TEST REPORT

Applicant	:	ZHEJIANG ORYARWA COMMUNICTION EQUIPMENT CO., LTD.
Address	:	NO. 1, YONGHE 3 ROAD, INDUSTRIAL FUNCTION ZONE, CHENGDONG STREET, YUEQING CITY, ZHEJIANG PROVINCE, CHINA
Manufacturer	:	ZHEJIANG ORYARWA COMMUNICTION EQUIPMENT CO., LTD.
Address	:	NO. 1, YONGHE 3 ROAD, INDUSTRIAL FUNCTION ZONE, CHENGDONG STREET, YUEQING CITY, ZHEJIANG PROVINCE, CHINA

The following samples were submitted and identified by/on behalf of the client as:

Sample Description	:	PC
Model No.	:	/
Date of Sample Received	:	March 16, 2021
Sample Testing Date	:	March 16, 2021 to March 19, 2021

Test Requested	In accordance with the RoHS Directive 2011/65/EU and amend Directive (EU) 2015/863.
Test Method	- With reference to IEC 62321-2:2013, disassembly, disjointment and sample preparation were performed. - With reference to IEC 62321-3-1:2013, screening by EDXRF Spectroscopy. - With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES. - With reference to IEC 62321-5:2013, determination of Lead, Cadmium by ICP-OES. - With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS. - With reference to IEC 62321-7-2:2017 & IEC 62321-7-1:2015, determination of Hexavalent Chromium by spot test/Colorimetric using UV-Vis. - With reference to IEC 62321-8:2017, determination of Diisobutyl phthalate(DIBP), Dibutyl phthalate(DBP), Benzylbutyl phthalate(BBP) and Bis(2-ethylhexyl) phthalate (DEHP) by GC-MS.
Test Result	Please refer to next pages.
Test Conclusion	Based on the performed tests on the submitted samples, the results **comply with** the RoHS Directive 2011/65/EU and amend Directive (EU) 2015/863.

******** For Further Details, Please Refer to the Following Page(s) ********

Compiled by: Approved by:

Kevin Cheng / Project Engineer Fiona Zhang / Laboratory Superviser

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Sample Disassembly List		
Part No.	**Parts/Raw material name**	
	Component Name	**Part Description**
1	Casing parts	Green plastic parts
2		White plastic parts
3		Beige plastic parts
4		Blue plastic parts
5		Cyan plastic parts
6		Pink plastic parts

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Screening Test by XRF Spectroscopy										
Part No.	Part Description	Result (mg/kg)								
		Pb	screening	Cd	screening	Hg	screening	Cr	screening	Br	screening
1	Green plastic parts	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**
2	White plastic parts	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**
3	Beige plastic parts	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**
4	Blue plastic parts	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**
5	Cyan plastic parts	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**
6	Pink plastic parts	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**	N.D.	**BL**

Remark:

1. BL= Below Limit, OL= Over Limit, LOD = Limit of Detection, --- = Not Regulated, / = Not Tested
2. “IN” expresses the inconclusive region, and further chemical testing to confirm whether it complies with the requirement of RoHS Directive.
3. mg/kg= milligram per kilogram.
4. The XRF screening test for RoHS elements – the reading may be different to the actual content in the sample be of non-uniformity composition.
5. N.D. = Not Detected, less than the value of Method Detection Limit.
6. Results are obtained by EDXRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for Cr(VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	LOD < IN < (150+3σ) ≤ OL
Pb	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3) < IN < (1500+3σ) ≤ OL
Hg	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ L	BL ≤ (700-3σ) < IN < 1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Cr	BL ≤ (700-3σ) < IN	BL ≤ (700-3σ) <IN	BL ≤ (500-3σ) < IN
Br	BL ≤ (300-3σ) < IN	---	BL ≤ (250-3σ) < IN

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Confirmation Test by Wet Chemistry

Part No.	Part Description	Result (mg/kg)						Conclusion
		Pb	Cd	Hg	Cr(VI)	PBBs	PBDEs	
MDL		5	5	5	2^	5	5	
1	Green plastic parts	/	/	/	/	/	/	P
2	White plastic parts	/	/	/	/	/	/	P
3	Beige plastic parts	/	/	/	/	/	/	P
4	Blue plastic parts	/	/	/	/	/	/	P
5	Cyan plastic parts	/	/	/	/	/	/	P
6	Pink plastic parts	/	/	/	/	/	/	P

Limit requirements:

	Pb	Cd	Hg	Cr(VI)	PBBs	PBDEs
Maximum permissible Limit (mg/kg)	1000	100	1000	1000	1000	1000

Remark:

1. N.D. = Not Detected, less than the value of Method Detection Limit.
2. mg/kg= milligram per kilogram.
3. MDL= Method Detection Limit in wet chemical test, --- = Not Regulated, / = Not Tested.
4. P =The result complies with the limit requirement, F =The result does not comply with the limit requirement.
5. "^"= MDL of Cr(VI) for non-metal sample is 2mg/kg, MDL of Cr(VI) for metal sample is 0.02mg/kg(Sample extraction solution).
6. Result on Cr(VI) for metal sample is shown as Positive/Negative. Positive = Presence of Cr(VI); Negative = Absence of Cr(VI). (Positive indicates the presence of Cr^{6+} on the tested areas, the result be regarded as conflict with RoHS requirement. Negative indicates the absence of Cr^{6+} on the tested areas, the result be regarded as no conflict with RoHS requirement.)

