



Thermal conductivity according to DIN EN ISO 8497

Test report No: G.2-028a/18

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

Material: K-Flex Solar HT

Labeling: 06471074671P
(as given by producer)

Material identification: Tube made of flexible elastomeric foam according to EN 14304 : 2009+A1:2013
(as given)

Nominal dimensions: Internal diameter: 28 mm Insulation thickness: 13 mm Length: 2000 mm

Nominal density: ---- kg/m³

Sampling: The material was collected by staff of FIW München on 05.12.2017 in the plant Uniejów/Poland.

Goods Receipt: No. 3684

Test equipment: Test pipe with calculated end caps according to DIN EN ISO 8497:1996 Diameter 29 mm, horizontal, Length 2000 mm

Preparation: Experimental data according to EN 13467 :
Internal diameter: 32 mm Insulation thickness: 13 mm Length: 1998 mm
Density: 74.5 kg/m³

Installation according to DIN 4140: Internal diameter: 32 mm Insulation thickness: 13 mm Length: 2280 mm
Density: *) 75.9 kg/m³ Mass: 0.327 kg

Remarks: The insulation pipe was built on the test pipe in state of delivery.

Experimental data:

Test No	Heat flow rate W	Temperature of the		Average temperature of the specimen °C	Temperature-difference of the specimen K	Thermal conductivity W/(m·K)
		Warm Side °C	Cold Side °C			
1	14.6	-17.9	-33.9	-25.9	16.0	0.0371
2	14.5	16.2	-3.8	6.2	20.0	0.0401
3	14.5	52.7	34.6	43.7	18.1	0.0452
4	14.5	79.6	63.3	71.5	16.3	0.0487
5	14.4	106.8	92.7	99.8	14.1	0.0511

Uncertainty: < 3%

Thermal conductivity is calculated for temperature differences on the specimen.

Properties of the material after conductivity-measurement up to 106.8 °C warm side: (Values at end of the test)

Density: *) 75.9 kg/m³ Mass: 0.327 kg Change in mass: 0.0 %

Remarks:

*) The given values of the density refer to the insulation of the specimens installed on the test pipe without facings.

Results:

Mean temperature °C	-30	-10	0	10	20	30	50	70	90
Thermal conductivity W/(m·K)	0.036	0.039	0.040	0.041	0.042	0.043	0.046	0.048	0.050

These thermal conductivity values refer to the material in a dry state installed as pipe insulation and are related to the mean temperature of the specimen ($\lambda_{Lab,R}$ as specified in the guidelines VDI-2055).

Final remarks: -----

Gräfelfing, 06.06.2018

Department Specialist

R. Hofmockel

Robert Hofmockel, M.Sc.



Tester

S. Tana

S. Tana

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.