Thermal Conductivity according to EN 12667

Test report No: F.2-1037a/12

Applicant: **L'ISOLANTE K-FLEX S.r.L., 20877 Roncello (MB), Italien**

Name of the product: **" K-FLEX SOLAR HT "**

Product identification: (as given by applicant)
Sheets of flexible closed celled foam on the basis of elastomeric foam.
Thickness: 10 mm
Colour: black

Sampling: Sent by applicant in June 2012
Goods Receipt: No. 6080 dated 05.06.2012

Test equipment: Guarded hot plate apparatus according to EN 12667:
Metering section 400 x 400 mm with guard section 800 x 800 mm

Preparation: Tested thickness[+)]: 0.0180 m — Mass[+)]: 0.3165 kg
Surface area tested: 0.2528 m² — Density[+)]: 69.6 kg/m³

Remarks: The specimens were built into the test apparatus in 2-layers without further conditioning.

Experimental data:

Test	Heat flow rate	Temperature of the Warm Side	Temperature of the Cold Side	Average temperature of the specimen	Temperature-difference of the specimen	Thermal Conductivity
No	W	°C	°C	°C	K	W/(m·K)
1	10.262	-20.8	-36.9	-28.9	16.1	0.0359
2	10.234	7.8	-7.3	0.3	15.1	0.0382
3	10.204	42.4	28.8	35.6	13.6	0.0423
4	10.176	68.4	56.1	62.3	12.3	0.0464
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Uncertainty: < 2%

Properties of the material after conductivity-measurement up to 68.4 °C warm side:

[+)] Mean values (two specimens)

Thickness[+)]: 0.0180 m — Mass[+)]: 0.3165 kg
Density[+)]: 69.6 kg/m³ — Change in mass: 0.0 %

Remarks:

Results:

Mean temperature °C	-30	-20	-10	0	10	20	30	40	60
Thermal conductivity W/(m·K)	0.0353	0.0364	0.0376	0.0387	0.0399	0.0410	0.0422	0.0433	0.0456

Evaluation: These thermal conductivity values refer to the material in a dry state and represent thermal conductivity values $\lambda_{Lab,P}$ as specified in the guidelines VDI 2055.

Final remarks: ---------

Forschungsinstitut für Wärmeschutz e.V. München FIW MÜNCHEN 13

Gräfelfing, 01.08.12

Department Specialist
Dipl.-Ing. R. Alberti

Tester
A. Bergler

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.

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