



Dated: 2025-04-10

Applicant: Chint New Energy Technology Co.,Ltd.
Address: NO.1 Jisheng Road,Jianshan New Zone,Haining City,Zhejiang Province
Attn: Benny Ng
Sample Description: PV Model
Model No.: CHSM72N(DG)/F-BH
Additional Model: Refer to APPENDIX I
Sample Received Date: 2025-02-20
Test Period: 2025-03-26 ~ 2025-04-02
Test Location: TÜV SÜD Certification and Testing (China) Co., Ltd.
Shanghai Branch, SHA Chemical Lab.
Purpose of examination: Verification of RoHS (Restriction of Hazardous Substances) directive 2011/65/EU and its amendment (EU) 2015/863 on submitted samples
Test Results: Refer to following page(s)
Remark:

- The result relates only to the items tested.
- The reference model(s) was declared by client.
- The test sample(s) and item(s) was specified by client.
- The tested materials covered by the report were declared by the manufacturer to be used on the additional model.

TÜV SÜD Certification and Testing (China) Co., Ltd.
TÜV SÜD Group
Prepared by:

Reviewed by:



Mr. Jialong HAN



Mr. Feng ZHANG

Disclaimer Measurement Uncertainty: Unless otherwise agreed upon, Pass or Fail verdicts are given base on the measured values without any considerations of measurement uncertainties. Please note, every test method has a measurement uncertainty which has been evaluated by the laboratory according to ISO/IEC 17025 requirements. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as Pass nor as Fail.

Any use for advertising purposes must be granted in writing. This test report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4.

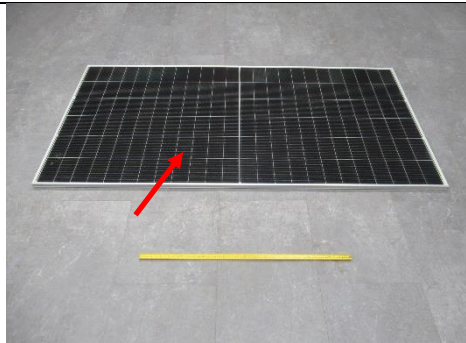
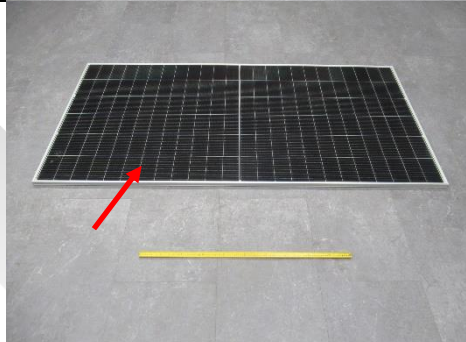
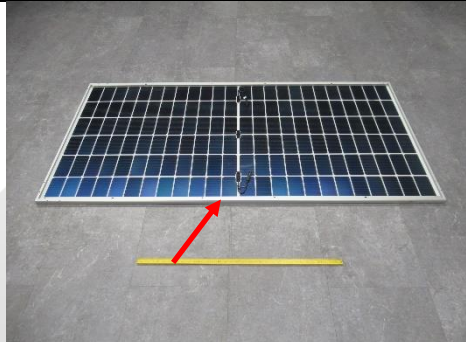


