TEST REPORT

LAB NO. : (2419)297-0115
DATE : November 13, 2019
PAGE : 1 OF 9

Applicant:
ZHEJIANG GEYA ELECTRICAL CO., LTD
WENZHOU BRIDGE INDUSTRAL ZONE, BEIBAIXIANG TWON, YUEQING CITY, ZHEJIANG PROVINCE, CHINA 32560

Date of Submission: 2019-10-24,2019-11-11
Test Period: 2019-10-24 to 2019-11-13
BV EE Ref. No. GYB-19OCT19-003CTNBP-A0

Sample Description:	Sample(s) received is(are) stated to be: MCB		
Manufacturer:	/	Buyer:	/
Style No.(s):	GYM8 Series	PO No.:	/
Country of Origin:	/	Country of Destination:	/

Test Item(s): Details see attached page(s).

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION
Compliance Test - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendments	PASS
Phthalate Test – (EU) 2015/863 amending Annex II to Directive 2011/65/EU	PASS

Note: The composite testing was performed as per client's request.
The test conclusion was given based on the results of tested part.

REMARK
If there are questions or concerns on this report, please contact the following persons:

General enquiry and invoicing
Ms. Una Zhang
(0574) 87091260
Una.Zhang@cn.bureauveritas.com

Technical enquiry
Mr.Tony Feng
(0574) 87091104
Tony Feng@cn.bureauveritas.com

BUREAU VERITAS CONSUMER PRODUCTS SERVICES (SHANGHAI) CO.,LTD. NINGBO BRANCH

PREPARED BY : KIKY

Tony Feng

Bureau Veritas Consumer Products Services（Shanghai）Co., Ltd. Ningbo Branch
1/6/7/8F., Building B, No.66,Qingyi Road, Hi-Tech Zone, Ningbo, Zhejiang, China
Tel:86-574-87091333, Fax:86-574-87971038
Email: BVCPSNBEL.NB@cn. bureauveritas.com
website:cps.bureauveritas.com

This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute you unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Photo of the Submitted Sample

24192970115

TEST RESULT

Compliance Test - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendments

Test Method : See Appendix.

See Analytes and their corresponding Maximum Allowable Limit in Appendix

-			Result					
Parameter			**Lead (Pb)**	**Cadmium (Cd)**	**Mercury (Hg)**	**Chromium VI (Cr VI)**	**PBBs & PBDEs**	**Conclusion**
Unit			**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	-
Test Item	**Description**	**Location**	-	-	-	-	-	-
Tested components of GYM8 Series								
1	Golden metal pin	Parts	ND	ND	ND	ND	NA	PASS
2	Transparent plastic pasts	Housing	ND	ND	ND	ND	ND	PASS
3	Gray plastic bodice		ND	ND	ND	ND	ND	PASS
4	Beige white plastic bodice inside		ND	ND	ND	ND	ND	PASS
5	Gray plastic housing		ND	ND	ND	ND	ND	PASS
6	Silvery blue plate metal	Socket	ND	ND	ND	Negative*	NA	PASS
7	Silvery plate metal		<500	ND	ND	ND	NA	PASS
8	Silvery blue metal metal screw		ND	ND	ND	Negative*	NA	PASS
9	Silvery plate metal		<500	ND	ND	ND	NA	PASS
10	Silvery metal point (Second submission)		ND	11.7*	ND	ND	NA	PASS
11	Coppery plate metal		ND	ND	ND	ND	NA	PASS
12	Blue plastic knob	Housing	ND	ND	ND	ND	ND	PASS
13	Black plastic inside		ND	ND	ND	ND	ND*	PASS
14	Silvery metal pin	Inside	ND	ND	ND	Negative*	NA	PASS
15	Silvery metal noddle		ND	ND	ND	Negative*	NA	PASS
16	Silvery metal pin		<500	ND	ND	Negative*	NA	PASS
17	Silvery metal ring		ND	ND	ND	Negative*	NA	PASS
18	Silvery plate metal With number		ND	ND	ND	ND	NA	PASS
19	Silvery plate metal		ND	ND	ND	ND	NA	PASS
20	Coppery metal wire		ND	ND	ND	ND	NA	PASS
21	Coppery metal circle		ND	ND	ND	ND	NA	PASS
22	Silvery metal parts	Holder	ND	ND	ND	ND	NA	PASS
23	Silvery white metal base		ND	ND	ND	ND	NA	PASS
24	Silvery blue metal circle ring		ND	ND	ND	ND	NA	PASS
25	Beige white plastic switch	Switch	ND	ND	ND	ND	ND*	PASS

