

# Test Report

Report No.: GNB190604131R1EN

Date: Aug. 01, 2019

Page 1 of 5

The following information was/were submitted and identified by/on behalf of the client:

Applicant : YUEQING DAIER ELECTRON CO., LTD.  
Address : No.1636 Liuhuang Road, Xirendang Industrial Zone, Liushi Town, Yueqing City, Zhejiang Province, China  
Sample Name : Push Button switch  
Sample Model : GQ19, LAS1-19F, LAS3-16F, GQ-12, GQ-16, GQ22, GQ25, GQ30  
Sample Receive Date : Jun. 04, 2019  
Sample Testing Period : Jun. 04, 2019 - Jun. 06, 2019  
Test Result Summary:

As requested by the applicant, for details refer to attached page(s).

TEST SAMPLE(S)	TEST ITEM(S)	TEST REQUESTED	CONCLUSION(S)
1, 2, 3, 4, 5, 6	Pb, Cd, Hg and CrVI content	RoHS Directive 2011/65/EU and its amendment (EU) 2015/863	PASS
7, 8, 9	Pb, Cd, Hg, CrVI, PBBs, PBDEs and Phthalates(DBP, BBP, DEHP, DIBP) content	RoHS Directive 2011/65/EU and its amendment (EU) 2015/863	PASS

# ORIGINAL

Authorized signature:

Lab Manager: Gavin Zhou



Aug. 01, 2019

This report is only responsible for the tested sample(s) from the client, the testing result(s) is used for scientific research, teaching or internal quality control. Without the writing agreement of the company, the client is not allowed to copy the report in part (entire copy is excepted).

# Test Report

Report No.: GNB190604131R1EN

Date: Aug. 01, 2019

Page 2 of 5

Test Result(s):

Test Sample Description:

Material No.	Material Description
<u>1</u>	Silvery metal ring
<u>2</u>	Silvery metal ring
<u>3</u>	Silvery metal part
<u>4</u>	Silvery metal part
<u>5</u>	Silvery metal electric contact
<u>6</u>	Silvery metal screw
<u>7</u>	Blue transparent plastic part
<u>8</u>	Transparent rubber part
<u>9</u>	Blue plastic ring

## RoHS(Pb, Cd, Hg, CrVI, PBBs, PBDEs and Phthalates(DBP, BBP, DEHP, DIBP) )

Test Method: Lead(Pb), Cadmium(Cd) –IEC 62321-5: 2013  
 Mercury(Hg) –IEC 62321-4: 2013  
 Chromium VI(CrVI): For Metal material –IEC 62321-7-1: 2015  
 For Polymer or Electronic material –IEC 62321-7-2: 2017  
 PBBs, PBDEs –IEC 62321-6: 2015  
 DBP, BBP, DEHP, DIBP –IEC 62321-8: 2017

Test item	Limit	Unit	RL	Result(s)		
				<u>01</u>	<u>02</u>	<u>03</u>
Lead(Pb)	1000	mg/kg	10	N.D.	21050*	151
Cadmium(Cd)	100	mg/kg	10	N.D.	35	N.D.
Mercury(Hg)	1000	mg/kg	10	N.D.	N.D.	N.D.
Chromium VI(CrVI)	--	µg/cm <sup>2</sup>	0.10	N.D.	N.D.	N.D.
<b>Conclusion(s)</b>				PASS	PASS	PASS

Test item	Limit	Unit	RL	Result(s)		
				<u>04</u>	<u>05</u>	<u>06</u>
Lead(Pb)	1000	mg/kg	10	26560*	22	N.D.
Cadmium(Cd)	100	mg/kg	10	20	8695*	N.D.
Mercury(Hg)	1000	mg/kg	10	N.D.	N.D.	N.D.
Chromium VI(CrVI)	--	µg/cm <sup>2</sup>	0.10	N.D.	N.D.	N.D.
<b>Conclusion(s)</b>				PASS	PASS	PASS

This report is only responsible for the tested sample(s) from the client, the testing result(s) is used for scientific research, teaching or internal quality control. Without the writing agreement of the company, the client is not allowed to copy the report in part (entire copy is excepted).