SUMMARY OF TEST RESULTS

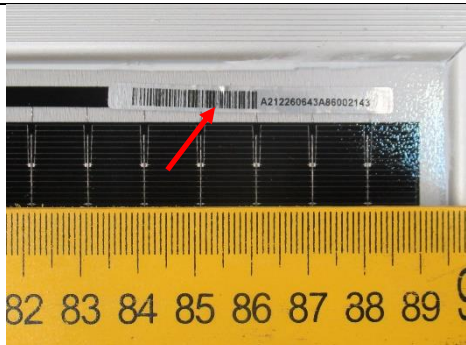
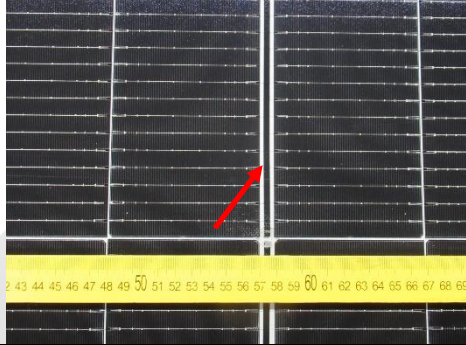
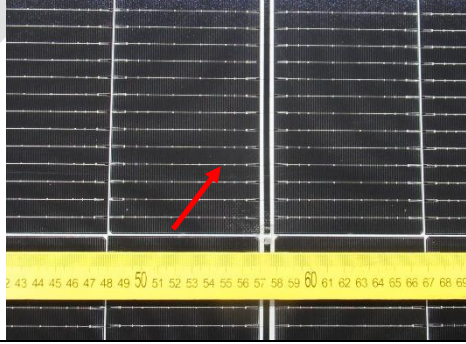
No.	Test Requested	Conclusion	Remarks
1.	Heavy Metal (Pb, Cd, Hg and Cr VI) Content	PASS	
2.	Polybrominated Biphenyls (PBBs) and Polybrominated Diphenyl Ethers (PBDEs) Content	PASS	
3.	Phthalates (DEHP, BBP, DBP and DIBP) Content	PASS	

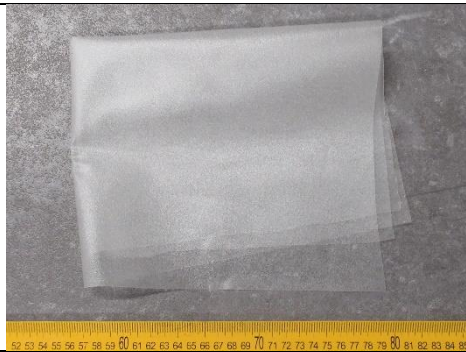


1. TESTED SUBJECT DESCRIPTION

Sample No.	Description (Material, colour)	Photograph/Location
01	Transparent glass	
02	Blue solar cell sheet	
03	Silvery aluminium alloy frame	
04	Silvery aluminium alloy hinge	

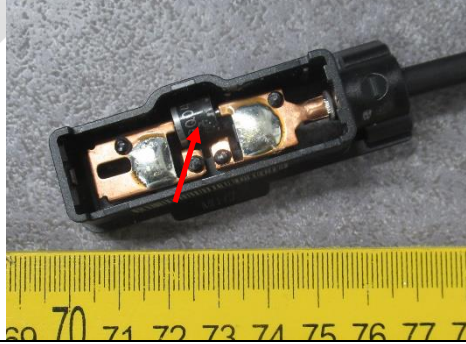
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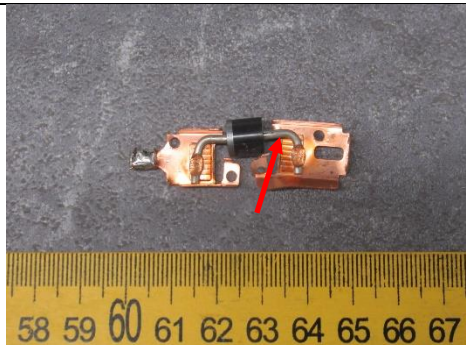
Sample No.	Description (Material, colour)	Photograph/Location
05	Silvery label	
06	Silvery label	
07	Silvery metal strip	
08	Silvery metal wire	

Sample No.	Description (Material, colour)	Photograph/Location
09	F406PS Transparent plastic inner film	
10	TF4 Transparent plastic inner film	
11	White coating	
12	White glue	



