



TEST REPORT

Page 1 of 8

REPORT No.: CTB25051203101C01

Applicant: Beijing Huimao Cooling Equipment Co.,Ltd.
Address: Room No.5112,Floor 5,Building 8,No.9 Guangping Street,Economic Development Zone,Da Xing District,Beijing,China

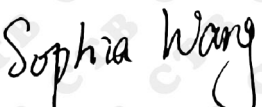
Manufacturer: Beijing Huimao Cooling Equipment Co.,Ltd.
Address: Room No.5112,Floor 5,Building 8,No.9 Guangping Street,Economic Development Zone,Da Xing District,Beijing,China

The following samples were submitted and identified on behalf of the clients as:

Sample name: Thermoelectric cooling module
Brand: /
Model(s): TEC1-12706T125, Series models see next page
Batch No.: /
Sample received date: May 16,2025
Testing period: May 16,2025 to May 23,2025
Test Method: Please refer to next page(s).
Test Result: Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
European Directive 2011/65/EU and amendment (EU) 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	PASS

Tested By: 	Check By: 	Approve By: 
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Date: May 26, 2025



TEST REPORT

Page 2 of 8

REPORT No.: CTB25051203101C01

Series models as below:

Model(s)	: TES1-071035TT,TEC1-06308T125,TEC1-06312T125,TEC1-07912T125, TES1-031025T125,TEC1-12714T200,TEC1-12708T250,TEC1-12710T250, TES1-03606T125,TES1-1102LT125,TEC1-07104T150,TEC1-05906T200, TES1-11709T125,TES1-11707T125,TES1-13806T125,TES1-12106T125, TEC1-11906T200,TES1-03105T125 ,TEC1-11908T125CH,TES1-04303RHT125, TES1-03604T125,TEC1-12708T250,TEC2-03103T150,TEC2-03104T150, TEC1-07107T125 center hole,TEC1-06908T125,TES1-24104T125, TEC1-12704T125 with center hole,TEC1-07112T150,TES1-06305T125, TEC1-04712T150,TEC1-07110T125,TEC1-12730T125,TEC1-12708T125 with center hole, TEC1-19913T125,TEC1-19908T200,TEC1-19924T250,TEC1-12724T125, TEC1-19911T125,TEC1-07104T125,TEC1-28720T200,TEC2-25407T125, TES1-03103T125,TEC1-24118T200, TES1-3202T125,TEC1-12708T125, TEC1-12704T125,TES1-06304T125,TEC1-12712T125,TES1-04702T125, TEC1-07106T125,TES1-04903T125,TES1-12703T125,TEC1-07103T125, TEC2-19709T125,TES1-071035T125,TES1-01201A ,TEC1-12703T125, TEC1-12705T125,TEC1-12708T125,TEC1-12709T125,TEC1-12715T125, TES1-12702T125,TES1-12704T125,TES1-12705125,TEC1-07109T125, TEC1-04715T125,TEC2-25406T125,TEC2-25408T125,TEC2-25405T125, TEC3-22903T125,TEC1-09515T125,TES1-06302T125 ,TEC1-12715T150, TEC1-12706T200,TEC1-12706T150,TES1-1702T125,TES1-3101T125, TEG1-127-2.8-1.6T250HP,TEC4-24606T125TEC1-16108T125,TEC1-16115T125, TEC1-12724T125,TEC1-19928T125
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Test Method:
A. Screening test by XRF spectroscopy

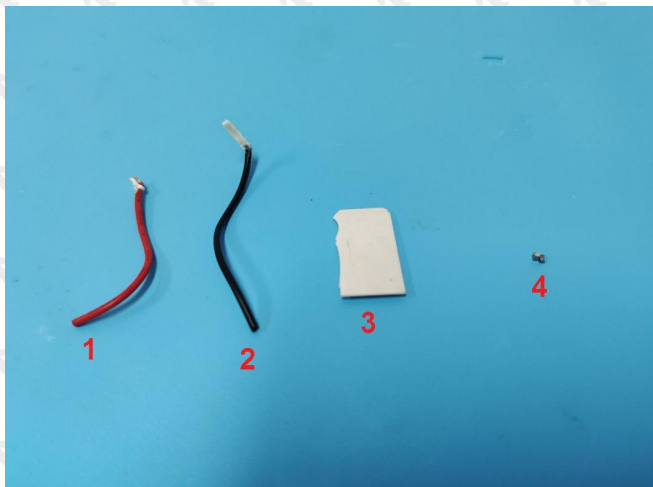
XRF screening limits for regulated elements according to IEC 62321-3-1:2013

