

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



Tolstého 186, 415 03 Teplice, Czech Republic

tel.: +420 417 503 093, tel.: +420 417 502 825

e-mail: [ikates@ikates.cz](mailto:ikates@ikates.cz), [www.ikates.cz](http://www.ikates.cz)



*Testing laboratory No.1139 accredited by Czech Accreditation Institute  
acc. to ČSN EN ISO(IEC 17025 for glass and selected building products testing*

## TEST REPORT

No. : 248C / 2014

Test item : **Insulating glass units**  
**- long term test method of gas leakage rate according to  
ČSN EN 1279-3 (initial type test)**

Client (address): Erpasan Kalıp Plastik Kimya İnş. Nak. San. Tic. Ltd. Şti.  
Pirireis Mah. Barbaros Cad. Darıca Sanayi Sitesi  
A Blok No: 1-2-3-4-5, Darıca-Kocaeli, Turkey

Producer (address): Erpasan Kalıp Plastik Kimya İnş. Nak. San. Tic. Ltd. Şti.  
Pirireis Mah. Barbaros Cad. Darıca Sanayi Sitesi  
A Blok No: 1-2-3-4-5, Darıca-Kocaeli, Turkey

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

Date of sample receiving : 2014-10-03

Date of test performance : 2014-11-03 to 2015-01-12

Date of issue : 2015-01-13

Manager of testing laboratory : Jiří Stránský

Results and/or information out of accreditation range and subcontracts are in the test report identified. Copying and translating, using of report for other purposes (advertisement, extracts from the report) only with consent of the laboratory. Without consent of the laboratory can be this report reproduced whole only.



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**Normative foundations :**

ČSN EN 1279-3 (2003): Glass in building – Insulating glass units – Part 3: Long term test method and requirements for gas leakage rate and for gas concentration tolerances

ZP 00001-02 (2004): Determination of gas concentration in insulating glass units

ZP-SOP 09018-01 (2009): Determination of gas leakage rate of IGU's according to ČSN EN 1279-3

**Sampling :**

Following test specimens with dimensions 352x502 mm were supplied to testing:

**6 pcs. float glass 4 mm / 12 mm, argon / float glass 4 mm**

Components list:

glass – float glass according to EN 572-9, Trakya Cam

spacer – aluminium, Nedex, 12 mm, with butyld plastic corner

desiccant – molecular sieve ERPASAN, 2 long sides

inner sealant – polyisobutylene ERPASAN BU 2000 BUTYL

outer sealant – polysulphide ERPASAN PS 2000, seal width 6 mm (measured on glass)

gas – argon, 90 %; filling through the corners

**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 gas leakage rate was performed using of gas chromatograph Shimadzu GC-2010 and calibration gas supplied by Air Products. Gas concentration measurement was carried out using of equipment ISO-GAS-CONTROL.



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**Test results :**

**1. Initial gas concentration (ZP 00001)**

Test specimen No.	3	4
$c_{Ar}$ (%)	94,7	93,5

**2. Gas leakage rate measurements and gas concentration in the tested specimens (ZP -SOP 090018-01, ZP 00001)**

Test specimen No.	1	2
$L_{Ar}$ ( $\mu$ l/h)	0,71	0,76
$L_{Ar}$ (%/a)	0,34	0,37
$c_{Ar}$ (%)	92,8	92,6

**Statement :** Test results, given in this report, apply only to the tested items and do not replace other documents, e.g. administrative character, issued by other bodies, according to particular regulations. The official version is in Czech language.

**Distribution list :**

2 x Erpasan Kalıp Plastik Kimya İnş. Nak. San. Tic. Ltd. Şti.

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

Tests were performed by :

Michal Hnilička, Jiří Stránský

Report was performed by :

For correctness and validity of report is responsible :

Jiří Stránský



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**Summary report No. 248CS/2014 Date: 2015-01-13**

**Insulating glass units – Evaluation of the gas leakage rate  
and gas concentration measured according to EN 1279-3**

For details, see the test report 248C/2014

Company (address): Erpasan Kalıp Plastik Kimya İnş. Nak. San. Tic. Ltd. Şti.  
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System description: IGU system description

Product name: insulating glass unit

Applied gas:

Unit number:

Measured concentration  $c_{Ar}$  (%):

Nominal concentration  $c_{Ar,0}$  (%)

Gas leakage rate  $L_{Ar}$  (% $\cdot$ a $^{-1}$ )

argon	
1	2
92,8	92,6
90	90
0,34	0,37

System conforms

YES	NO
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Jiří Stránský  
manager of testing laboratory

end of the test report