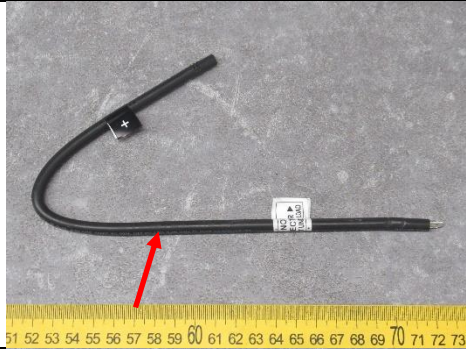
Sample No.	Description (Material, colour)	Photograph/Location
13	White glue	
14	White label	
15	Black label	
16	Black plastic cable tie	

Sample No.	Description (Material, colour)	Photograph/Location
17	Black plastic enclosure	
18	Golden copper alloy contact piece	
19	Silvery solder	
20	Black diode	

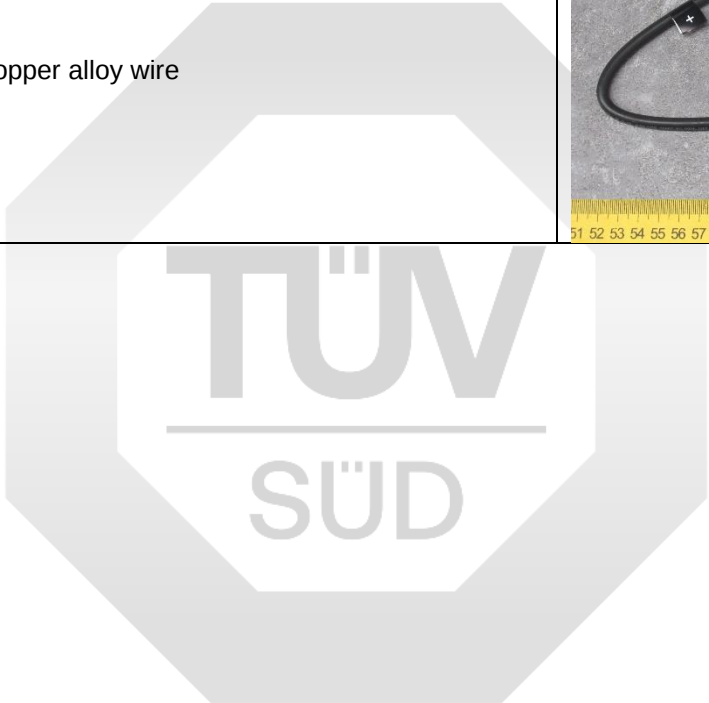
Sample No.	Description (Material, colour)	Photograph/Location
21	Silvery metal pin	
22	Black plastic plug enclosure	
23	Red plastic sealing ring	
24	Black plastic cable sleeve	

Sample No.	Description (Material, colour)	Photograph/Location
25	Black plastic sleeve	
26	Black plastic sleeve	
27	Silvery metal sleeve	
28	Silvery copper alloy contact piece	



Sample No.	Description (Material, colour)	Photograph/Location
29	Black plastic cable jacket	
30	Silvery copper alloy wire	

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2. TEST RESULT(S)**2.1 SCREENING TEST**

Test method: With reference to EN 62321-1:2013, EN 62321-2:2021, EN 62321-3-1:2014 and EN 62321-8:2017.

For Heavy Metals and Flame Retardants, analyzed by Energy Dispersive X-ray Fluorescence Spectrometer (XRF); for phthalates, analyzed by Gas Chromatography and Mass Spectrometer (GC-MS).

