Report No.:HN20235798 Date:2024-01-02 Page 1 of 7

Applicant	:	NINGBO ISOLA SMART ENERGY CO., LTD
Address	:	4F,Building 037, No.336 Tongning Road, Jiangbei District, Ningbo City, Zhejiang Province
Product Description	:	Flexible Solar Panel
Sample Amount	:	/
Item No.	:	YH***W-*M（***=010-580，in increment of 5；*=5-40）
P.O. No.	:	/
Vendor	:	NINGBO ISOLA SMART ENERGY CO., LTD
Factory	:	NINGBO ISOLA SMART ENERGY CO., LTD
Supplier	:	NINGBO ISOLA SMART ENERGY CO., LTD
Supplier No.	:	/
Origin	:	Taizhou
Destination	:	Ningbo
Sample Received	:	15.12.2023;29.12.2023
Test Period	:	15.12.2023 - 02.01.2024

Above sample information was provided and confirmed by clients, HQTS is not responsible for its accuracy or completeness.

SUMMARY OF TEST RESULTS	
Test Requested	**CONCLUSION**
According to RoHS Directive 2011/65/EU with amendment Directive 2015/863/EU to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent chromium (Cr(VI)), Polybrominated biphenyls (PBBs), Polybrominated diphenylethers (PBDEs) , Phthalates (DBP, BBP, DEHP, DIBP) in the tested materials of the submitted sample(s).	PASS

Ningbo Helmsman Quality Testing Services Co., Ltd.
宁波恒实质量检测技术服务有限公司

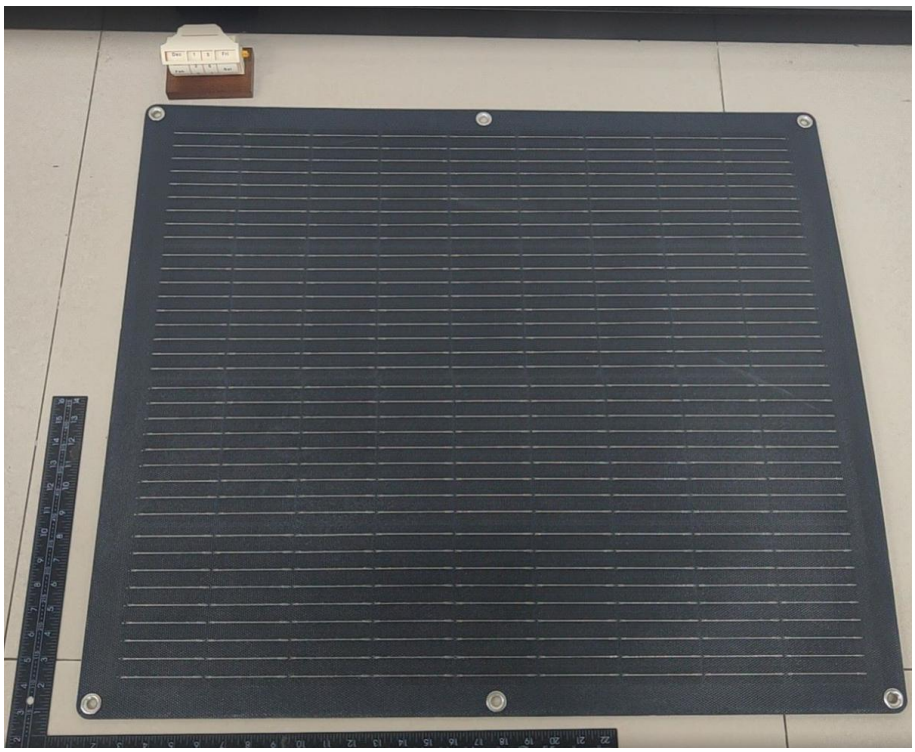
PREPARED BY :

Jerry

Lab Manager (Lance)

COMPANY: Ningbo Helmsman Quality Testing Services Co., Ltd.
ADDRESS: 818 Jinyuan Road, Yinzhou District, Ningbo City, Zhejiang, China
Tel: 86-574-83028482 Postcode: 315105 Email: Report Query (testing_quality@hqts.cn)
The results set forth in this report are only indicative or representative of the quality or characteristics of the test sample 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. You have 15 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. 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.