# Test Report

Report No.: GNB190604131R1EN

Date: Aug. 01, 2019

Page 3 of 5

Test item(s)	Limit	Unit	RL	Result(s)		
				07	08	09
Lead(Pb)	1000	mg/kg	10	N.D.	14	N.D.
Cadmium(Cd)	100	mg/kg	10	N.D.	N.D.	N.D.
Mercury(Hg)	1000	mg/kg	10	N.D.	N.D.	N.D.
Chromium VI(CrVI)	1000	mg/kg	50	N.D.	N.D.	N.D.
Dibutyl phthalate(DBP)	1000	mg/kg	50	N.D.	N.D.	N.D.
Butyl benzyl phthalate(BBP)	1000	mg/kg	50	N.D.	N.D.	N.D.
Di-2-ethylhexyl phthalate(DEHP)	1000	mg/kg	50	N.D.	N.D.	N.D.
Di-iso-butyl phthalate(DIBP)	1000	mg/kg	50	N.D.	N.D.	N.D.
Monobromobiphenyls	--	mg/kg	5	N.D.	N.D.	N.D.
Dibromobiphenyls	--	mg/kg	5	N.D.	N.D.	N.D.
Tribromobiphenyls	--	mg/kg	5	N.D.	N.D.	N.D.
Tetrabromobiphenyls	--	mg/kg	5	N.D.	N.D.	N.D.
Pentabromobiphenyls	--	mg/kg	5	N.D.	N.D.	N.D.
Hexabromobiphenyls	--	mg/kg	5	N.D.	N.D.	N.D.
Heptabromobiphenyls	--	mg/kg	5	N.D.	N.D.	N.D.
Octabromobiphenyls	--	mg/kg	5	N.D.	N.D.	N.D.
Nonabromobiphenyls	--	mg/kg	5	N.D.	N.D.	N.D.
Decabromobiphenyl	--	mg/kg	5	N.D.	N.D.	N.D.
Group PBBs	1000	mg/kg	--	N.D.	N.D.	N.D.
Monobromodiphenyl ethers	--	mg/kg	5	N.D.	N.D.	N.D.
Dibromodiphenyl ethers	--	mg/kg	5	N.D.	N.D.	N.D.
Tribromodiphenyl ethers	--	mg/kg	5	N.D.	N.D.	N.D.
Tetrabromodiphenyl ethers	--	mg/kg	5	N.D.	N.D.	N.D.
Pentabromodiphenyl ethers	--	mg/kg	5	N.D.	N.D.	N.D.
Hexabromodiphenyl ethers	--	mg/kg	5	N.D.	N.D.	N.D.
Heptabromodiphenyl ethers	--	mg/kg	5	N.D.	N.D.	N.D.
Octabromodiphenyl ethers	--	mg/kg	5	N.D.	N.D.	N.D.
Nonabromodiphenyl ethers	--	mg/kg	5	N.D.	N.D.	N.D.
Decabromodiphenyl ether	--	mg/kg	5	N.D.	N.D.	N.D.
Group PBDEs	1000	mg/kg	--	N.D.	N.D.	N.D.
<b>Conclusion(s)</b>				PASS	PASS	PASS

This report is only responsible for the tested sample(s) from the client, the testing result(s) is used for scientific research, teaching or internal quality control. Without the writing agreement of the company, the client is not allowed to copy the report in part (entire copy is excepted).

# Test Report

Report No.: GNB190604131R1EN

Date: Aug. 01, 2019

Page 4 of 5

- Notes:**
1. 1000mg/kg = 0.1%;
  2. RL = Reporting Limit;
  3. N.D. = Not detected (<RL);
  4. "\*" = Exemption item.

According to the declaration from the client, Lead(Pb) in No.2 and No.4 are exempted by EU RoHS Directive 2011/65/EU based on: Copper alloy containing up to 4% lead by weight; Cadmium (Cd) in No.5 is exempted by EU RoHS Directive 2011/65/EU based on: Cadmium and its compounds in electrical contacts.

5. According to IEC 62321-7-1: 2015, explanation of result on Cr(VI) for metal sample see below table.

Colorimetric result (Cr(VI) concentration)	Qualitative result
The sample solution is < the 0.10 ug/cm <sup>2</sup> equivalent comparison standard solution	The sample is negative for Cr(VI) – The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
The sample solution is ≥ the 0.10 ug/cm <sup>2</sup> and ≤ the 0.13 ug/cm <sup>2</sup> equivalent comparison standard solutions	The result is considered to be inconclusive – Unavoidable coating variations may influence the determination. Recommendation: if addition samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trials for the final determination.
The sample solution is > the 0.13 ug/cm <sup>2</sup> equivalent comparison standard solution	The sample is positive for Cr(VI) – The Cr(VI) concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

Negative = Absence of Cr(VI), Inconclusive = Maybe exist Cr(VI), Positive = Presence of Cr(VI).

ORIGINAL

**Remark:** This report replaces the report No. GNB190604131EN, Date: Jul. 29, 2019.

## Test Report

Report No.: GNB190604131R1EN

Date: Aug. 01, 2019

Page 5 of 5

### Sample Photo(s):



GIG authenticate the photo(s) on original report only

\*\*\*End of Report\*\*\*

# ORIGINAL

This report is only responsible for the tested sample(s) from the client, the testing result(s) is used for scientific research, teaching or internal quality control. Without the writing agreement of the company, the client is not allowed to copy the report in part (entire copy is excepted).