Sample No.	Heavy Metals and Flame Retardants					Phthalates			
	Cd	Pb	Hg	Cr	Br	DEHP	BBP	DBP	DIBP
01	BL	BL	BL	BL	NA	NA	NA	NA	NA
02	BL	BL	BL	BL	BL	BL	BL	BL	BL
03	BL	BL	BL	BL	NA	NA	NA	NA	NA
04	BL	BL	BL	BL	NA	NA	NA	NA	NA
05	BL	BL	BL	BL	BL	BL	BL	BL	BL
06	BL	BL	BL	BL	BL	BL	BL	BL	BL
07	BL	Inc. ^(a)	BL	BL	NA	NA	NA	NA	NA
08	BL	Inc. ^(a)	BL	BL	NA	NA	NA	NA	NA
09	BL	BL	BL	BL	BL	BL	BL	BL	BL
10	BL	BL	BL	BL	BL	BL	BL	BL	BL
11	BL	BL	BL	BL	BL	BL	BL	BL	BL
12	BL	BL	BL	BL	BL	BL	BL	BL	BL
13	BL	BL	BL	BL	BL	BL	BL	BL	BL
14	BL	BL	BL	BL	BL	BL	BL	BL	BL
15	BL	BL	BL	BL	BL	BL	BL	BL	BL
16	BL	BL	BL	BL	Inc. ^(a)	BL	BL	BL	BL
17	BL	BL	BL	BL	BL	BL	BL	BL	BL
18	BL	BL	BL	BL	NA	NA	NA	NA	NA
19	BL	BL	BL	BL	NA	NA	NA	NA	NA
20	BL	BL	BL	BL	Inc. ^(a)	BL	BL	BL	BL
21	BL	BL	BL	BL	NA	NA	NA	NA	NA
22	BL	BL	BL	BL	BL	BL	BL	BL	BL
23	BL	BL	BL	BL	BL	BL	BL	BL	BL

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Sample No.	Heavy Metals and Flame Retardants					Phthalates			
	Cd	Pb	Hg	Cr	Br	DEHP	BBP	DBP	DIBP
24	BL	BL	BL	BL	BL	BL	BL	BL	BL
25	BL	BL	BL	BL	BL	BL	BL	BL	BL
26	BL	BL	BL	BL	BL	BL	BL	BL	BL
27	BL	BL	BL	Inc. ^(a)	NA	NA	NA	NA	NA
28	BL	BL	BL	BL	NA	NA	NA	NA	NA
29	BL	BL	BL	BL	BL	BL	BL	BL	BL
30	BL	BL	BL	BL	NA	NA	NA	NA	NA

Remark:

- "BL" denotes below limit
- "OL" denotes over limit
- "Inc." denotes inconclusive
- "NA" denotes not applicable
- ^(a) denotes further confirmation test was conducted, results are listed in 2.2, 2.3.
- XRF screening limits in mg/kg for regulated elements in various matrices

ELEMENT	POLYMER		
	BL	INCONCLUSIVE	OL
Cd	$X \leq (70-3\sigma)$	$(70-3\sigma) < X < (130+3\sigma)$	$X \geq (130+3\sigma)$
Pb	$X \leq (700-3\sigma)$	$(700-3\sigma) < X < (1300+3\sigma)$	$X \geq (1300+3\sigma)$
Hg	$X \leq (700-3\sigma)$	$(700-3\sigma) < X < (1300+3\sigma)$	$X \geq (1300+3\sigma)$
Br	$X \leq (300-3\sigma)$	$X > (300-3\sigma)$	NA
Cr	$X \leq (700-3\sigma)$	$X > (700-3\sigma)$	NA

ELEMENT	METAL		
	BL	INCONCLUSIVE	OL
Cd	$X \leq (70-3\sigma)$	$(70-3\sigma) < X < (130+3\sigma)$	$X \geq (130+3\sigma)$
Pb	$X \leq (700-3\sigma)$	$(700-3\sigma) < X < (1300+3\sigma)$	$X \geq (1300+3\sigma)$
Hg	$X \leq (700-3\sigma)$	$(700-3\sigma) < X < (1300+3\sigma)$	$X \geq (1300+3\sigma)$
Cr	$X \leq (700-3\sigma)$	$X > (700-3\sigma)$	NA

