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TEST REPORT
IEC 62321
Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)

Report Reference No.	100178
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Approved by (name+ signature) :	NIKOS EXARCHEAS COMPUTER ENGINEER HEAD OF THE ELECTRIC CABLE DEPARTMENT
Testing Laboratory.....	MIRTEC S.A. ATHENS LABORATORIES
Address	50 Kifisou Str.-12133 Athens, Greece
Applicant's name	PATERDIS DIMITRIOS
Address	27 Ch. Smyrnis Str., 13461 Zefyri, Athens, Greece
Test specification:	
Standard.....	IEC 62321:2008 (ed.1)
Non-standard test method……..:	-
Test Report Form No.	IEC62321B
Test Report Form(s) Originator.....	SGS Fimko Ltd.
Master TRF	Dated 2009-03

This report is not valid unless signed by an accepted IECEE HS Testing Laboratory and a Statement of Test Results issued by an NCB in accordance with the IECEE Rules of Procedures.

Sample

Sample description .....:	Parts of solar water heater boiler.
Trademark .....:	BAUER Solar Systems
Manufacturer's name .....:	PATERDIS DIMITRIOS
(Model) number .....:	Samples from solar water heater boiler
Ratings/Characteristics .....:	-

Identification of the sample …….. : Sample D: bare metal, Sample E: painted metal

Weight of the sample (in g) …….. : -

Type of sample …….. :

☒ Metal

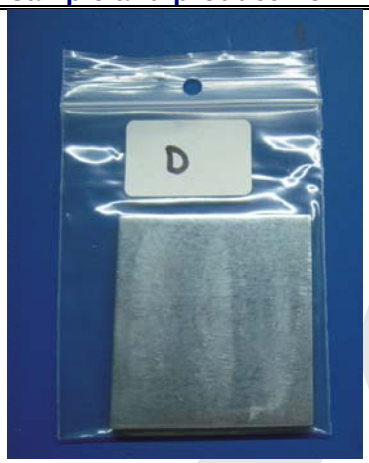
☐ Polymer

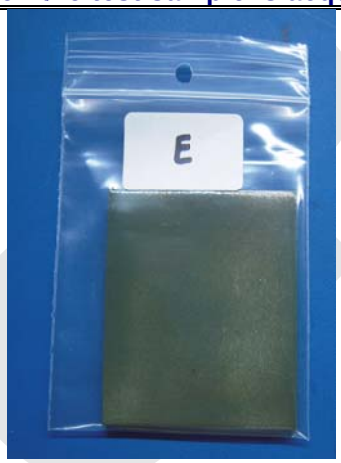
☐ Electronic Component

Written description of the sample and sampling procedure:
(including description of any product disassembly performed to acquire the test sample)

Representative samples were taken from solar water heater boiler

Photograph(s) of the sample and product from which the test sample is acquired if relevant:





Copy of marking plate (if applicable) N/A

Testing

Summary of testing:

In sample D, total Cr concentration was found to exceed the limit of 0,0800%w/w. The actual concentration was 0,085%w/w. The test for Cr(VI) detection was negative though and the concentration of Cr(VI) is below limit. None of the other hazardous substances described in RoHS Directive (2011/65/EU) were detected though.

In sample E, none of the hazardous substances described in RoHS Directive (2011/65/EU) were detected.

The test items were found inconclusive for Cd, Hg and Br substances, since the equipment detection limits are in the inconclusive range for these substances. (Cd: 0,02 %w/w, Hg: 0,1 %w/w and Br: 0,05 %w/w)

Standard used / test clause *(for ex. IEC 62321:2008 (ed. 1) 6)*	**Method used or Performance based equivalent*** *(for ex. Lead by ICP-OES)*	**Name, address and location of any laboratory involved in the analysis:**	**Operator (name + signature)**
IEC 62321:2008	XRF	See Page 1	MARIANNA XANTHOPOULOU CHEMIST, MSc, PhD HEAD OF THE CHEMISTRY DEPARTMENT

*** Any deviation by agreement, or otherwise, from the test procedure specified in the standard:**

ΕΡΓΑΣΤΗΡΙΑ ΑΘΗΝΩΝ - ΕΒΕΤΑΜ MIRTEC-ATHENS LABORATORIES QA

Test results
(unit: mg/kg)

Sample D

	mg/kg	Positive (Pos.) / Negative (Neg.)
Lead (Pb)	BL	--
Mercury (Hg)	BL	--
Cadmium(Cd)	BL	--
Total chromium (Cr)	850	--
Presence of Hexavalent Chromium (Cr(VI))	--	--
Hexavalent chromium (Cr(VI))	BL	Neg.
Monobromobiphenyl		--
Dibromobiphenyl		--
Tribromobiphenyl		--
Tetrabromobiphenyl		--
Hexabromobiphenyl		--
Pentabromobiphenyl		--
Heptabromobiphenyl		--
Octabromobiphenyl		--
Nonabromobiphenyl		--
Decabromobiphenyl		--
Bromine (Br)	BL	--
Total PBBs		--
Monobromodiphenyl ether		--
Dibromodiphenyl ether		--
Tribromodiphenyl ether		--
Tetrabromodiphenyl ether		--
Pentabromodiphenyl ether		--
Hexabromodiphenyl ether		--
Heptabromodiphenyl ether		--
Octabromodiphenyl ether		--
Nonabromodiphenyl ether		--
Decabromodiphenyl ether		--
Total PBDEs		--

Sample E

	mg/kg	Positive (Pos.) / Negative (Neg.)
Lead (Pb)	BL	--
Mercury (Hg)	BL	--
Cadmium(Cd)	BL	--
Total chromium (Cr)	BL	--
Presence of Hexavalent Chromium (Cr(VI))	--	--
Hexavalent chromium (Cr(VI))		--
Monobromobiphenyl		--
Dibromobiphenyl		--
Tribromobiphenyl		--

Tetrabromobiphenyl		--
Hexabromobiphenyl		--
Pentabromobiphenyl		--
Heptabromobiphenyl		--
Octabromobiphenyl		--
Nonabromobiphenyl		--
Decabromobiphenyl		--
Bromine (Br)	BL	--
Total PBBs		--
Monobromodiphenyl ether		--
Dibromodiphenyl ether		--
Tribromodiphenyl ether		--
Tetrabromodiphenyl ether		--
Pentabromodiphenyl ether		--
Hexabromodiphenyl ether		--
Heptabromodiphenyl ether		--
Octabromodiphenyl ether		--
Nonabromodiphenyl ether		--
Decabromodiphenyl ether		--
Total PBDEs		--

Any factor that may have affected the results:

Dates ..... :

Date of receipt of test item ..... : 26/5/2016

Date (s) of performance of tests..... : 24/6/2016

General remarks:

The test results presented in this report relate only to the sample tested.
This report shall not be reproduced, except in full or the first page, without the written approval of the issuing NCB.

Throughout this report a point is used as the decimal separator.

Additional photograph(s) of the testing procedure: