

TEST REPORT

Applicant : NINGBO GAOSHENG MECHANICAL AND ELECTRICAL TECHNOLOGY
CO., LTD
Address : #519 wuxiang north road wuxiang industrial zone.ningbo.Zhejiang
315111.China

Report on the submitted sample said to be:

Sample name : MOTOR
Trade Name : N/A
Model : See the model list on the next page
Manufacturer : NINGBO SHENGGUANG MOTOR CO., LTD
Address : #519 wuxiang north road wuxiang industrial zone.ningbo.Zhejiang-
315111.China
Test conclusion : Based on the performed tests on submitted samples, the results of Lead,
Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls
(PBBs), Polybrominated diphenyl ethers (PBDEs), Bis (2-ethylhexyl)
phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP), Di
Iso Butyl Ortho Phthalate (DIBP) comply with the limits as set by RoHS
Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.
Testing period : June 05, 2019 to June 13, 2019
Date of report : June 13, 2019

Testing Requested:	Results
Selected test(s) as requested by client	Pass

Prepared by:

Calvin Chen

Calvin Chen

Examine By :

Tony Mo

Tony Mo

Approved/Manager:



Model List	
Model	ZF-KP5063000-833K, SG-27, SG-25, PM-33, TG-38, SG-385, SG-395, BL-37, BL-3550, BL-3525, SG-545, SG-555, SG-KP5, SG-775, FM-33, FG-38, PM-37, RG-33, RG50M38, RG50M545, RG50M555, RG50M775, RG50M45, PG16030, PG16050, PG22180, PG222238, PG25M370, PG28M385, PG28M395, PG32GR, PG32M555, PG36GR37, PG36545, PG36M555, PG36KP5, PG36BL36, PG42M40, PG42775, PG42M555, PG45ZY45, PG45775, PG45M555, PG45BL42, PG52ZY52, PG52ZY58, PG56ZY55, PG56ZY58, PG56BL57, PG80BL80, TR70, TR60, TG60ZY55, TT-38, TT-545, TT-555.TT-KP5, TT-45ZY, TT-YJ61, VF-545, VF-555, VF-KP5, VF-775, VF-YJ61, VFO-38, VFO-385, VFO-545, MG-545, MG-555, MG-KP5, MG-YJ61, WGM370, WGM385, WGM395, AF-38, AF-545, AF-555.AF-KP5, CE-38, CE-545, CF-555, GF-545, GF-555, GF-KP5, GF-775.GF-45ZY, GF-YJ61, RF-YJ61, TF-775, ZF-38, ZF-545, ZF-555.ZF-KP5, ZF-45ZY, ZF-YJ61, 49TYD-375-2, 59TYD-375-2A, 59TYD-375-2B, 60KTYD, 65KTYD, RS370.RS385, RS395, RS-545, RS-555, RS-775, 45ZY, 55ZY.2IK06GN, 3IK15GN, 4IK25GN, 5IK40GN, 60DM.70DM.80DM.90DM

Testing method:

1. With reference to IEC 62321-1:2013, review was performed for the samples disjoined from the submitted articles submitted by the Applicant
2. Tests were performed for the samples indicated by the photos in the report with test methods reference to IEC 62321-1:2013, Procedures for the determination of Levels of Six regulated Substances in Electrotechnical Products
 - (1) With reference to IEC 62321-3-1:2013, Screening by XRF spectorscop
 - (2) Wet Chemical Test Method
 - a. With reference to IEC 62321-5:2013, Determination of Lead &Cadmium by ICP-OES or AAS
 - b. With reference to IEC 62321-4:2013, Determination of Mercury by ICP-OES
 - c. With reference to IEC 62321-7-1:2015, Determination of Hexavalent Chromium by Spot or Colorimetic Methodcd
 - d. With reference to IEC 62321-6:2015, Derermination of PBBs and PBDEs by GC-MS
 - e. With reference to IEC 62321-8:2017, determination of DEHP, DIBP, DBP and BBP by GC-MS

Note: The test results are related only to the tested items. The report shall note be reproduced excpt in full without the written approval of the testing laboratory.

Part No.	Part Description	Restricted Substance	Results of EDXRF	Result of wet Chemical Testing (2mg/kg)	Conclusion on RoHS	Sample submitted/ Resubmitted Date
1	Metal Shell	Pb Cd Hg Cr(VI) Br DEHP BBP DBP DIBP	BL BL BL IN - - - - -	- - - Negative - - - - -	Comply Comply Comply Comply - - - - -	June 13, 2019
2	Wire core	Pb Cd Hg Cr(VI) Br DEHP BBP DBP DIBP	BL BL BL IN - - - - -	- - - Negative - - - - -	Comply Comply Comply Comply - - - - -	June 13, 2019
3	Baffle	Pb Cd Hg Cr(VI) Br DEHP BBP DBP DIBP	BL BL BL BL BL IN IN IN IN	- - - - - ND ND ND ND	Comply Comply Comply Comply Comply Comply Comply Comply Comply	June 13, 2019
4	Metal Shaft	Pb Cd Hg Cr(VI) Br DEHP BBP DBP DIBP	BL BL BL IN - - - - -	- - - Negative - - - - -	Comply Comply Comply Comply - - - - -	June 13, 2019

