



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

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Testing laboratory No.1139 accredited by Czech Accreditation Institute, o.p.s.

according to ČSN EN ISO/IEC 17025:2018

TEST REPORT

No. : 268A / 2022

Test item : **Insulating glass units**
- long term test method and requirements for moisture penetration according to ČSN EN 1279-2 (initial type test)

Client (address): **MILKANA OOD**
1 Kara Kolyo Str., West Industrial Zone
Pleven, Bulgaria

Producer (address): **Milkana OOD**
2 Maxim Gorki Str.
Pordim, Bulgaria

Place of test performance : **testing laboratory IKATES, s.r.o., Teplice**

Date of sample receiving : **2022-10-20**

Date of test performance : **2022-11-03 to 2023-01-24**

Date of issue : **2023-02-07**

Number of pages : **4**

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Manager of testing laboratory : **Jiří Stranský**



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Normative foundations :

ČSN EN 1279-2 (2019): Glass in building - Insulating glass units – Part 2: Long term test method and requirements for moisture penetration

Sampling :

Following test specimens of insulating glass units have been supplied to the testing laboratory :

Samples description provided by the producer	
IGU construction :	float glass clear 4 mm + 12 mm, Al + float glass clear 4 mm
Number of pieces and external dimensions :	15 pcs 352 x 502 mm x 20 mm
Production date :	2022
Glass (name, producer, type) :	float glass clear 4 mm; Sisecam/Trakia Glass
Spacer (material, name, producer) :	Aluminium, bended, 12 mm, Profilglass, Italy
Corner keys (name, producer, additional sealing) :	-
Joint (name, producer, additional sealing) :	Stainless steel connector
Desiccant (name, producer, type, filled sides, T _c) :	Natergy, China, 3 Å; 4 sides; 17,7 %
Outer sealant (name, producer, type) :	GD 116 NA, Kömmerling GmbH, polysulfide
Average sealant depth on spacer back (u) :	n/a
Average sealant depth on glass surface (s) :	n/a
Inner sealant (name, producer, type) :	GD 115, Kömmerling GmbH; polyisobutylene
Average sealant depth (r) :	n/a
Mass of inner sealant / length and side (R):	n/a g/m/side
Coating (name, producer) :	-
Edge deletion :	-
Gas filling (type) :	-
Closing of gap filling holes (type) :	-
Special features (e.g. inserts) :	-



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Metrological provision of tests :

Calibrated measuring gauges of testing laboratory were used during testing.

Climatic test was performed in the climatic chamber CTS controlled by the calibrated thermo- and hygrometer and by the validated software CID-PRO.

Determination of moisture content and adsorption capacity of desiccant was performed using of oven Temptra with calibrated thermocouples and verified laboratory balances KERN 770-14.

Test results :

External dimensions :	352 x 502 mm				
Total thickness before aging test :	19,9 mm				
Product name :	Insulating glass unit; Milkana PS				
Corner construction :	bent, stainless steel connector				
Amount of desiccant (filled sides) :	2 sides				
Average sealant depth on spacer back (u) :	5 mm				
Average sealant depth on glass surface (s) :	6-7 mm				
Average sealant depth (r) :	5-6 mm				
Edge deletion :	-				
Special features (e.g. inserts) :	-				
Initial moisture content T_i (%) :	1,36	1,29	1,35	1,31	
Average initial moisture content $T_{i, av}$ (%) :	1,33				
Final moisture content T_f (%) :	1,80	1,59	1,91	2,01	1,94
Average final moisture content $T_{f, av}$ (%) :	1,85				
Moisture penetration index I (%) :	2,88	1,62	3,57	4,18	3,72
Average moisture penetration index I_{av} (%) :	3,19				
Test passed :	YES				



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Statement : Test results, given in this report, apply only to the tested items as received. The test report does not replace other documents, e.g. administrative characters, issued by other bodies, according to particular regulations. The official version is in Czech language.

Distribution list :

2 x MILKANA OOD

1 x Laboratory for glass and building products testing IKATES, s.r.o. (archive)

Test results were approved by :

For correctness of the report is responsible :

Michal Hnilíčka

end of the test report