ELEMENT	COMPLEX MATERIAL		
	BL	INCONCLUSIVE	OL
Cd	$X \leq (50-3\sigma)$	$(50-3\sigma) < X < (150+3\sigma)$	$X \geq (150+3\sigma)$
Pb	$X \leq (500-3\sigma)$	$(500-3\sigma) < X < (1500+3\sigma)$	$X \geq (1500+3\sigma)$
Hg	$X \leq (500-3\sigma)$	$(500-3\sigma) < X < (1500+3\sigma)$	$X \geq (1500+3\sigma)$
Br	$X \leq (250-3\sigma)$	$X > (250-3\sigma)$	NA
Cr	$X \leq (500-3\sigma)$	$X > (500-3\sigma)$	NA

- Screening limits in mg/kg for regulated phthalates in various matrices

PHthalates	BL	INCONCLUSIVE
DEHP	$X < 600$	$X \geq 600$
BBP	$X < 600$	$X \geq 600$
DBP	$X < 600$	$X \geq 600$
DIBP	$X < 600$	$X \geq 600$

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2.2 HEAVY METAL CONTENT

Test method: With reference to EN 62321-4:2014 /A1:2017, EN 62321-5:2014, EN 62321-7-1:2015 and EN 62321-7-2:2017, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) and Ultraviolet-visible spectrophotometer (UV-Vis).

[Reporting Limit: 2.0 mg/kg for Cadmium; 5.0 mg/kg or 0.10 µg/cm² for Hexavalent Chromium, 10.0 mg/kg for Lead and Mercury.]

Sample No.	Result(s)				
	Total Cadmium	Hexavalent Chromium	Hexavalent Chromium	Total Mercury	Total Lead
07	--	--	--	--	108
08	--	--	--	--	79
27	--	/	Negative	--	--
Unit	mg/kg	mg/kg	µg/cm²	mg/kg	mg/kg
RoHS Requirement	100	1000	Negative [#]	1000	1000

Remark:

- "mg/kg" denotes milligram per kilogram
- "µg/cm²" denotes micrograms per square centimeter
- "<" denotes less than
- "Positive" denotes the absorbance value of sample is > 0.13 µg/cm², the sample is considered to be positive for Hexavalent Chromium.
- "Inconclusive" denotes the absorbance value of sample is ≥ 0.10 µg/cm² and ≤ 0.13 µg/cm², the sample is considered to be Inconclusive for Hexavalent Chromium.
- "Negative" denotes the absorbance value of sample is < 0.10 µg/cm², the sample is considered to be negative for Hexavalent Chromium.
- "[#]" According to DIRECTIVE 2011/65/EU Article 4(1) and Annex II. While, positive means the presence of CrVI 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) and Annex II.
- "--" denotes tested by XRF, result is listed in 2.1.

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2.3 POLYBROMINATED BIPHENYLS (PBBs) AND POLYBROMINATED DIPHENYL ETHERS (PBDEs) CONTENT

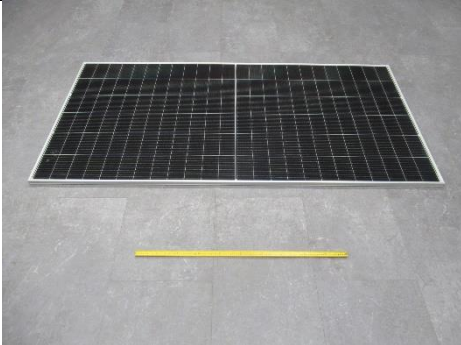
Test Method: With reference to EN 62321-6:2015, extracted by toluene and analyzed by Gas Chromatography and Mass Spectrometer (GC-MS). [Reporting Limit : 5 mg/kg]