-			Result					
Parameter			Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs & PBDEs	Conclusion
Unit			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item	Description	Location	-	-	-	-	-	-
26	Beige white with green plastic switch		ND	ND	ND	ND	ND*	PASS
27	Beige white with red plastic switch	Switch	ND	ND	ND	ND	ND*	PASS
28	White plastic pipe inside	Inside	ND	ND	ND	ND	ND	PASS
29	Silvery blue metal pin		ND	ND	ND	ND	NA	PASS
30	Silvery metal pin		ND	ND	ND	ND	NA	PASS
31	Silvery metal spring		<500	ND	ND	Negative*	NA	PASS
32	Black metal screw		ND	ND	ND	ND	NA	PASS
33	Golden metal nut	Parts	<500	ND	ND	ND	NA	PASS
34	Silvery metal pin		ND	ND	ND	Negative*	NA	PASS
35	Silvery plate metal		<500	ND	ND	ND	NA	PASS
36	Red plastic bodice		ND	ND	ND	ND	ND	PASS

Note / Key :

ND = Not detected ">" = Greater than "<" = Less than
NR = Not requested mg/kg = milligram(s) per kilogram = ppm = part(s) per million
Detection Limit: See Appendix. NA = Not applicable EX= Exempted

Remark :

- The testing approach is listed in table of Appendix.
- * denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
- Only selected example(s) is (are) indicated on the photograph(s) in Comment.
- According to European Parliament and Council Directive 2011/65/EU, Article 5 "Adaptation of the Annexes to scientific and technical progress", exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.

TEST RESULT

Phthalate Test – (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : Reference to IEC 62321-8 :2017.

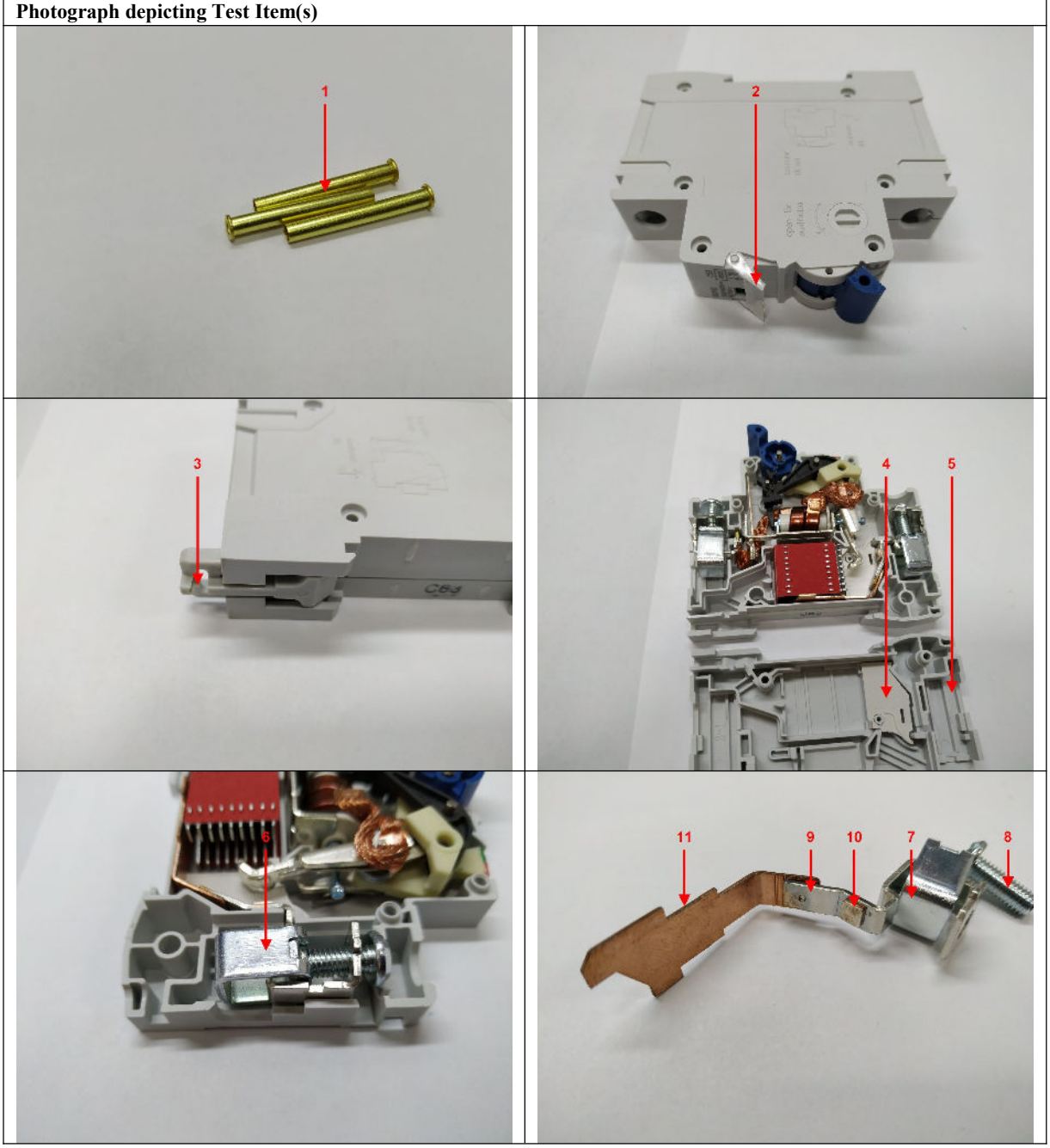
Maximum Allowable Limit : 0.1% (Each)

