



# TEST REPORT

## ZHE JIANG JEC NEW ENERGY TECHNOLOGY CO.,LTD

**Technical Report: (3223)005-0240**

Date Received:

January 05,2023

February 06,2023

Page 1 of 9

ZHE JIANG JEC NEW ENERGY TECHNOLOGY CO.,LTD  
BUILDING 4, CETC INFORMATION INDUSTRIAL PARK OF  
JIAXING NO. 587 TAOYUAN ROAD, GAOZHAO STREET,  
XIUZHOU DISTRICT JIAXING CITY, ZHEJIANG PROVINCE,  
314000, P.R. CHINA

### SAMPLE INFORMATION:

<b>Sample Description:</b>	Solar Panel	<b>Style No.(s):</b>	NES144-7-550M/ NES108-7-410M/ CETC-100M
<b>Sample Status :</b>	INTACT	<b>PO No.:</b>	/
<b>Manufacturer:</b>	Zhe Jiang JEC New Energy Technology Co.,LTD	<b>Country of Origin:</b>	CHINA
<b>Buyer:</b>	/	<b>Country of Destination:</b>	OVERSEAS

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

### EXECUTIVE SUMMARY:

TEST REQUESTED	CONCLUSION
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	PASS
Compliance Test - Phthalate Test – (EU) 2015/863 amending Annex II to Directive 2011/65/EU	PASS

Note: Samples are provided by customers.  
The tested part of the sample was specified by client.  
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:

Customer service

Ms. Ashe Xi  
(0574) 87091115  
ashe.xi@bureauveritas.com

**BUREAU VERITAS TESTING TECHNICAL SERVICE (ZHEJIANG) CO.,LTD**

PREPARED BY :

Yolanda Xi

Yolanda Xi

Sean Wang

Sean Wang  
ASSISTANT MANAGER

Bureau Veritas Testing Technical Service  
(Zhejiang) Co.,Ltd  
1F west, 4F east, 7F east, 8F, Building B,  
No.66 Qinyu Road, Ningbo, Zhejiang, China  
Tel:86-574-87091333, Fax:86-574-  
87971036  
website: cps.bureauveritas.com

This report is governed by, and incorporates by reference, the Conditions of Testing 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. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. 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 your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

**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					Conclusion
Parameter			Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs & PBDEs	
Unit			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item	Description	Location	-	-	-	-	-	-
Tested components of NES144-7-550M/NES108-7-410M/CETC-100M								
1	Transparent glass	Housing	ND	ND	ND	ND	ND	PASS
2	Silvery metal	Housing	ND*	ND*	ND	ND	NA	PASS
3	White solar board	Housing	ND	ND	ND	ND	ND	PASS
4	Gold metal	Part	ND	ND	ND	ND	NA	PASS
5	Black plastic	Housing	ND	ND	ND	ND	ND	PASS
6	White rubber	Housing	ND	ND	ND	ND	ND	PASS
7	Black plastic Ribbon	Housing	ND	ND	ND	ND	ND	PASS
8	Black soft plastic wire jacket	Wire jacket	ND	ND	ND	ND	ND	PASS
9	Silver metal wire	Part	ND	ND	ND	ND	NA	PASS
10	Silver label	Housing	ND	ND	ND	ND	ND	PASS
11	Black soft plastic	Part	ND	ND	ND	ND	ND	PASS
12	Red rubber ring	Housing	ND	ND	ND	ND	ND	PASS
13	Silvery metal	Part	ND	ND	ND	ND	NA	PASS
14	Orange soft plastic	Part	ND	ND	ND	ND	ND	PASS
15	Black plastic	Housing	ND	ND	ND	ND	ND	PASS
16	Black rubber	Housing	ND	ND	ND	ND	ND	PASS
17	Black solar board	Housing	ND	ND	ND	ND	ND	PASS
18	Black metal	Housing	ND*	ND*	ND	ND	NA	PASS
19	White plastic Ribbon	Housing	ND	ND	ND	ND	ND	PASS

Note / Key :

ND = Not detected

NR = Not requested

Detection Limit: See Appendix.

