Thermal conductivity according to DIN EN ISO 8497

Test report No: G.2-186a/16

Applicant:	**ROLS ISOMARKET, 127015 Moscow, Russische Föderation**
Material:	**Energoflex Super**
Labeling: (as given by producer)	-----
Material identification: (as given)	Tubes made of polyethylene foam with a closed cellular structure
Nominal dimensions:	Internal diameter: 22 mm Insulation thickness: 20 mm Length: ----- mm
Nominal density:	----- kg/m³
Sampling:	Sent by applicant.
Goods Receipt:	No. 2485
Test equipment:	Test pipe with calculated end caps according to DIN EN ISO 8497 Diameter 24 mm, horizontal, Length 2000 mm
Preparation:	Experimental data according to EN 13467 :
	Internal diameter: ---- mm Insulation thickness: ---- mm Length: ---- mm
	Density: ---- kg/m³
Installation according to DIN 4140	Internal diameter: 24.2 mm Insulation thickness: 20 mm Length: 2300 mm
	Density: *) 26.9 kg/m³ Mass: 0.173 kg
Remarks:	The insulation tube was built on the test pipe in state of delivery.
	Cell gas content before measurement was 97 vol.- % air.

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	10.7	11.2	-11.6	-0.2	22.8	0.0366
2	10.7	31.8	10.5	21.2	21.3	0.0389
3	10.7	54.1	33.8	44.0	20.3	0.0411
4	-----	-----	-----	-----	-----	-----
5	-----	-----	-----	-----	-----	-----

Uncertainty: < 3% Thermal conductivity is calculated for temperature differences on the specimen.

Properties of the material after conductivity-measurement up to 54.1 °C warm side: (Values at end of the test)

Density: *) 26.9 kg/m³ Mass: 0.173 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	0	10	20	30	40	----	----	----	----
Thermal conductivity W/(m·K)	0.037	0.038	0.039	0.040	0.041	----	----	----	----

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, 06.10.2016

Department Specialist

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Tester

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