PRODUCT PHOTO





********** To be continued **********

COMPANY: Ningbo Helmsman Quality Testing Services Co., Ltd.
ADDRESS: 818 Jinyuan Road, Yinzhou District, Ningbo City, Zhejiang, China
Tel: 86-574-83028482 Postcode: 315105 Email: Report Query (testing_quality@hqts.cn)
The results set forth in this report are only indicative or representative of the quality or characteristics of the test sample 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. You have 15 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. 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.

TEST RESULT

Compliance Test - Heavy Metals, Flame Retardants Content - 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						
Item No.	Pb (mg/kg)	Cd (mg/kg)	Hg (mg/kg)	Cr(VI) (mg/kg)	PBBs (mg/kg)	PBDEs (mg/kg)	Conclusion
1	ND	ND	ND	ND	ND	ND	PASS
2	ND	ND	ND	ND	ND	ND	PASS
3	ND	ND	ND	ND	ND	ND	PASS
4	ND	ND	ND	ND	ND	ND	PASS
5	ND	ND	ND	ND	ND	ND	PASS
6	ND	ND	ND	ND	ND	ND	PASS
7	ND	ND	ND	ND	ND	ND	PASS
8	ND	ND	ND	ND	NA	NA	PASS
9	ND	ND	ND	ND	NA	NA	PASS
10	ND	ND	ND	ND	NA	NA	PASS
11	ND	ND	ND	ND	NA	NA	PASS
12	ND	ND	ND	ND	NA	NA	PASS
13^1	223	ND	ND	ND	NA	NA	PASS

COMPANY: Ningbo Helmsman Quality Testing Services Co., Ltd.
ADDRESS: 818 Jinyuan Road, Yinzhou District, Ningbo City, Zhejiang, China
Tel: 86-574-83028482 Postcode: 315105 Email: Report Query (testing_quality@hqts.cn)
The results set forth in this report are only indicative or representative of the quality or characteristics of the test sample 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. You have 15 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. 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.

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.

(^1) The sample was resubmitted on Dec.29, 2023

COMPANY: Ningbo Helmsman Quality Testing Services Co., Ltd.
ADDRESS: 818 Jinyuan Road, Yinzhou District, Ningbo City, Zhejiang, China
Tel: 86-574-83028482 Postcode: 315105 Email: Report Query (testing_quality@hqts.cn)
The results set forth in this report are only indicative or representative of the quality or characteristics of the test sample 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. You have 15 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. 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.

TEST RESULT

Compliance Test - 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)

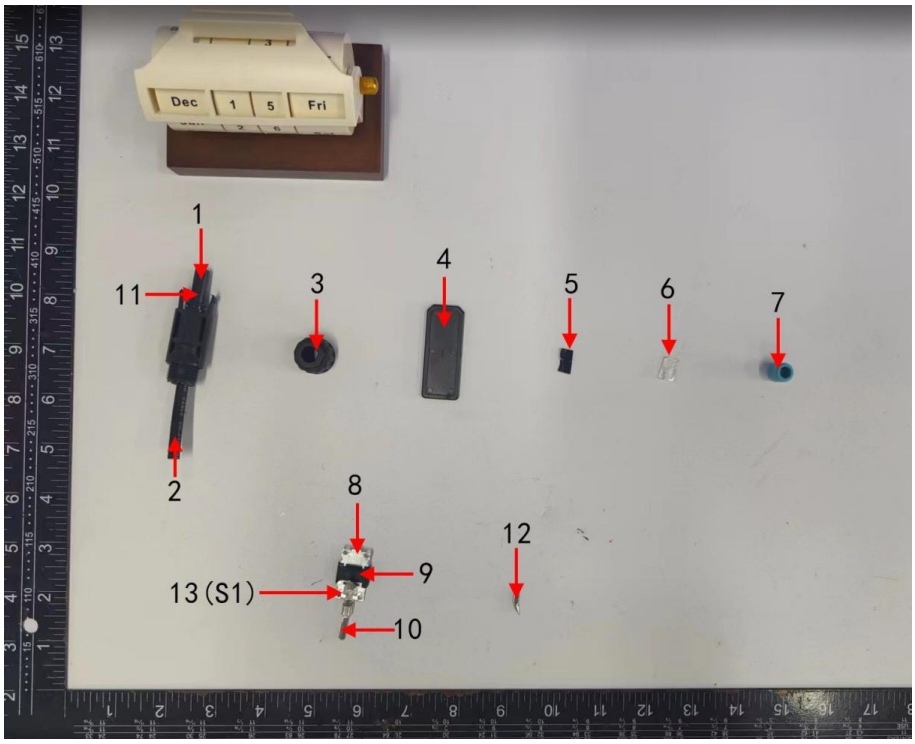
Item No.	Result (%)				Conclusion
	DBP	BBP	DEHP	DIBP	
1+2+3	ND	ND	ND	ND	PASS
4+5	ND	ND	0.008	ND	PASS
6+7	ND	ND	ND	ND	PASS

