

# Test Certificate according to VDI 2055

## Ü2.013.0-08a/09



Summary of results in accordance with section 3.3 Gütesicherung  
 Leading testing institute: Forschungsinstitut für Wärmeschutz e.V. München (FIW)

**Test requested by:** Paroc Group Oy, 00620 Helsinki  
**Manufacturer:** Plant T  
**Designation of material:** PAROC Wired Mat 130 und Wired Mat 130 AL1  
**Type of material:** Wired mat of stone wool with galvanised stitching with or without inlayers of aluminium foil.  
**Designation and properties:** Insulation designation code according to AGI-Working document Q 132: 10.01.03.68.13 refer to product datasheet (dated: 09.12.08), thermal conductivity from 50°C to 600°C, AS-quality, hydrophobic  
**Fire Classification:** see 4.1  
**DIN CERTCO Reg.Nr.:** 6V124  
**Type of control:** Surveillance contract No: U2.013/08  
**Internal quality control:** On the factory production control was checked by staff of the FIW München within the visit to the production site and found according to the rules.  
**Sample taking:** By staff of the FIW München in the plant on 30.06.09  
 Goods Receipt at 13.07.2009, No. 1359

### Results:

1. Dimensions/Density - according to EN 822, EN 823, EN 1602 (Average values)

Nominal Thickness mm	Nominal Length mm	Nominal Width mm	Thickness mm	Load kN/m <sup>2</sup>	Length mm	Width mm	Area-related mass g/m <sup>2</sup>	Density of insulant kg/m <sup>3</sup>
50	4000	1000	55	1.0	4040	1004	284 *)	125 <sup>2)</sup>
80	2500	1000	85	1.0	2550	1002	286 *)	123 <sup>2)</sup>

\*) of facing or supporting material, <sup>2)</sup> referred to nominal thickness

2. Thermal conductivity according to EN 12667:  
 Nominal thickness 80 mm : density 124 kg/m<sup>3</sup>

Nominal thickness mm	Temperature *) °C	50	100	150	200	300	400	500	600	650
80	Thermal conductivity W/(m·K)	0.039	0.045	0.052	0.059	0.075	0.095	0.119	0.147	0.163

\*) In case of temperature differences < 50 K the given temperature corresponds to the arithmetical average of warm side and cold side temperature!

3. Behaviour at higher temperatures: (maximum service temperatures)

3.1 Test method EN 14706: As regards the test according to section 7.4.1 of the AGI-working document Q132 during 72 h at a one-sided temperature exposure of 680 °C and under a load of 0.5 kN/m<sup>2</sup> the decrease in thickness did not exceed 5 %. The mean apparent density was 129 kg/m<sup>3</sup>.

4. Further properties	
4.1 Fire behaviour: <b>DIN 4102-1 A1</b> Certificate: <b>P-NDS04-8</b> (31.12.2012)	4.4 Airflow resistance EN 29053 Nom. thickness 50 mm: <b>93000 Pa·s/m<sup>2</sup></b> Nom. thickness 80 mm: <b>89000 Pa·s/m<sup>2</sup></b>
4.2 Ignition loss EN 13820: <b>0.5</b> - % in mass	4.5 Hydrophobic property EN 1609: <b>0.03 kg/m<sup>2</sup> after 24h</b> (requirement ≤ 1.0 kg/m <sup>2</sup> acc. to Q132, section 5.11)
4.3 AS quality: Chloride content EN 13468: <b>5.3 mg/kg</b> (requirement according to AGI Q132:2006: ≤ 10 mg/kg)	4.6 Compressive strength EN 826: ----- kPa

5. Other data:

5.1 Shot content: 0.3 % regarding a mesh size of 0.5 mm and 2.0 % regarding a mesh size of 0.25 mm.  
 5.2 Sulfid content: -----

Remarks: The mineralwool product complies with the characteristics required by the AGI insulation designation code. The basis of the calculation of the heat loss are the nominal values according to the product data sheet. The given values of the thermal conductivity only apply to the measured samples.

Comment: As regards the characteristics tested, the stone wool product fulfils the standards determined by the VDI-AG "Gütesicherung" (quality control) in the guidance papers and their supplements.

Gräfelfing, 11.02.2010

Head of Department

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The only valid document is the one in German and not this translation. Test results only refer to test objects.  
 The prior written consent of our Institute is required for any publication or reference concerning parts of this report.