Element	Screening limit / mg/kg		MDL	
	Polymers and metals	Composite material	Polymers	Other material
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma)$ $\leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma)$ $\leq OL$	10mg/kg	50mg/kg
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma)$ $\leq OL$	$BL \leq (50-3\sigma) < X < (150+3\sigma)$ $\leq OL$	10mg/kg	50mg/kg
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma)$ $\leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma)$ $\leq OL$	10mg/kg	50mg/kg
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$	10mg/kg	50mg/kg
Br	$BL \leq (300-3\sigma) < X$ (non-metal only)	$BL \leq (250-3\sigma) < X$	10mg/kg	50mg/kg

B. Chemical Test

Test Item(s)	Test Method	Analysis Equipment(s)	MDL	Limit
Lead (Pb)	IEC 62321-5:2013	ICP-OES	2 mg/kg	1000mg/kg
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES	2 mg/kg	100mg/kg
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	2 mg/kg	1000mg/kg
Hexavalent Chromium Cr(VI)	IEC 62321-7-1:2015	UV-VIS	- -	1000mg/kg
	IEC 62321-7-2:2017		8 mg/kg	1000mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS	50mg/kg	1000mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS	50mg/kg	1000mg/kg
Phthalate	IEC 62321-8:2017	GC-MS	50mg/kg	1000mg/kg

Tested material list

No.	Description	Photo(s) of tested material
1	Red plastic wire skin	
2	Black plastic wire skin	
3	White ceramic	
4	Grey plastic	

Note: test samples were specified by applicant.

Test Result(s):

No.	XRF screening Result					Chemical confirm Result (mg/kg)	Remark	Conclusion
	Pb	Cd	Hg	Cr	Br			
1	BL	BL	BL	BL	BL	---	---	PASS
2	BL	BL	BL	BL	BL	---	---	PASS
3	BL	BL	BL	BL	BL	---	---	PASS
4	BL	BL	BL	BL	BL	---	---	PASS

Test Item(s)	Dibutyl Phthalate (DBP) (mg/kg)	Benzylbutyl Phthalate (BBP) (mg/kg)	Bis-(2-ethylhexyl) Phthalate (DEHP) (mg/kg)	Diisobutyl phthalate (DIBP) (mg/kg)	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit	1000	1000	1000	1000	
No.	Result (mg/kg)				
1+2	N.D	N.D	N.D	N.D	PASS
3	N.D	N.D	N.D	N.D	PASS
4	N.D	N.D	N.D	N.D	PASS



TEST REPORT

Page 5 of 8

REPORT No.: CTB25051203101C01

Remark:

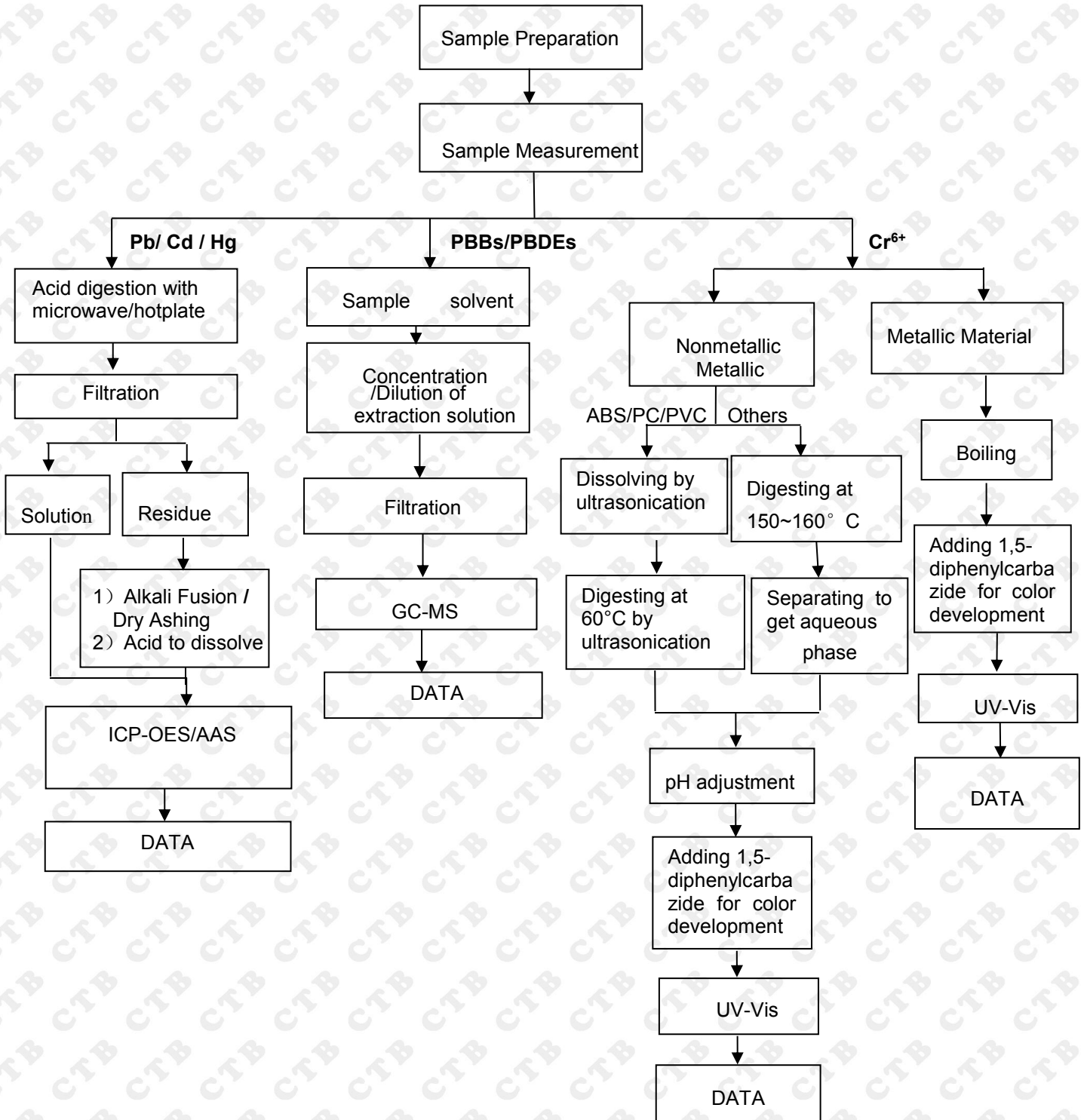
1. BL = below the limit
2. OL = over the limit
3. X = inconclusive, chemical confirm test is needed
4. NA = metal not applicable
5. mg/kg = milligram per kilogram = ppm
6. N.D = not detected
7. Negative = Absence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is less than $0.1\mu\text{g}/\text{cm}^2$ sample surface area used.
8. Positive = Presence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is equal to or greater than $0.13\mu\text{g}/\text{cm}^2$
9. sample surface area used. The limit for composite test should be divided by the mixed number.

Note:

1. When performing screening tests, it is the result on total Br while test item on restricted substances is PBBs/PBDEs, it is the result on total Cr while test item on restricted substances is Cr^{6+} .
2. Pb, Cd, Hg, Cr and Br results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr^{6+}) and GC-MS (for PBBs, PBDEs) is needed to be performed, if the concentration falls into the inconclusive area according to IEC 62321-3-1:2013.
3. For the XRF screening test for RoHS elements, the reading may be different to the actual content in the sample be of non-uniformity composition.
4. As requested by the applicant, EU RoHS test was conducted only on components listed in this report. Other components were not tested.