Parameter	CAS No.	Unit	MDL	Result			
				2+3+4	5+12+13	25+26+27	28+36
Dibutyl phthalate (DBP)	84-74-2	%	0.005	ND	ND	ND	ND
Butyl benzyl phthalate (BBP)	85-68-7	%	0.005	ND	ND	ND	ND
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	%	0.005	ND	ND	ND	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	0.005	ND	ND	ND	ND
Conclusion	-	-	-	PASS	PASS	PASS	PASS

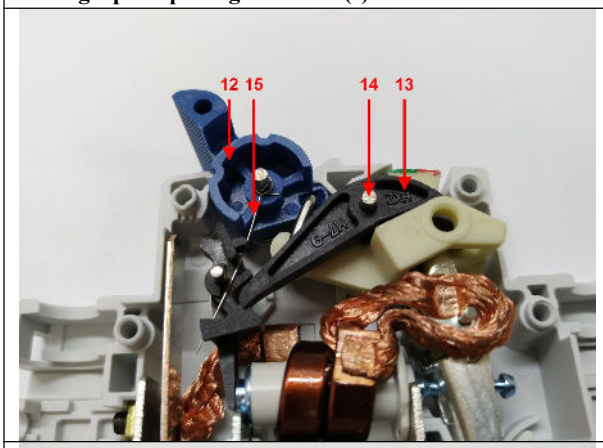
Note: mg/kg= milligram per kilogram % = percentage 1 mg/kg = 0.0001%
MDL = Method Detection Limit ND = Not Detected (< MDL) "-" = Not Regulated

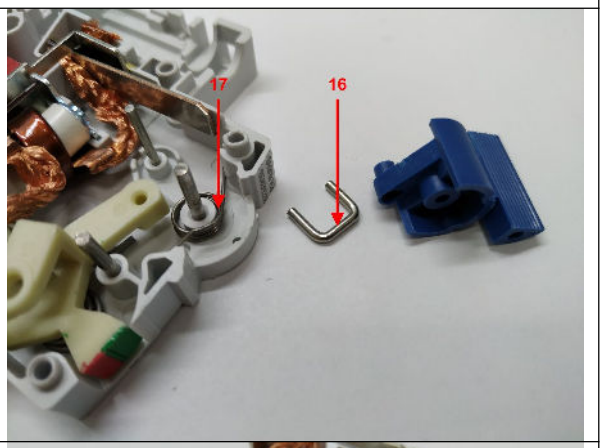
Comment :

