Forschungsinstitut für Wärmeschutz e.V. München

Thermal Conductivity according to EN ISO 8497:1996

Test report No.: G2-19-1631-02

Applicant: **ROLS ISOMARKET, 127015 MOSCOW, Russian Federation**
Manufacturing plant: ROLS ISOMARKET, 127015 MOSCOW, Russian Federation
Name of product: **GOST R 56729-2015 Energoflex Super**
Declared values: Inner diameter: 22 mm Thickness: 20 mm Length: ---
Description: (as given by applicant) Tube made of polyethylene foam according to EN 14313:2009+A1:2013
Sampling: Sent by applicant
Sample receipt: WE19-5101 on Oct 09, 2019 (internal no. 01)
Test equipment: Testing apparatus with calculated pipe ends according to EN ISO 8497:1996 in atmospheric air
Diameter 22.0 mm, length 2000 mm, horizontal
Preparation: Measured values according to EN 13467 and EN 13470 (as delivered):
Inner diameter: --- Thickness of insulation: --- Length: ---
Density: ---
Mounting: (acc. to DIN 4140:2014)
Inner diameter: 22.4 mm Thickness of insulation: 21.5 mm Length: 2285 mm
Density: *) 24.0 kg/m³ Mass: 0.163 kg
Start of testing: Oct 17, 2019
Remark: The tube was installed in state of delivery on the test pipe.
Cell gas content before measurement: 100 vol.-% air.

Measured values: Test protocol No.: G2-19-1631:0001:01

Test	Heat flow	Temperature of the Warm side	Temperature of the Cold side	Temperature-difference of the specimen	Mean temperature of the specimen	Thermal conductivity
No.	W	°C	°C	K	°C	W/(m·K)
01	8.21	12.6	-7.2	19.8	2.7	0.0361
02	8.20	37.0	18.9	18.1	28.0	0.0393
03	8.18	55.2	38.1	17.1	46.7	0.0416

Uncertainty: < 3 % Thermal conductivity at a given temperature difference on the specimen

Dismounting: Properties of the material after measurement up to 55.2 °C warm side temperature:
Density: *) 24.0 kg/m³ Mass: 0.163 kg Change in mass: 0.0 %
End of testing: Oct 21, 2019
Remark: ---

*) The given values of density refer to the insulation of the mounted specimens without coating/facing.

Evaluation: (thermal conductivities rounded upwards to next 0.001 W/(m·K) according to EN ISO 13787:2003)
Polynomial: $\lambda(\vartheta_m) = +3.5713E\text{-}02 + 1.2635E\text{-}04 \cdot \vartheta_m$

Mean temperature ϑ_m in °C	**0**	**10**	**20**	**30**	**40**	---	---	---	---	---
Thermal conductivity λ in W/(m·K)	**0.036**	**0.037**	**0.039**	**0.040**	**0.041**	---	---	---	---	---

These thermal conductivity values refer to the material in a dry state under the given experimental conditions at the time of the measurement and are related to the mean temperature of the specimen.

Remark: ---

Gräfelfing, Oct 23, 2019

Department Specialist: Dipl.-Ing. K. Wiesemeyer

Tester: S. Tana

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Results relate only to the items tested.
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