Thermal conductivity according to DIN EN ISO 8497

Test report No: G.2-214b/12

Applicant:	**Evocell S.r.l., 61022 Talacchio di Colbordolo (PU), Italien**		
Material:	**IT-Flex**		
Labeling: (as given by producer)	19 X 18		
Material identification: (as given)	Tubes made of flexible elastomeric foam according to EN 14304:2009. Colour: black		
Nominal dimensions: Nominal density:	Internal diameter: 18 mm ----- kg/m³	Insulation thickness: 19 mm	Length: 2000 mm
Sampling:	Sent by applicant.		
Goods Receipt:	No. 6052		
Test equipment:	Test pipe with calculated end caps according to DIN EN ISO 8497 Diameter 20 mm, horizontal, Length 2000 mm		
Preparation:	Experimental data according to EN 13467 : Internal diameter: ---- mm Density: 48.1 kg/m³	Insulation thickness: ---- mm	Length: ---- mm
Installation according to DIN 4140	Internal diameter: 20 mm Density: *) 52.3 kg/m³	Insulation thickness: 15 mm Mass: 0.202 kg	Length: 2310 mm
Remarks:	The insulation tube was built on the test pipe in state of delivery.		

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	10.3	15.4	-6.4	4.5	21.8	0.0342
2	10.3	36.8	16.1	26.5	20.7	0.0366
3	10.3	55.3	35.1	45.2	20.2	0.0384
4	-----	-----	-----	-----	-----	-----
5	-----	-----	-----	-----	-----	-----

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

Properties of the material after conductivity-measurement up to 55.3 °C warm side: (Values at end of the test)

Density: *) 52.3 kg/m³ Mass: 0.202 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	30	**40**	----	----	----	----	----
Thermal conductivity W/(m·K)	0.034	0.035	0.037	**0.038**	----	----	----	----	----

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

Final remarks: -

Gräfelfing, 09.07.2012

Department Specialist

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