">" = Greater than

mg/kg = milligram(s) per kilogram = ppm = part(s) per million

NA = Not applicable

"<" = Less than

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.

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

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

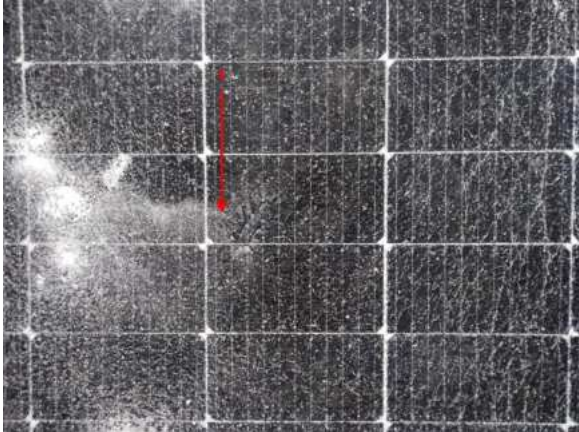


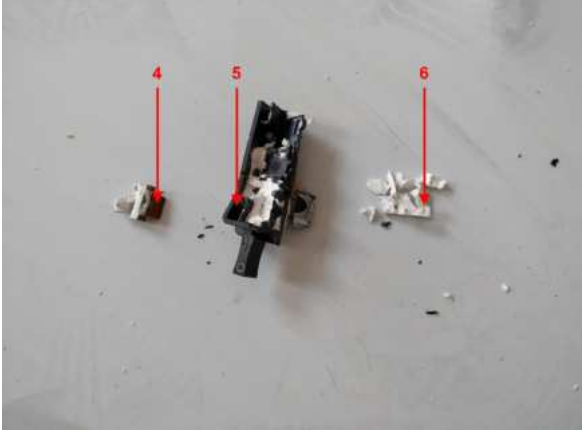
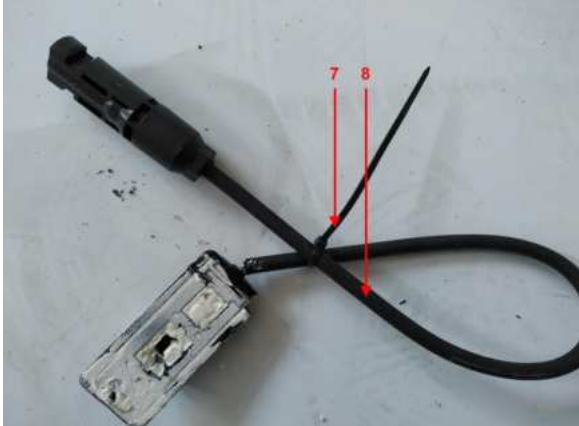

**Maximum Allowable Limit :** 0.1% (Each)

Parameter	CAS No.	Unit	MDL	Result			
				1+3	5	6+7+8	10+11
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
<b>Conclusion</b>	-	-	-	PASS	PASS	PASS	PASS

Parameter	CAS No.	Unit	MDL	Result		
				12	14+15+16	17+19
Dibutyl phthalate (DBP)	84-74-2	%	0.005	ND	ND	ND
Butyl benzyl phthalate (BBP)	85-68-7	%	0.005	ND	ND	ND
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	%	0.005	ND	ND	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	0.005	ND	ND	ND
<b>Conclusion</b>	-	-	-	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(s) [ Compliance Test for European Parliament and Council Directive 2011/65/EU ] : <b>Photograph depicting Test Item(s)</b>	
	
	
	







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 ] :**

Directive 2011/65/EU

No.	Name of Analyte(s)	Detection Limit (mg/kg)				Maximum Allowable Limit (mg/kg)
		X-ray fluorescence (XRF) <sup>[a]</sup>			Wet Chemistry	
		Plastic	Metallic / glass / ceramic	Others		
1	Lead (Pb)	100	200	200	10 <sup>[b]</sup>	1 000
2	Cadmium (Cd)	50	50	50	10 <sup>[b]</sup>	100
3	Mercury (Hg)	100	200	200	10 <sup>[c]</sup>	1 000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	3 <sup>[g, h]</sup> / 10 <sup>[d]</sup> / See <sup>[e, i]</sup>	1 000 / Negative <sup>[j]</sup>
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 <sup>[f]</sup>	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 <sup>[f]</sup>	Sum 1 000

NA = Not applicable IEC = International Electrotechnical Commission

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

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

<sup>[c]</sup> Test method with reference to International Standard IEC 62321-4: 2013+AMD1: 2017 CSV.

