Thermal Conductivity according to EN 12667

Test report No: F.2-1071a/14

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

Name of the product: **" K-Flex ST "**

Product identification: (as given by applicant)
Sheet made of flexible elastomeric foam according to EN 14304:2009+A1:2013.
Thickness: 19 mm; Colour: black
Production code: 207314

Sampling: By employee of the FIW München at the plant in Roncello on 30.07.2014.
Goods Receipt: No. 9639 dated 04.08.2014

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[+)]: 0.0196 m — Mass[+)]: 0.2345 kg
Surface area tested: 0.2500 m² — Density[+)]: 47.9 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	7.070	-21.9	-36.1	-29.0	14.2	0.0306
2	7.070	0.0	-13.4	-6.7	13.4	0.0325
3	7.045	33.8	21.5	27.6	12.3	0.0353
4	7.021	65.6	54.8	60.2	10.8	0.0400
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Uncertainty: < 2%						

Properties of the material after conductivity-measurement up to 65.6 °C warm side:

[+)] Mean values (two specimens)

Thickness[+)]: 0.0196 m — Mass[+)]: 0.2345 kg
Density[+)]: 47.9 kg/m³ — Change in mass: 0.0 %

Remarks: --

Results:

Mean temperature °C	-30	-20	0	10	20	40	50	60	---
Thermal conductivity W/(m·K)	0.0302	0.0312	0.0333	0.0343	0.0353	0.0374	0.0384	0.0395	---

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: ---------

Gräfelfing, 13.11.14

Department Specialist: Dipl.-Ing. R. Alberti

Tester: A. Berglér

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