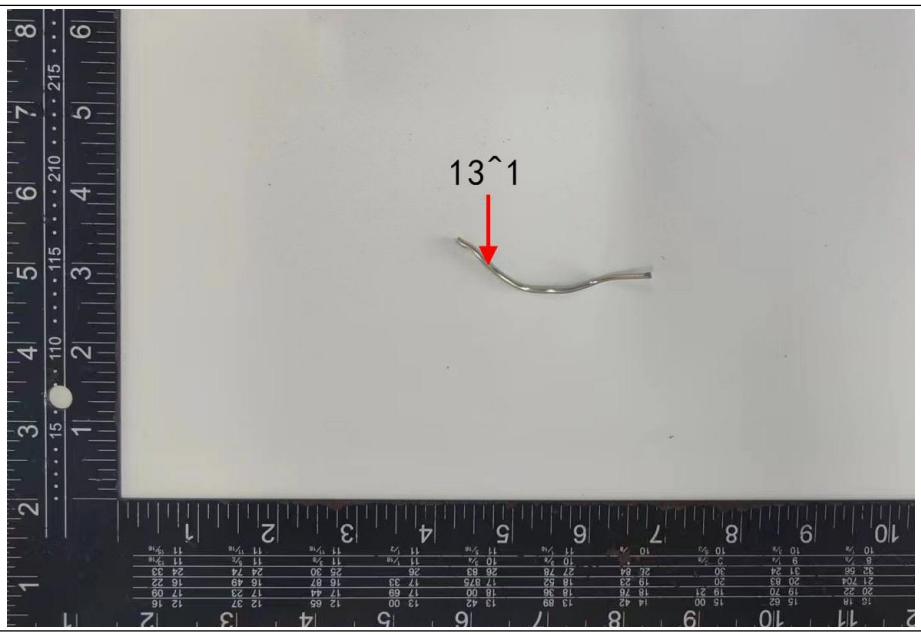
Note: mg/kg= milligram per kilogram % = percentage 1 mg/kg = 0.0001%
MDL = Method Detection Limit ND = Not Detected (< MDL) "-" = Not Regulated

COMPANY: Ningbo Helmsman Quality Testing Services Co., Ltd.
ADDRESS: 818 Jinyuan Road, Yinzhou District, Ningbo City, Zhejiang, China
Tel: 86-574-83028482 Postcode: 315105 Email: Report Query (testing_quality@hqts.cn)
The results set forth in this report are only indicative or representative of the quality or characteristics of the test sample 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. You have 15 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. 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.

Photograph(s) [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

Photograph depicting Test Item(s)





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

COMPANY: Ningbo Helmsman Quality Testing Services Co., Ltd.
ADDRESS: 818 Jinyuan Road, Yinzhou District, Ningbo City, Zhejiang, China
Tel: 86-574-83028482 Postcode: 315105 Email: Report Query (testing_quality@hqts.cn)
The results set forth in this report are only indicative or representative of the quality or characteristics of the test sample 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. You have 15 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. 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.

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	10[d] /See [e, g]	1 000 / Negative[g]
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+AMD1: 2017 CSV.

[d] Polymers and Electronics - Test method with reference to International 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] 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).

COMPANY: Ningbo Helmsman Quality Testing Services Co., Ltd.
ADDRESS: 818 Jinyuan Road, Yinzhou District, Ningbo City, Zhejiang, China
Tel: 86-574-83028482 Postcode: 315105 Email: Report Query (testing_quality@hqts.cn)
The results set forth in this report are only indicative or representative of the quality or characteristics of the test sample 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. You have 15 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. 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.