Test Item		Result(s) [mg/kg]		RoHS Requirement [mg/kg]
		16	20	
PBBs	Monobromobiphenyl	<5	<5	-
	Dibromobiphenyl	<5	<5	-
	Tribromobiphenyl	<5	<5	-
	Tetrabromobiphenyl	<5	<5	-
	Pentabromobiphenyl	<5	<5	-
	Hexabromobiphenyl	<5	<5	-
	Heptabromobiphenyl	<5	<5	-
	Octabromobiphenyl	<5	<5	-
	Nonabromobiphenyl	<5	<5	-
	Decabromobiphenyl	<5	<5	-
	Sum of detected PBBs	<50	<50	1000
PBDEs	Monobromodiphenyl ether	<5	<5	-
	Dibromodiphenyl ether	<5	<5	-
	Tribromodiphenyl ether	<5	<5	-
	Tetrabromodiphenyl ether	<5	<5	-
	Pentabromodiphenyl ether	<5	<5	-
	Hexabromodiphenyl ether	<5	<5	-
	Heptabromodiphenyl ether	<5	<5	-
	Octabromodiphenyl ether	<5	<5	-
	Nonabromodiphenyl ether	48	<5	-
	Decabromodiphenyl ether	71	<5	-
	Sum of detected PBDEs	119	<50	1000

Remark:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than

APPENDIX I: Product Model

Product: PV Model	Test model: CHSM72N(DG)/F-BH
	
Additional model: CHSM54M(DG)/F-BH, CHSM54M(DG)/F-BH, CHSM66M(DG)/F-BH, CHSM72M(DG)/F-BH, CHSM78M(DG)/F-BH, CHSM48M(DGT)/F-BH, CHSM54M(DGT)/F-BH, CHSM72M(DGT)/F-BH, CHSM78M(DGT)/F-BH, CHSM54M(DG)/F-HC, CHSM60M(DG)/F-HC, CHSM72M(DG)/F-HC, CHSM78M(DG)/F-HC, CHSM54RN(DGT)(BLH)/F-BH, CHSM54N(DGT)(BLH)/F-BH, CHSM54RN(DG)(BLH)/F-BH, CHSM54N(DG)(BLH)/F-BH, CHSM54RNs(DGT)(BLH)/F-BH, CHSM54RNs(DG)(BLH)/F-BH, CHSM54RN(DG)(BLH)/F-HC, CHSM54N(DG)(BLH)/F-HC, CHSM48N(DGT)/F-BH, CHSM48RN(DGT)/F-BH, CHSM54RN(DGT)/F-BH, CHSM54N(DGT)/F-BH, CHSM54RN(DG)/F-BH, CHSM54N(DG)/F-BH, CHSM60N(DG)/F-BH, CHSM60RN(DG)/F-BH, CHSM72RN(DG)/F-BH, CHSM72N(DG)/F-BH, CHSM72RN(DGT)/F-BH, CHSM72N(DGT)/F-BH, CHSM78N(DGT)/F-BH, CHSM78N(DG)/F-BH, CHSM66RN(DG)/F-BH, CHSM54RNs(DG)/F-BH, CHSM54RN(DG)/F-HC, CHSM54N(DG)/F-HC, CHSM60N(DG)/F-HC, CHSM60RN(DG)/F-HC, CHSM72RN(DG)/F-HC, CHSM72N(DG)/F-HC, CHSM78N(DG)/F-HC, CHSM54RNs(DG)/F-HC, CHSM66RN(DG)/F-HC, CHSM48RN(DG)(BLH)/F-BH, CHSM48RN(DGT)(BLH)/F-BH, CHSM60RNs(DG)(BLH)/F-BH, CHSM60RNs(DGT)(BLH)/F-BH, CHSM78RN(DG)/F-BH, CHSM48RN(DG)/F-BH, CHSM60RNs(DG)/F-BH, CHSM78N(DG)/F-BH-IA, CHSM72N(DG)/F-BH-IA, CHSM66RN(DG)/F-BH-IA, CHSM54RNs(DGT)/F-BH, CHSM60N(DGT)/F-BH, CHSM66N(DG)/F-BH	

Remark:

- The report covers material testing on specified samples.
- The tested materials covered by the report were declared by the manufacturer to be used on the additional model.

--END OF REPORT--