Thermal Conductivity according to EN 12667

Test report No: F.2-1004a/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: 13 mm
Colour: black

Sampling:
Goods Receipt:
Sent by applicant in June 2012.
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[+)]: 0.0133 m
Surface area tested: 0.2500 m²
Mass[+)]: 0.2615 kg
Density[+)]: 78.6 kg/m³

Remarks:
The specimens were built into the test apparatus 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	12.412	-22.9	-36.8	-29.9	13.9	0.0370
2	12.380	6.0	-7.3	-0.7	13.3	0.0389
3	12.348	40.8	28.8	34.8	12.0	0.0427
4	12.733	66.2	55.0	60.6	11.2	0.0472
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Uncertainty: < 2%

Properties of the material after conductivity-measurement up to 66.2 °C warm side:

[+)] Mean values (two specimens)

Thickness[+)]: 0.0133 m
Density[+)]: 78.6 kg/m³
Mass[+)]: 0.2615 kg
Change in mass: 0.0 %

Remarks:

Results:

Mean temperature °C	-30	-20	-10	0	10	20	30	40	60
Thermal conductivity W/(m·K)	**0.0363**	**0.0374**	**0.0385**	**0.0396**	**0.0408**	**0.0419**	**0.0430**	**0.0441**	**0.0463**

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. Albert

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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