-0001.C013	White plastic (connecting tube)		
SN14	A14	SHA22-0046509-0001.C014	Beige plastic (connecting shell)		
SN15	A15	SHA22-0046509-0001.C015	Silvery metal (terminal)		
SN16	A16	SHA22-0046509-0001.C016	Black plastic (wire sheath) (wire harness)		
SN17	A17	SHA22-0046509-0001.C017	Red plastic (wire sheath) (wire harnes		
SN18	A18	SHA22-0046509-0001.C018	Black plastic (boot)		
SN19	A19	SHA22-0046509-0001.C019	Silver-blue metal (screw)		
SN20	A20	SHA22-0046509-0001.C020	Black plastic (protective shell)		
SN21	A21	SHA22-0046509-0001.C021	Black plastic (pyrocondensation pipe		
SN22	A22	SHA22-0046509-0001.C022	Black plastic (fixed block)		
SN23	A23	SHA22-0046509-0001.C023	Silver-blue metal (motor shell)		
SN24	A24	SHA22-0046509-0001.C024	Silvery metal (soldering tin)		
SN25	A25	SHA22-0046509-0001.C025	Golden metal (washer)		
SN26	A26	SHA22-0046509-0001.C026	Golden metal (guide vane)		
SN27	A27	SHA22-0046509-0001.C027	Copper-colored metal (guide vane)		
SN28	A28	SHA22-0046509-0001.C028	White plastic (gasket)		
SN29	A29	SHA22-0046509-0001.C029	Black plastic (fixed block)		
SN30	A30	SHA22-0046509-0001.C030	Golden metal (dowel)		
SN31	A31	SHA22-0046509-0001.C031	Black plastic (fixed block)		
SN32	A32	SHA22-0046509-0001.C032	Black rubber (gasket)		
SN33	A33	SHA22-0046509-0001.C033	Black plastic (fixed block)		
SN34	A34	SHA22-0046509-0001.C034	White rubber (gasket)		
SN35	A35	SHA22-0046509-0001.C035	White rubber (gasket)		
SN36	A36	SHA22-0046509-0001.C036	Black rubber (gasket)		
SN37	A37	SHA22-0046509-0001.C037	Beige plastic (motor lid)		



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Date: Jan 03, 2023

Page 4 of 10

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).

					0 0/			
Test Item(s)	A1	A2	A3	A4	A5	A6	A7	A8
Cd	BL							
Pb	BL							
Hg	BL							
Cr(VI)▼	BL	BL	BL	BL	BL	ND	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)	A9	A10	A11	A12	A13	A14	A15	A16
Cd	BL							
Pb	BL							
Hg	BL							
Cr(VI)▼	ND	BL						
PBBs			BL	BL	BL	ND		BL
PBDEs			BL	BL	BL	ND		BL
DBP			BL	BL	BL	BL		BL
BBP			BL	BL	BL	BL		BL
DEHP			BL	BL	BL	BL		BL
DIBP			BL	BL	BL	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	BL	BL	ND	BL
PBBs	BL	BL		BL	BL	BL		
PBDEs	BL	BL		BL	BL	BL		
DBP	BL	BL		BL	BL	BL		
BBP	BL	BL		BL	BL	BL		
DEHP	BL	BL		BL	BL	BL		
DIBP	BL	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)▼	BL	BL	BL	BL	BL	ND	BL	BL



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'er	erification Report No.:		SHAEC	22004650901	1	Date: Jan 03, 2023			Page 5 of 10		
	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	PASS	PASS	PASS	PASS	PASS	PASS	PASS		

Ve

Test Item(s)	A33	A34	A35	A36	A37
Cd	BL	BL	BL	BL	BL
Pb	BL	BL	BL	BL	BL
Hg	BL	BL	BL	BL	BL
Cr(VI)▼	BL	BL	BL	BL	BL
PBBs	BL	BL	BL	BL	ND
PBDEs	BL	BL	BL	BL	ND
DBP	BL	BL	BL	BL	BL
BBP	BL	BL	BL	BL	BL
DEHP	BL	BL	BL	BL	BL
DIBP	BL	BL	BL	BL	BL
Conclusion	PASS	PASS	PASS	PASS	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	BL ≤(70-3σ)< X	LOD < X
	<(130+3σ)≤OL	<(130+3σ)≤OL	<(150+3σ)≤ OL
Pb	BL ≤(700-3σ)<	BL ≤(700-3σ)< X	BL ≤(500-3σ)<
	X<(1300+3σ)≤ OL	<(1300+3σ)≤ OL	X<(1500+3σ)≤ OL
Hg	BL ≤(700-3σ)< X	BL ≤(700-3σ)< X	BL ≤(500-3σ)< X
	<(1300+3σ)≤ OL	<(1300+3σ)≤ OL	<(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,



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MDL of Cr(VI) for polymer, composite and leather sample is 10 mg/kg. MDL of Cr(VI) for metal sample is 0.10 μ g/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 inconclusiveunavoidable coating variations may influence the determination

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.

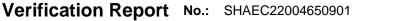


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Sample photos: A1 A2 A3 A4 Ó 200°aa ato ato 20 ato 210 ato 40 200°ato 200° A5 A6 A7 **A8** A9 A10 A11 oc of old op of on oc of or or oc of op of op 001



Date: Jan 03, 2023

Page 8 of 10



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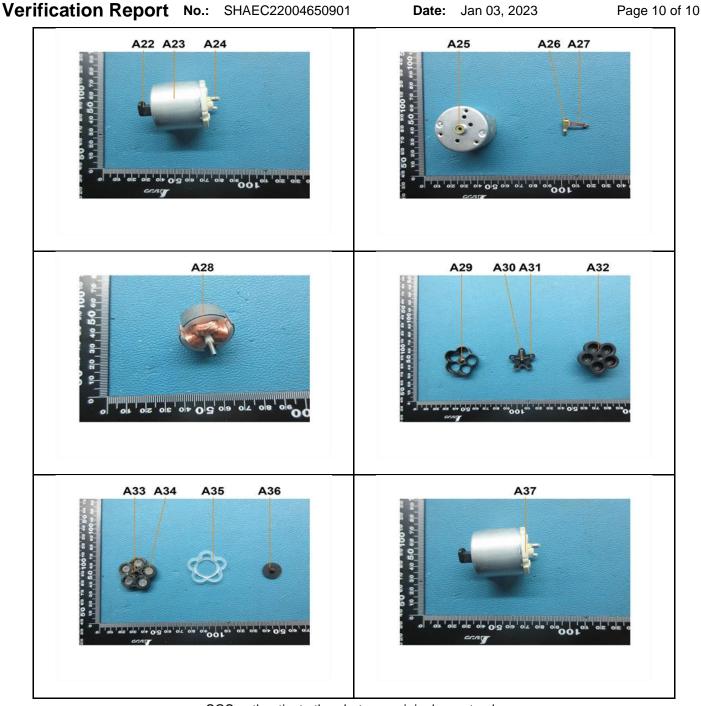
Verification Report No.: SHAEC22004650901	Date: Jan 03, 2023 Page 9 of 10
	A12 A13
	A14 A15 A16 A17 A18
	A19 A20 A21



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