

## Thermal conductivity according to DIN EN ISO 8497

Test report No: G.2-124a/16

**Applicant:** ROLS ISOMARKET, 127015 Moscow, Russische Föderation

**Material:** Energoflex Black Star

**Labeling:** -----  
(as given by producer)

**Material identification:** Flexible heat-insulating tubes made of expanded polyethylene foam according to EN 14313:2009+A1:2013.  
(as given) Colour: black  
Dimension: 28/6

**Nominal dimensions:** Internal diameter: 28 mm      Insulation thickness: 6 mm      Length: 2000 mm

**Nominal density:** ----- kg/m<sup>3</sup>

**Sampling:** Sent by applicant.

**Goods Receipt:** No. 2256

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

**Preparation:** Experimental data according to EN 13467 :  
Internal diameter: ---- mm      Insulation thickness: ---- mm      Length: ---- mm  
Density: ---- kg/m<sup>3</sup>

**Installation according to DIN 4140:** Internal diameter: 29 mm      Insulation thickness: 6 mm      Length: 2277 mm  
Density: \*) 25.9 kg/m<sup>3</sup>      Mass: 0.038 kg

**Remarks:** The insulation tube 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	6.46	-0.2	-4.8	-2.5	4.6	0.0368
2	6.44	21.6	17.3	19.5	4.3	0.0400
3	6.43	38.4	34.3	36.4	4.1	0.0433
4	----	----	----	----	----	----
5	----	----	----	----	----	----

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

Properties of the material after conductivity-measurement up to 38.4 °C warm side: (Values at end of the test)

Density: \*) 25.9 kg/m<sup>3</sup>      Mass: 0.038 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	0.039	0.040	0.042	0.044	----	----	----	----

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, 01.08.2016

Department Specialist

Tester

*K. Wiesemeyer*  
Dipl.-Ing. Karin Wiesemeyer



*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.