



Determination of metal corrosion developing capacity of Agribalance open cell polyurethane foam according to CUAP, Common Understanding of Assessment Procedure for ETA, Revision 2 October 2009, Factory made thermal insulation material and /or acoustic insulation material made of vegetable or animal fibres, Annex E

Requested by: IsoGreen Industries Ab

Requested by IsoGreen Industries Ab
Box 3095
83103 Östersund
Sweden

Order Order on 21.3.2013 by Lena Kershaw.

Contact person **VTT Expert Services Ltd**
Senior Expert
Eeva-Liisa Lepistö-Saukko
Kemistintie 3, FI-02150 Espoo
P.O. Box 1000, FI-02044 VTT
Tel. + 358 20 722 5531
Email: eeva-liisa.lepisto-saukko@vtt.fi

Assignment **Determination of metal corrosion developing capacity of Agribalance open cell polyurethane foam according to CUAP, Common Understanding of Assessment Procedure for ETA, Revision 2 October 2009, Factory made thermal insulation material and /or acoustic insulation material made of vegetable or animal fibres, Annex E**

Sample Sample was delivered on 26.3.2013 by the customer.
Identification: Agribalance, Open cell polyurethane foam
Nominal dry density of 9 kg/m³

General Metal corrosion test is one of the tests referred in CUAP, Common Understanding of Assessment Procedure for Thermal insulation and/or acoustic insulation material made of vegetable fibres, for the European Technical approval related to CE-marking of Construction products.

Performance of the task CUAP, ETA request No 12.01/02, Revision 2 October 2009, Thermal insulation material and/or acoustic insulation material made of vegetable fibres was applied.

Open cell polyurethane foam of 20 g, riven in small pieces, was packed in each four crystallising dishes and deionized water of 250 ml (instead of 150 ml) at room temperature was immersed into the samples in order to get even, wet composition which was easy enough to be baked.

Two samples were made including the 0.075 mm zinc sheet and two samples with 0.075 mm copper sheet between two layers of insulation material. Samples were transferred to the humidity chamber maintained at 40 ± 2°C and 90-95 % RH for 14 days. After the test period metal coupons were cleaned and examined immediately for perforation over the 40 W light bulb.

The test results relate only to the sample tested.

Test was performed on 15.4. – 30.4.2013.


Test results

No pits (perforations) were observed on the copper sheets. Several (15 pcs) pits of Ø 1.0 – 7.0 mm and several smaller (68 pcs) pits and very small (15 pcs) pits were observed on the sheet of zinc, Za1. Several (15 pcs) pits of Ø 1.0 – 7.0 mm and several smaller (40 pcs) pits and very small (30 pcs) pits were observed on the sheet of zinc, Za2.

Pictures of metal foils after the test are presented in figure 1 of the Appendix 1. The weight losses of the metal coupons are presented in the table 1 of the Appendix 1.

Espoo, 21.5.2013


Hannu Hyttinen
Product Manager


Eeva-Liisa Lepistö-Saukko
Senior Expert

Appendices

1 pcs

Distribution

Customer
Archive

Original
Original

VTT Expert services Ltd Product Approval and Certification, copy

The test results relate only to the sample tested.