Test flow chart

1. Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs



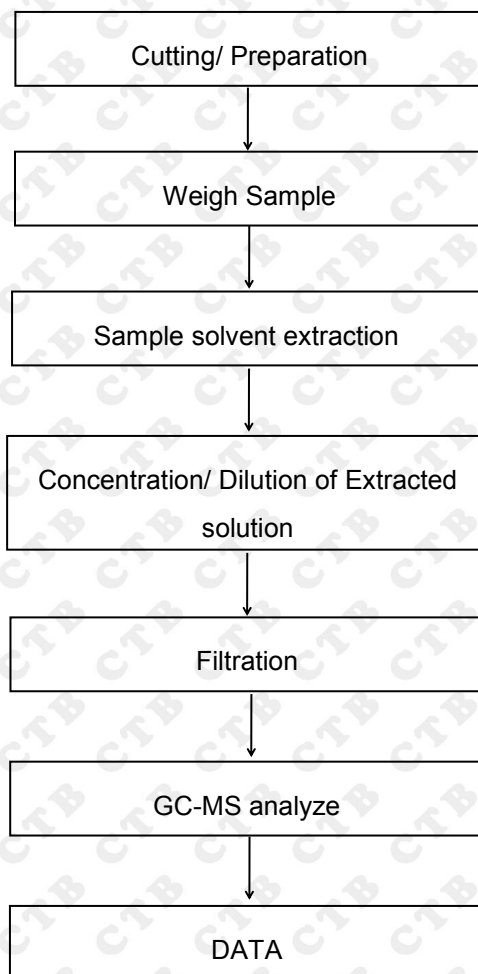
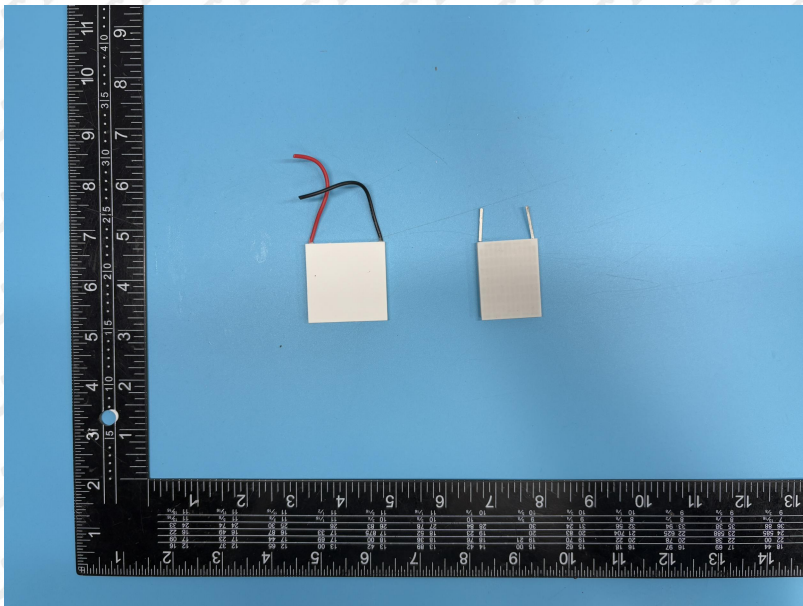
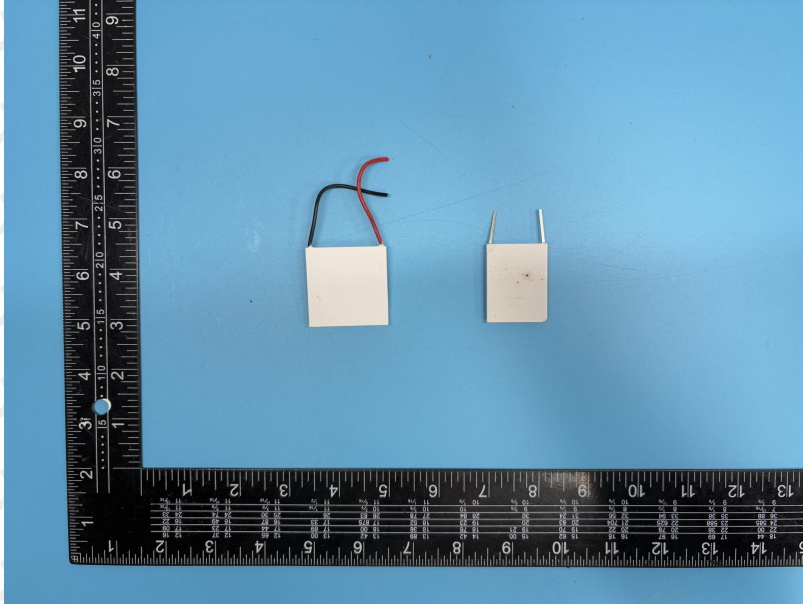
2. Phthalate test flow chart

Photo documentation



*** End of Report ***

Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client. "★" indicates the testing items were fulfilled by subcontracted lab. "※" indicates the items are not in CNAS accreditation scope.

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