

Determination of water vapour permeability acc. to EN 13469

Test report no.: R-153/17

Applicant: K-Flex Polska Sp. z o.o. Wielenin Kolonia 50b, 99-210 Uniejów

Product name: K-FLEX ST

Material designation: Production day / Code: 02473011971 P

Material description: Tube for thermal insulation made of flexible rubber foam with closed cells and skins on both sides; Colour: black; Nominal thickness: 32 mm; inner diameter: 28 mm;

Origin of the material: Sampling by FIW München in the plant Uniejów on 21.06.2017.
Samples were sent by applicant on 10.07.2017 to the FIW München.
Goods receipt no.: E3319

Test procedure: Determination of water vapour permeability in accordance with EN 13469:2013.
Test conditions according to clause 5: (23°C, 0/50% r. h.)
Specimen: tube Length: 230 mm
Comment: $\mu_{\text{tube}} = (2 \cdot \pi \cdot l \cdot \delta_L \cdot \Delta p) / (G \cdot \ln((D+2 \cdot d)/D))$

Conditioning: ---

Period of testing: August - November 2017

Results: The water vapour diffusion resistance index μ_{tube} has been tested at five specimens with an mean density of 55 kg/m³.

specimen no.	inner diameter D_i mm	thickness d mm	density kg/m ³	water vapour resistance index μ_{tube}	water vapour permeability δ kg/(m·s·Pa)
1	32.0	32.6	54.9	9520	$2.18 \cdot 10^{-14}$
2	32.0	32.5	55.2	9120	$2.28 \cdot 10^{-14}$
3	32.0	32.8	54.5	9920	$2.10 \cdot 10^{-14}$
4	32.0	32.8	54.0	10220	$2.03 \cdot 10^{-14}$
5	32.0	33.0	53.9	9090	$2.29 \cdot 10^{-14}$
arithmetic mean	32	33	55	9600	$2.2 \cdot 10^{-14}$

Remarks: The measured values are applicable only for the tested specimens with thickness d , inner diameter D_i and chosen test conditions as specified above.

Gräfelfing, 09.01.2018

Department specialist



Dipl.-Ing.(FH) Stefan Kutschera



Examiner



Michael Zimmermann

Results relate only to the items tested.

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