GUANGDONG WONDER TESTING INTERNATIONAL CO., LTD.

TEST REPORT

Report No.: WDX24030681EN

Applicant: Memory Range Technology co., Ltd.

Address: Room 702, 7/F, SPA Centre, NO. 53-55 Lockhart Road, Wan Chai, Hong Kong.

Date: Apr. 25, 2024

Traceability

TEST REPORT

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The following information was (were) submitted and identified by client:

Sample Name: MFi Lightning to USB Type-C Braided Cable

Number of Sample: 1pc

Style of Sample: BYTM11

Sample Received Date: Apr. 12, 2024

Completed Date: Apr. 16, 2024

Test Result(s): Please refer to next page(s).

Test Requested and Conclusion(s):

No.	Test Sample	Standard(s) and Requirement(s)	Conclusion(s)	Signed by
1	Tested materials of submitted samples	RoHS 2.0 Directive 2011/65/EU and its Commission delegated Directive (EU) 2015/863	PASS	Andy zhu

Test Result(s):

RoHS - Lead (Pb)/Cadmium(Cd)/Mercury(Hg)/Hexavalent Chromium(Cr^{6+})/PBBs/PBDEs

Method: With reference to IEC 62321-3-1: 2013/ IEC 62321-4: 2013+AMD1:2017/ IEC 62321-5: 2013/ IEC 62321-6: 2015 Appendix A/ IEC 62321-7-1: 2015/ IEC 62321-7-2:2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

Material No.	Test Substance(s)	EDXRF Result(s)*	Chemical Result(s)# (mg/kg)	Conclusion(s)
1	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	BL	--	PASS
	PBDEs		--	PASS
2	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	BL	--	PASS
	PBDEs		--	PASS
3	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	BL	--	PASS
	PBDEs		--	PASS
4	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	--	--	NA
	PBDEs		--	NA
5	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr6+▼	IN	Negative	PASS
	PBBs	--	--	NA
	PBDEs		--	NA

Test Result(s):

RoHS - Lead (Pb)/Cadmium(Cd)/Mercury(Hg)/Hexavalent Chromium(Cr^{6+})/PBBs/PBDEs

Method: With reference to IEC 62321-3-1: 2013/ IEC 62321-4: 2013+AMD1:2017/ IEC 62321-5: 2013/ IEC 62321-6: 2015 Appendix A/ IEC 62321-7-1: 2015/ IEC 62321-7-2:2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

Material No.	Test Substance(s)	EDXRF Result(s)*	Chemical Result(s)# (mg/kg)	Conclusion(s)
6	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr6+▼	IN	Negative	PASS
	PBBs	--	--	NA
	PBDEs		--	NA
7	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	BL	--	PASS
	PBDEs		--	PASS
8	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	BL	--	PASS
	PBDEs		--	PASS
9	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	--	--	NA
	PBDEs		--	NA
10	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	--	--	NA
	PBDEs		--	NA

Test Result(s):

RoHS - Lead (Pb)/Cadmium(Cd)/Mercury(Hg)/Hexavalent Chromium(Cr^{6+})/PBBs/PBDEs

Method: With reference to IEC 62321-3-1: 2013/ IEC 62321-4: 2013+AMD1:2017/ IEC 62321-5: 2013/ IEC 62321-6: 2015 Appendix A/ IEC 62321-7-1: 2015/ IEC 62321-7-2:2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

Material No.	Test Substance(s)	EDXRF Result(s)*	Chemical Result(s)#（mg/kg）	Conclusion(s)
11	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	--	--	NA
	PBDEs		--	NA
12	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	BL	--	PASS
	PBDEs		--	PASS
13	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	--	--	NA
	PBDEs		--	NA
14	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	BL	--	PASS
	PBDEs		--	PASS
15	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	BL	--	PASS
	PBDEs		--	PASS

Test Result(s):

RoHS - Lead (Pb)/Cadmium(Cd)/Mercury(Hg)/Hexavalent Chromium(Cr^{6+})/PBBs/PBDEs

Method: With reference to IEC 62321-3-1: 2013/ IEC 62321-4: 2013+AMD1:2017/ IEC 62321-5: 2013/ IEC 62321-6: 2015 Appendix A/ IEC 62321-7-1: 2015/ IEC 62321-7-2:2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

Material No.	Test Substance(s)	EDXRF Result(s)*	Chemical Result(s)#（mg/kg）	Conclusion(s)
16	Pb	BL	--	PASS
	Cd	BL	--	PASS
	Hg	BL	--	PASS
	Cr^{6+}	BL	--	PASS
	PBBs	BL	--	PASS
	PBDEs		--	PASS

Note:

1. RL(Report Limit): 10mg/kg for Pb/ Cd/ Hg/ Cr^{6+}(Nonmetal material); 100mg/kg for PBBs & PBDEs.
2. LOQ(limit of quantification)(Cr^{6+})=0.10μg/cm^2.
3. "▼"=a. when Cr(VI) in a sample is detected above 0.13 μg/cm^2, the sample is considered to be **Positive** for Cr(VI).
   b. when Cr(VI) in a sample is detected below 0.10 μg/cm^2, the sample is considered to be **Negative** for Cr(VI).
   c. when Cr(VI) in a sample is detected between 0.10 μg/cm^2 and 0.13 μg/cm^2 , the result was **Inconclusive**.
4. "*" = It is the result on total Cr and Br while test substances are Cr^{6+} and PBBs & PBDEs.
5. "#" = Result are obtained by EDXRF for primary screening, if the result exceeds the below limit (BL), and further chemical testing.