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DIBP, DBP, BBP, DEHP

Test No.	Part No.	Result (mg/kg)				Conclusion
		DIBP	DBP	BBP	DEHP	
MDL		30	30	30	30	
T01	1+2+3	N.D.	N.D.	N.D.	N.D.	P
T02	4+5+6	N.D.	N.D.	N.D.	N.D.	P

Limit requirements:

	DIBP	DBP	BBP	DEHP
Maximum permissible Limit (mg/kg)	1000	1000	1000	1000

Remark:

1. DIBP= Diisobutyl phthalate, DBP= Dibutyl phthalate, BBP= Benzylbutyl phthalate, DEHP= Bis(2-ethylhexyl) phthalate
2. N.D. = Not Detected, less than the value of Method Detection Limit.
3. mg/kg= milligram per kilogram.
4. MDL= Method Detection Limit in wet chemical test.
5. P =The result complies with the limit requirement, F =The result does not comply with the limit requirement.

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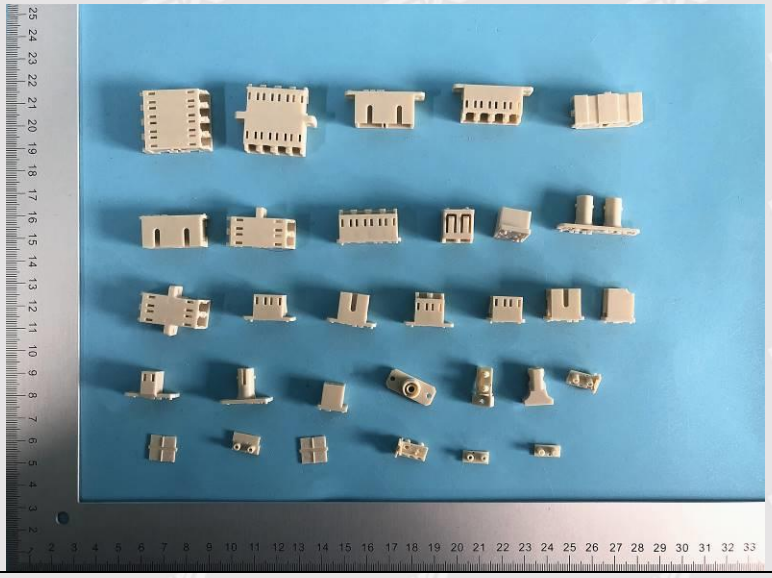
Test Part Photo



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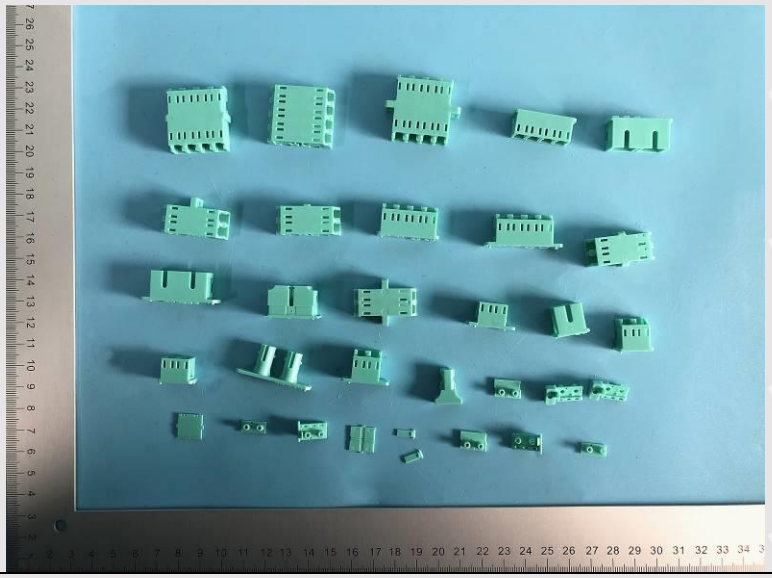

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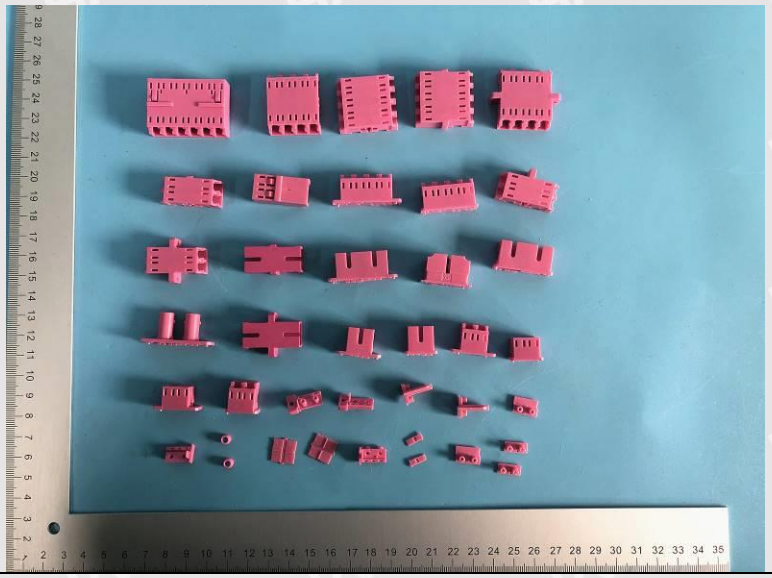

===== End of Test Report =====

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