<sup>[d]</sup> Polymers and Electronics - Test method with reference to International Standard IEC 62321-7-2: 2017.

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

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

<sup>[g]</sup> Leather - Test method International Standard ISO 17075: 2017.

<sup>[h]</sup> Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2017.

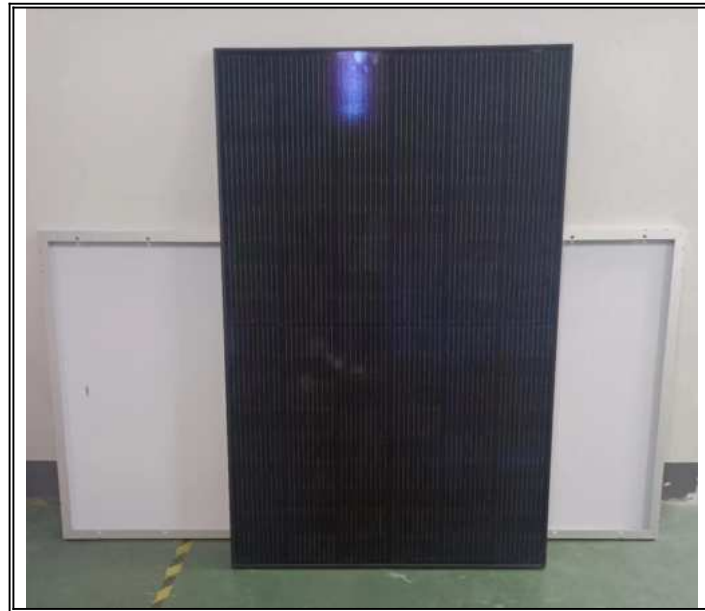
<sup>[i]</sup> Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1). While, 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)

SAMPLE REFERENCE PHOTO:







ZHE JIANG JEC NEW ENERGY TECHNOLOGY CO.,LTD

Technical Report: **(3223)005-0240**

February 06,2023

Page 9 of 9

### **Appendix** **Additional Model**

NES36-5-10M 至 110M

NES72-5-155M 至 210M

NES96-5-210M 至 300M

NES36-6-10M/P 至 205M/P

NES60-6-255M/P 至 350M/P

NES72-6-305M/MPVT/P/PPVT 至 420M/MPVT/P/PPVT

NES96-6-405M/P 至 550M/P

NES120-6-255M/P 至 360M/P

NES144-6-305M/P 至 430M/P

NES108-6-285M/MB 至 350M/MB

NES120-6-320M/MB 至 390M/MB

NES132-6-350M/MB 至 430M/MB

NES144-6-385M/MB/MPVT 至 470M/MB/MPVT

NES144-7-530M/MB/MPVT/MDG 至 575M/MB/MPVT/MDG

NES132-7-485M/MB/MDG 至 520M/MB/MDG

NES120-7-440M/MB/MDG 至 470M/MB/MDG

NES108-7-400M/MB/MDG 至 430M/MB/MDG

NES120-8-590M/MB/MDG 至 620M/MB/MDG

NES132-8-650M/MB/MDG 至 680M/MB/MDG

CETC-10M 至 420M

**Note:** The information in this Appendix is provided by client. Since the client was not able to provide the sample of additional Style, above additional Style(s) hasn't been tested, but only based on the guarantee letter provided by the client. Bureau Veritas-CPS takes no responsibility for any mistakes and the problems of product consistency caused by inaccurate and/or invalid information submitted by the client. The client will take the responsibility of all discrepancy and risk.

-- END OF REPORT --