Part No.	Part Description	Restricted Substance	Results of EDXRF	Result of wet Chemical Testing (2mg/kg)	Conclusion on RoHS	Sample submitted/ Resubmitted Date
5	Grey metal	Pb	BL	-	Comply	June 13, 2019
		Cd	BL	-	Comply	
		Hg	BL	-	Comply	
		Cr(VI)	IN	Negative	Comply	
		Br	-	-	-	
		DEHP	-	-	-	
		BBP	-	-	-	
		DBP	-	-	-	
		DIBP	-	-	-	
6	Metal Gear	Pb	BL	-	Comply	June 13, 2019
		Cd	BL	-	Comply	
		Hg	BL	-	Comply	
		Cr(VI)	IN	Negative	Comply	
		Br	-	-	-	
		DEHP	-	-	-	
		BBP	-	-	-	
		DBP	-	-	-	
		DIBP	-	-	-	
7	Gear oil	Pb	BL	-	Comply	June 13, 2019
		Cd	BL	-	Comply	
		Hg	BL	-	Comply	
		Cr(VI)	BL	-	Comply	
		Br	BL	-	Comply	
		DEHP	IN	ND	Comply	
		BBP	IN	ND	Comply	
		DBP	IN	ND	Comply	
		DIBP	IN	ND	Comply	
8	Screw	Pb	BL	-	Comply	June 13, 2019
		Cd	BL	-	Comply	
		Hg	BL	-	Comply	
		Cr(VI)	IN	Negative	Comply	
		Br	-	-	-	
		DEHP	-	-	-	
		BBP	-	-	-	
		DBP	-	-	-	
		DIBP	-	-	-	

Remark:

- (1) (a) It is the result on total Br while test item on restricted is PBBs\PBDEs. It is the result on total Cr⁶⁺ while test item on restricted substances is Cr⁶⁺.
- (b) Results are obtained by EDXRF for primary screening ,and further chemical testing by ICP(for Cd, Pb, Hg), UV-VIS(for Cr⁶⁺) and GC\MS (for PBBs, PBDEs) is recommended to be performed , if the concentration exceeds the below warning value according to IEC62321(unit: mg/kg)

Element	Polymer	Metal	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	$BL \leq (300-3\sigma) < X$	--	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

(c)BL=Below Limit, OL=Over Limit, IN=Inconclusive, LOD=Limit of Detection,-=Not Regulated,

Negative = A negative test result indicated above positive observation was not found at the time of testing. When the spot-test showed a negative result, the boiling-water-extraction procedure shall be used to verify the result.

(#1) = As claimed by the declaration submitted by the client, the Lead content of the components is coming from the constituent of ceramic part of the electronic component only. According to EU RoHS Directive, Lead in electronic ceramic parts of this component can be exempted.

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

(2) (a) mg/kg=ppm=0.0001%, ND=Not Detected(<MDL)),

(b)Unit and Method Detection Limit(MDL)in wet chemical test

Test Items	Units	MDL	EU RoHS Limit
Pb	mg/kg	2	1000
Cd	mg/kg	2	100
Hg	mg/kg	2	1000
Cr(VI)	mg/kg	0.02 mg/50 cm ² (Metal)	1000
		2	
PBBs	mg/kg	5	1000
PBDEs	mg/kg	5	1000
DEHP	mg/kg	5	1000
BBP	mg/kg	5	1000
DBP	mg/kg	5	1000
DIBP	mg/kg	5	1000

(c) According to IEC 62321, result on Cr for metal sample is shown as Positive\Negative, Negative=Absence of Cr⁶⁺ coating, Positive=Presence of Cr⁶⁺ coating.

(d) ▲As declared by the client the materials fall into exemption items according to RoHS Directive 2011\65\EU recasting 2002\95\EC

Photograph of sample

POCE authenticate the photo on original report only

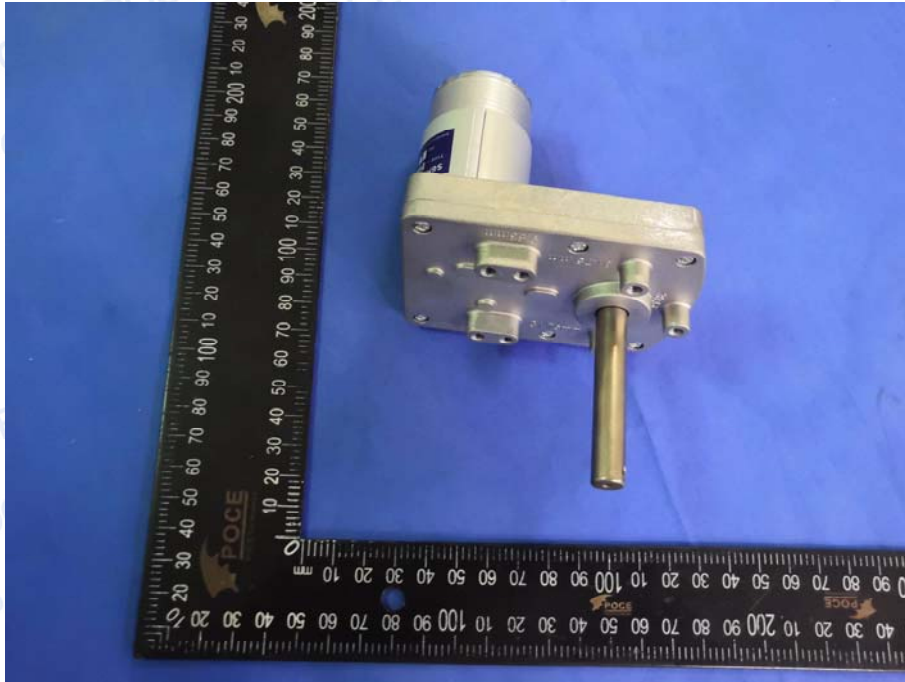


Photo 1



Photo 2

*****END OF REPORT*****