

RAPPORTO DI PROVA / TEST REPORT N. 177667/ING

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Marghera 17/07/2020 rif. Your mail dated November, 28th, 2019

richiedente
proposer CRISTALERIAS RAMOS S.L.U.
campione
sample IGU prova eseguita dal / from 17/01/2020
test date al / to 17/07/2020

contrassegnato
reference CLIMALIT R.I.V.

ricevuto il
received 18/11/2019 by carrier

CE GasLiSpa rev 1 9/6/2020

AGEING TEST ACCORDING TO EN 1279-3:2018**Glass in building – Insulating glass unit – Part 3: Long term test method and requirements for gas leakage rate and for gas concentration tolerances**

Manufacturer declared	CRISTALERIAS RAMOS, S.L.U.
Plant	C/Palier, 20-22 Pol. Ind. Ciudad del Automovil, Leganes Madrid
Date of production declared	31.10.2019
Production line	1
Product Name	CLIMALIT R.I.V.
Exterior dimensions	350 mm x 500 mm
Total thickness	20 mm
Composition	4 float/12/4 float
Spacer declared	aluminum – Alu-Pro
Spacer material	rigid, with metallic surface of adhesion
Corner construction	bent without corner keys
Desiccant declared	molecular sieve MOLVER MGM 01 – Fenzi
Desiccant amount	30 g/m on only one long side
Outer sealant declared	polyulfide Thiover - Fenzi
Average sealant depth on spacer back (u) declared	4.0 mm
Inner sealant declared	butyl Naftotherm BU-S - Kömmerling
Mass of inner sealant in g/m (R) declared	3.0 g/m
Average sealant width (r) declared	4.5 mm
Gas filling	gas argon (by hole on the spacer)

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The results stated in this test report refer exclusively to the examined sample. The laboratory is not responsible for those information contained in said report that have been provided by the customer. This test report may not be reproduced in part without our written authorization.

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sample C/PALIER,20-22/POL.IND. CIUDAD DEL - 28914 AUTOMOVIL - LEGANES MADRID
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Declared nominal gas concentration	90 %
Declared construction Temperature during production	290 K
Declared construction Atmospheric pressure during production	1025 hPa

Where "Declared" the information comes from the producer, when not information are checked and recorded by SSV.

We decline any responsibility for sampling, labeling and declaration.

Sampling: carrier out by the proposer

In 2/4 randomly selected insulating glass, the following tests were carried out:

- 1- gas leakage measured
- 2- concentration measured
- 3- internal volume measured
- 4- L_i % a^{-1} calculated

After ageing climate exposure according to EN 1279-3:2018

Specimen n°	Internal volume (mm ³)	Gas	Gas leakage amount m_i (µg/h)	Concentration after ageing c_i (%)	Percentage gas leakage rate $gasL_i$ (%) a^{-1}
1	1844798	argon	2.23	88.0	0.71
2	1842715	argon	2.34	85.2	0.77
Media $L_{i\ av}$ (%) a^{-1}					0.7

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Requirements

- 1) $L_{i\text{av}} \leq 1$ in % a^{-1}
- 2) Absolute limit of all individual $L_{i\text{max}} \leq 1.20$ in % a^{-1}
- 3) Determined C_i not less than 5% absolute of $C_{i,0}$ (declared)

Note: Further measurements more than 2 are done if $L_{i\text{av}}$ (%) a^{-1} is more than 1.00 but no values were more than 1.20 on the first 2 specimen

Tests carried out at SSV Marghera laboratories

--- END OF THE TEST REPORT ---

THE HEAD OF THE LABORATORY
Ennio Mognato

THE LABORATORIES DIRECTOR
Dr. Nicola Favaro

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