Screening limits in mg/kg for regulated elements in various matrices

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

BL = Below Limit, OL = Over Limit, IN = Inconclusive, LOD = Limit of Detection

ROHS Limit

Test Item(s)	Pb	Cd	Hg	Cr^{6+}	PBBs	PBDEs
Limit（mg/kg）	1000	100	1000	1000	1000	1000

Test Result(s):

Phthalates

Method: With reference to IEC 62321-8: 2017, analyzed by Gas Chromatograph-Mass Spectrometry (GC-MS).

Test Substance(s)	DBP	BBP	DEHP	DIBP	Conclusion(s)
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
RL（mg/kg）	30	30	30	30	
Limit(s)（mg/kg）	1000	1000	1000	1000	
Material No.	Result(s)（mg/kg）				
1+3+7	60	ND	205	ND	PASS
8+12	ND	ND	ND	ND	PASS
14+15+16	ND	ND	ND	ND	PASS

Remark :

1. mg/kg = milligram per kilogram (ppm).
2. ND = Not Detected (< RL).
3. RL = Report Limit.
4. NA = Not Applicable.
5. "--" = Not Regulated.
6. "+" = This data is obtained from composite testing on more than one materials, it is possible that result obtained from individual testing on any one of the materials is substantially higher. Please be cautious when using this data for compliance evaluation.
7. As per client's request, only the appointed points and items have been tested.

Test Material List

Material No.	Description(s)	Location(s)
1	Transparent plastic with black fiber	Cable tie
2	Black textile	Wire sleeve
3	Black plastic	Interface wrap
4	Silver metal with black fiber	Interface shell
5	Silver metal	Type-C interface
6	Silver metal	Interface
7	Grey plastic	Inner of Type-C interface

Material No.	Description(s)	Location(s)
8	White plastic	Wire jacket
9	Silver metal	Wire jacket wrap
10	Silver metal foil	Wire jacket wrap
11	Silver metal	Wire core
12	White plastic	Wire jacket
13	Silver metal	Wire core
14	Red plastic	Wire jacket
15	Green plastic	Wire jacket
16	Blue plastic	Wire jacket

Photo(s) of Sample(s):

1-6

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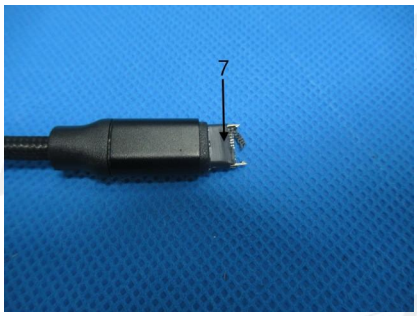

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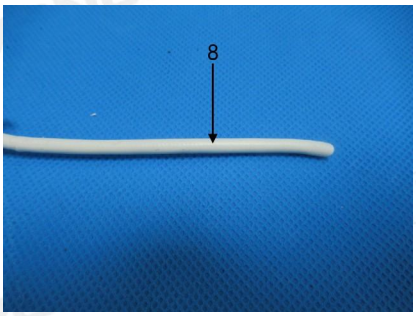

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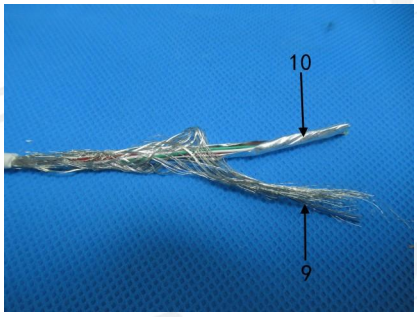
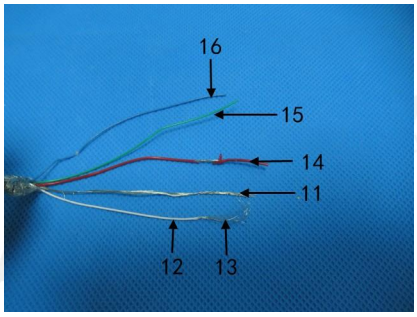


11-16



End of Report

Report Remark

1. The company guarantees the scientificity, impartiality and accuracy, is responsible for test data, and keeps confidential for the samples and technical data provided.
2. The information of the samples submitted for inspection is provided by applicant, and the company is not responsible for its authenticity or integrity.
3. The results shown in this report refer only to the sample(s) submitted.
4. This report is invalid without signature of approver, is invalid if not affixed with Authorized Stamp of Test and Paging Seal. The data/results in reports without an CMA stamp are not in the accredited scope of CMA cannot be as domestic social impartiality proof data. It can only used for research and development, teaching, internal quality control, and only for internal reference.
5. Any unauthorized reproduced in part, Any way of piracy, alteration forgery of this report is unlawful.
6. If there are any questions about the report, please contact us.
7. Any dispute of this report must be raised to the center within 10 workdays since the date of receipt, or it will not be accepted.
8. For samples with unstable performance, re-inspection will not be accepted.

CONTACT US

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