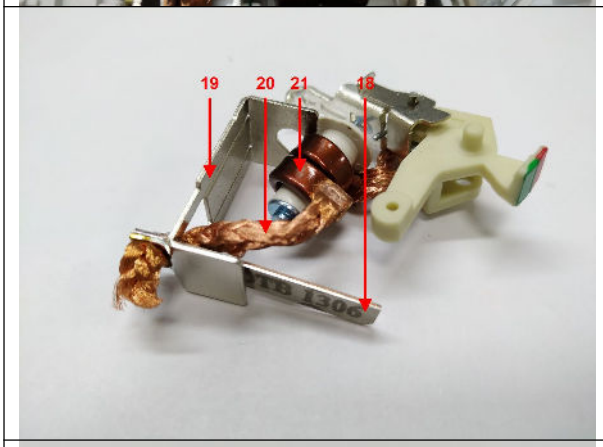
Photograph depicting Test Item(s)

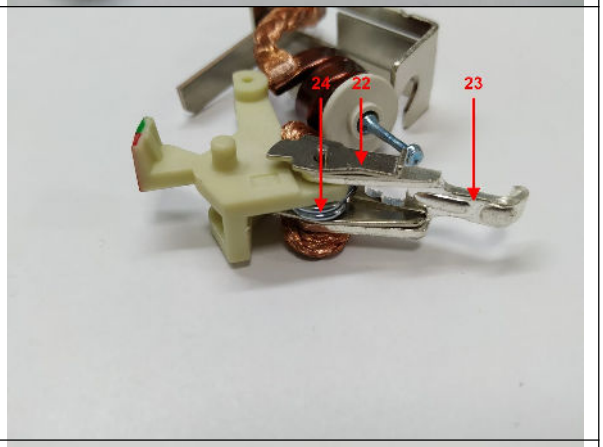


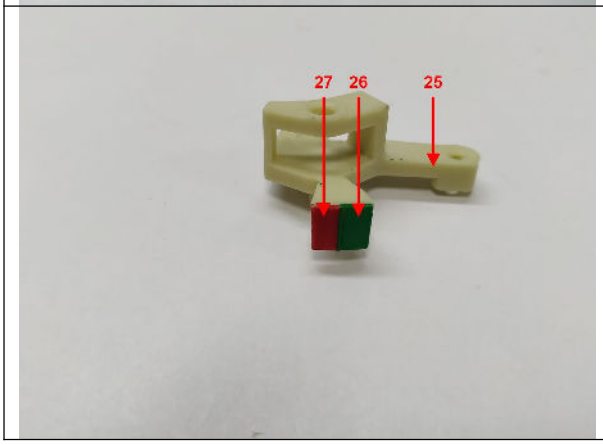
Photograph depicting Test Item(s)

