

**IKATES, s.r.o. – Laboratory for glass and building products testing**

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**Summary report No. N – 12/2008 Date: 2008-07-23**

**Insulating glass units – Seal properties results according to EN 1279-4**

For details, see the test report N-12/2008

Company (Importer): eco instruments Sp. z o.o.,  
 ul. Powsińska 18, 02-920 Warszawa, Poland

Plant (Producer) : eco instruments Sp. z o.o.,  
 ul. Powsińska 18, 02-920 Warszawa, Poland

Sealant specification: polyurethane sealant ECO PUR C

Seal strength test:	At intersection with line A-B:		Type of failure observed				
	Average stress $\sigma_{av}$ (MPa)	Average extension $\varepsilon_{av}$ (%)	C = cohesion A = adhesion G = glass breakage				
			1	2	3	4	5
Initial cure	0,42	7,7	A/C	A/G	A/C	G	G
After water immersion	0,41	8,9	G	A	A	G	A
After heating at 60°C	0,42	7,7	A/G	G	G	G	G
After UV radiation	0,41	8,9	G	A	A	A	A

Moisture vapour transmission rate:

Film thickness 2,02 mm  
 $\Delta P_{H_2O}$  90 % r.h. across the membrane (initial state)  
 temperature 22 °C  
 MVTR 3,75 grams  $H_2O \cdot m^{-2} \cdot (24h)^{-1} \cdot (2 mm)^{-1}$

Gas permeation rate:

Film thickness 2,03 mm  
 Surface 0,001256  $m^2$  - Shape: circular  
 Permeation rate: 4,41  $\cdot 10^{-3} g \cdot m^{-2} \cdot h^{-1}$

Conclusion of seal strength test:

The sealant conforms to the test criteria

YES

Jiří Stránský

manager of testing laboratory

