

**Determination of water vapour permeability acc. to DIN EN 13469**

Test report no.: R-44/16

**Applicant:** Evocell S.r.l., 61022 Talacchio di Colbordolo (PU) Italy  
**Product name:** IT-Flex C1  
**Material designation:** 19 x 15  
**Material description:** Tube for thermal insulation made of flexible rubberfoam with closed cells and skins on both sides; Colour: black; Nominal inner diameter: 15 mm; Nominal thickness: 19 mm  
**Origin of the material:** Samples were sent by applicant to the FIW München in March 2016. Sampling by CSI in the plant Evocell, Bellusco on 19.02.2016. Goods receipt no.: E1862  
**Test procedure:** Determination of water vapour permeability in accordance with DIN EN 13469. Test conditions according to clause 5: (23°C, 0/50% r. h.) Specimen: tube; Length: 230 mm; Comment:  $\mu_{\text{tube}} = (2 \cdot \pi \cdot l \cdot \delta_L \cdot \Delta p) / (G \cdot \ln((D_i + 2 \cdot d) / D_i))$   
**Conditioning:** ---  
**Period of testing:** March - June 2016


**Results:** The water vapour diffusion resistance index  $\mu_{\text{tube}}$  has been tested at five specimens with an average density of 49 kg/m<sup>3</sup>:

Specimen no.	inner diameter D <sub>i</sub> mm	thickness d mm	density kg/m <sup>3</sup>	water vapour resistance index $\mu_{\text{tube}}$	water vapour permeability $\delta$ kg/(m <sup>2</sup> s Pa)
1	17.0	17.9	48.6	13150	1.58 · 10 <sup>-14</sup>
2	17.0	17.8	49.0	10940	1.90 · 10 <sup>-14</sup>
3	17.0	17.7	49.3	14520	1.43 · 10 <sup>-14</sup>
4	17.0	17.9	48.8	13290	1.56 · 10 <sup>-14</sup>
5	17.0	17.8	49.3	13680	1.52 · 10 <sup>-14</sup>
average	17	18	49	13100	1.6 · 10 <sup>-14</sup>

**Remarks:** The measured values are applicable only for the tested specimens with the thickness d, the inner diameter D<sub>i</sub> and the chosen test conditions 23°C, 0/50% r.h..


Gräfelfing, 14.07.2016

Department specialist

  
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Examiner

  
 Michael Zimmermann