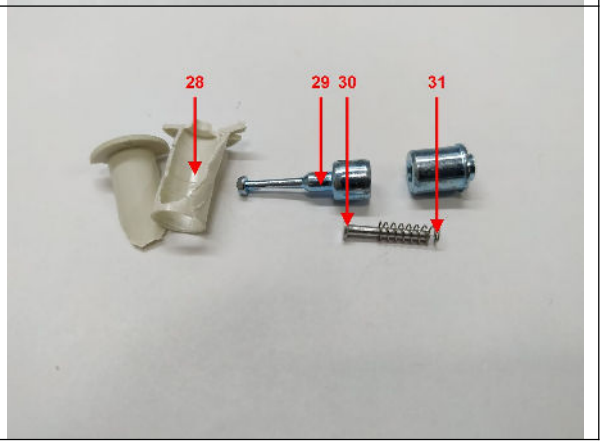




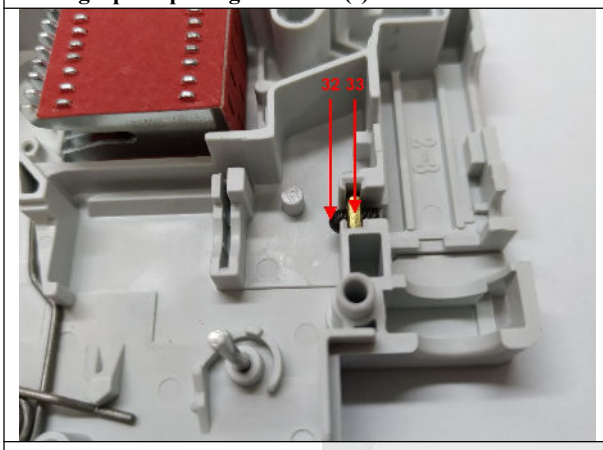


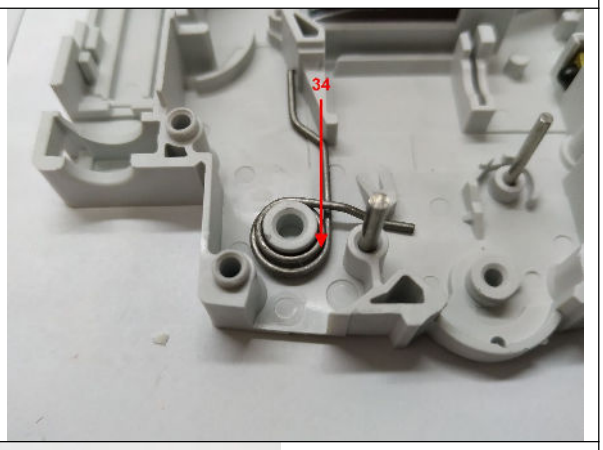


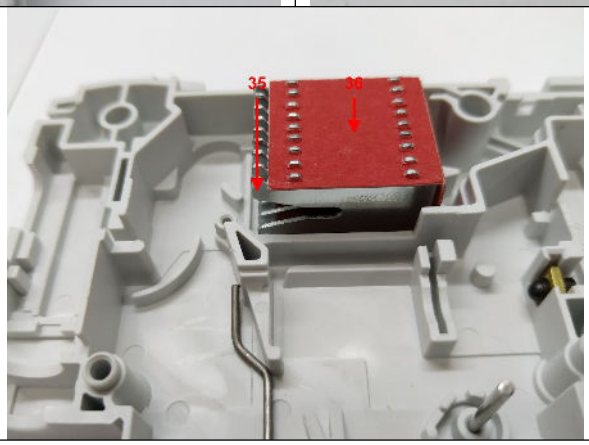




Photograph depicting Test Item(s)







END

APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

No.	Name of Analyte(s)	Detection Limit (mg/kg)				Maximum Allowable Limit (mg/kg)
		X-ray fluorescence (XRF)[a]			Wet Chemistry	
		Plastic	Metallic / glass / ceramic	Others		
1	Lead (Pb)	100	200	200	10[b]	1 000
2	Cadmium (Cd)	50	50	50	10[b]	100
3	Mercury (Hg)	100	200	200	10[c]	1 000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	3[g, h] / 10[d] / See [e, i]	1 000 / Negative[i]
6	Bromine (Br)	200	NA	200	NA	NA
7	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	NA	NA	NA	Each 50[f]	Sum 1 000
8	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)	NA	NA	NA	Each 50[f]	Sum 1 000

NA = Not applicable IEC = International Electrotechnical Commission

[a] Test method with reference to International Standard IEC 62321-3-1: 2013.

[b] Test method with reference to International Standard IEC 62321-5: 2013.

[c] Test method with reference to International Standard IEC 62321-4: 2013+A1:2017 CSV.

[d] Polymers and Electronics - Test method with reference to European Standard IEC 62321-7-2: 2017.

[e] Metal - Test method with reference to International Standard IEC 62321-7-1: 2015.

[f] Test method with reference to International Standard IEC 62321-6: 2015.

[g] Leather - Test method International Standard ISO 17075: 2007.

[h] Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2007.

[i] 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 Parliament and 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 Parliament and Council Directive 2011/65/EU, Article 4(1).

Testing Approach [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

The testing approach was with reference to the following document(s).

1 International Standards IEC 62321-1: 2013 and IEC 62321-2: 2013

2 "RoHS Enforcement Guidance Document Version 1" by EU RoHS Enforcement Authorities Informal Network. (May 2006)

3 "RoHS Regulations - Government Guidance Notes" by United Kingdom Department for Business Innovation & Skills. (February 2011)

4 "Final Report to RoHS substances (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium" by Belgium Federal Public Service Health, Food Chain Safety and Environment. (November 2005)