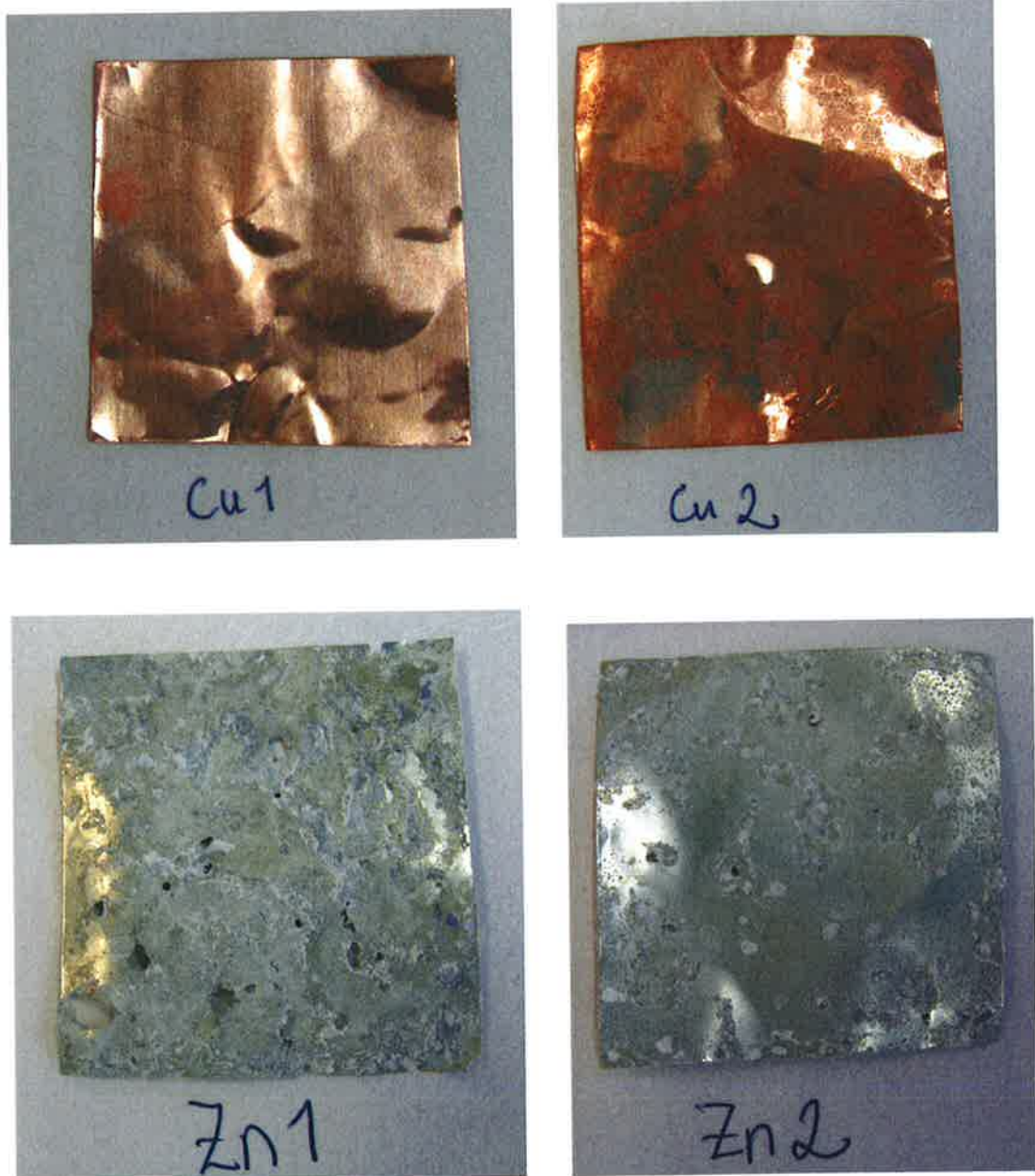


Fig. 1. Copper and zinc foils after the test of corrosion developing capacity. Product: Agribalance open cell polyurethane foam. Manufacturer: IsoGreen Industries Ab.

The test results relate only to the sample tested.

The use of the name of VTT Expert Services Ltd or the name Technical Research Centre of Finland (VTT) in any other form in advertising or publication in part of this report is only permissible with written authorisation from VTT Expert Services Ltd.

Table 1. Weight losses of the foils of thickness 0.075 mm and dimensions 50*50 mm in the test of corrosion developing capacity Product: Agribalance open cell polyurethane foam. Manufacturer: IsoGreen Industries Ab.

Folio	Weight loss in the test, g	Weight loss in the test, %
1. Cu	0.003	0.2
2. Cu	0.004	0.2
1. Zn	0.129	10.6
2. Zn	0.083	6.7

The test results relate only to the sample tested.