



RAPPORTO DI PROVA / TEST REPORT N. 142217

page 1 of 2

Marghera

26/01/2017

rif. Your order n.030/45269744 of 09.11.2016

**richiedente
proposer**

KOEMMERLING CHEMISCHE FABRIK GMBH
ZWEIBRUECKER STRASSE 200 - 66954 PIRMASENS (D)

**campione
sample**

sealant membranes

prova eseguita dal / from 13/12/2016
test date al / to 25/01/2017

**contrassegnato
reference**

GD 116 NA

**ricevuto il
received**

11/11/2016 by carrier

MVTRing r.3 25/8/2011

Water vapour transmission rate on a film according to prEN 1279-4:2016

Producer: Kömmerling Chemische Fabrik GmbH
Product type: polysulphide
(chemical family)
Denomination: GD 116 NA (batch A: 81656 batch B: 81181)
Sampling: carried out by the proposer
Test carried out at: SSV Marghera laboratories

The water vapour permeability of the sealing membranes supplied by you was measured according to prEN 1279-4:2016 "Glass in Building – Insulating Glass Units – Part 4: Methods of test for the physical attributes of edge seal components and inserts" Annex D on 3 different specimens labelled by our laboratory as 1, 2, and 3. Each specimen underwent repeated measurements in different days.

The test specimens were prepared as follows: membranes were placed (as hermetic seal) on a glass dish containing about 30 grams of molecular sieves with an initial water content of 1,1%. Under these test conditions the passage of moisture vapour to the outside could occur only through the membrane itself.

The three dishes prepared with each sample membrane were weighed and placed in a climatic chamber with forced ventilation at 23°C and 90% relative humidity. Weighing was repeated at few-days intervals in order to determine the WVTR (Water Vapour Transmission Rate).

Le prove riportate in questo rapporto contrassegnate dalla dicitura ** Non Accreditata da ACCREDIA ** non rientrano nell'Accreditamento ACCREDIA di questo Laboratorio. Si attesta che il campione oggetto di analisi esibito dalla ditta richiedente presenta le caratteristiche sopra riportate. Il presente attestato si riferisce al campione esaminato e non può essere riprodotto parzialmente. In carta semplice per gli usi consentiti dalla legge.

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The results obtained for three samples are reported in the following table:

time (in days)	Weight increase (in grams)		
	sample n° 1	sample n° 2	sample n° 3
10	0.3478	0.3838	0.3606
16	0.5267	0.5786	0.5491
22	0.7111	0.7796	0.7422
29	0.9281	1.0195	0.9753
36	1.1444	1.2562	1.2047
43	1.3754	1.5110	1.4510
Membrane thickness(in mm)	2.0	1.9	1.9
Dish mouth area (in m ²)	0.00785	0.00785	0.00785
WVTR	4.0	4.3	4.2
WVTR calculated for 2 mm (*)	4.0	4.1	4.0

Average WVTR calculated for 2 mm (*): 4.0 ± 0.1 (dev. std) $\frac{\text{grams H}_2\text{O}}{\text{m}^2 \cdot 24 \text{ h} \cdot 2 \text{ mm}}$

(*) An inverse relationship between thickness and permeability was assumed in the calculation.

Attachments: n° 3 graphs

--- END OF THE TEST REPORT ---

THE HEAD OF THE LABORATORY

Ennio Mognato

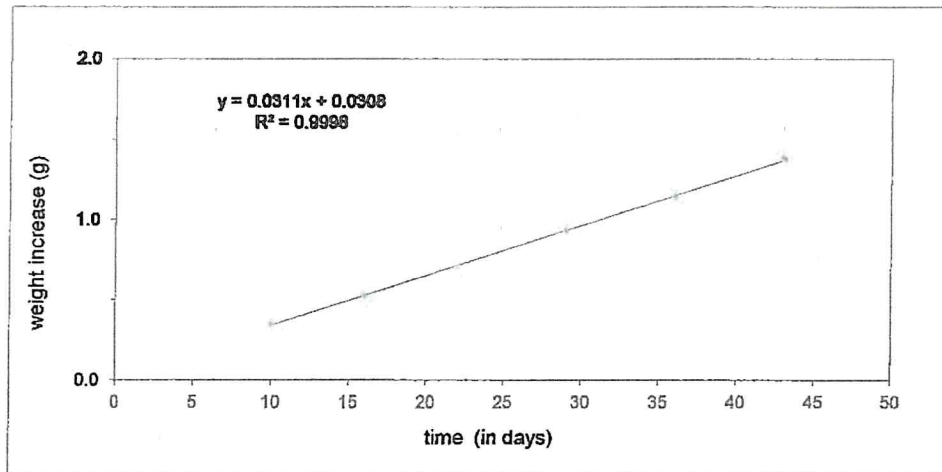
THE LABORATORIES DIRECTOR

Dr. Nicola Favaro

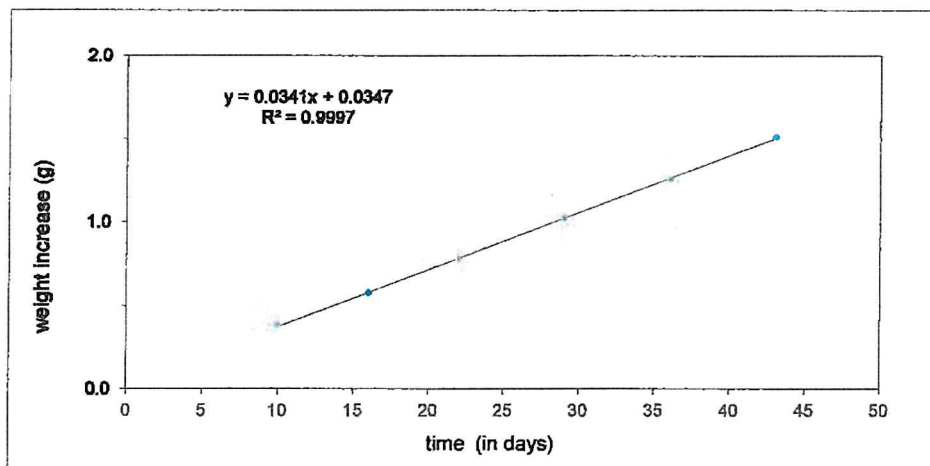
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Sample n° 1



Sample n° 2



Sample n° 3

