

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



Tolstého 186, 415 03 Teplice, Czech Republic

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

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



*Notified testing laboratory No. 1394*

*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. : 339B / 2017

Test item : **Laminated safety glass Simglass  
- bullet resistance test EN 1063 - class BR7**

Client (address): **SİM CAM SAN. VE DIŞ. TİC. A.Ş.  
Sanayii Yolu Cad.No.27, Kurtköy/Pendik/İSTANBUL, Turkey**

Producer (address): **SİM CAM SAN. VE DIŞ. TİC. A.Ş.  
Sanayii Yolu Cad.No.27, Kurtköy/Pendik/İSTANBUL, Turkey**

Place of test performance : VTÚ, s.p., Slavičín, Czech Republic

Date of sample receiving : 2017-11-27

Date of test performance : 2017-12-06

Date of issue : 2017-12-14

Number of pages : 4

Page No. : 1

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 the report reproduced whole only.

<b>No. : 339B / 2017</b>	<b>Number of pages : 4</b>
	<b>Page No. : 2</b>

#### **Normative foundations :**

ČSN EN 1063 (2000): Glass in building - building - Security glazing – Testing and classification of resistance against bullet attack

#### **Sampling :**

Following test specimens with dimensions 500x500 mm were supplied to the bullet-resistance test :

Notes:

- composition is given from external (attacked) to internal surface
- total measured thickness 83,3 - 83,6 mm

#### **Metrological provision of tests :**

The test was carried out in accredited testing laboratory No. 1128 – VTÚ, s.p. in Slavičín. Calibrated measuring gauges were used to the testing. Bullet velocity was measured by the calibrated optical gates SH-95.

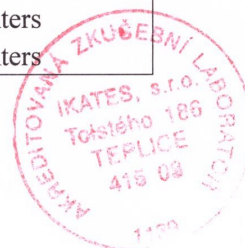
Test was performed using of pressure measurement barrel H.3347 Used ammunition: FN Belgium, 7,62x51 mm FJ/PB/HC1, bullet mass 9,8 g, test range 10 mm, reference velocity  $820 \pm 10$  m/s.

#### **Test results :**

##### **Bullet resistance (ČSN EN 1063) Class : BR7 NS**

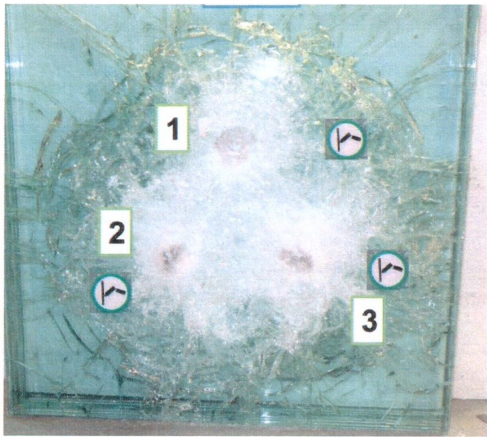
specimen No.	shot No.	bullet velocity (m/s)	state after shot
1	1	817,7	no penetration, no splinters
	2	821,8	no penetration, no splinters
	3	819,2	no penetration, no splinters
2	1	823,7	no penetration, no splinters
	2	822,2	no penetration, no splinters
	3	823,6	no penetration, no splinters
3	1	824,0	no penetration, no splinters
	2	827,2	no penetration, no splinters
	3	820,3	no penetration, no splinters

**Classification: EN 1063 BR7-NS**

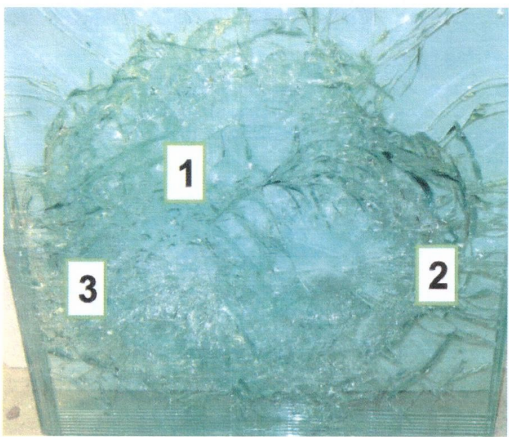


No. : 339B / 2017	Number of pages : 4 Page No. : 3
-------------------	-------------------------------------

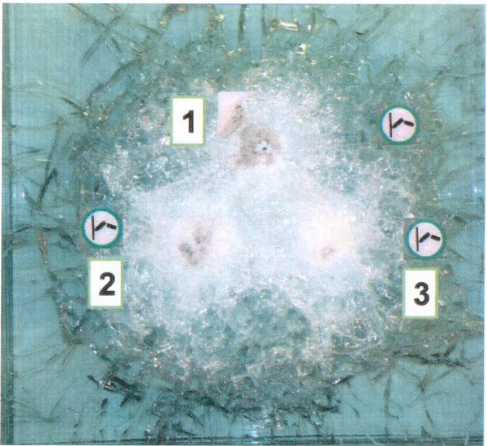
sample No.1  
attack face



protected face



sample No.2  
attack face



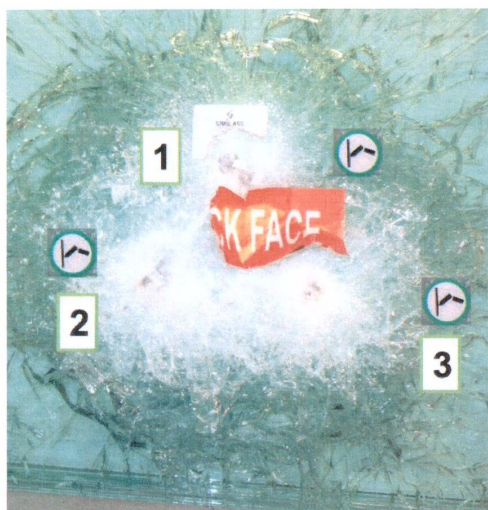
protected face



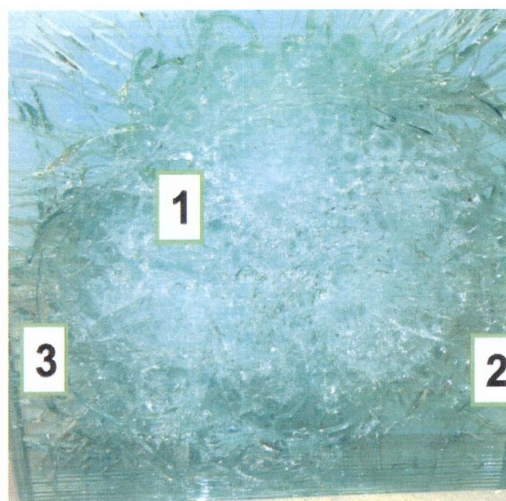


No. : 339B / 2017	Number of pages : 4 Page No. : 4
-------------------	-------------------------------------

specimen No.3  
attack face



protected face



**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 the Czech language.

**Distribution list :**

2 x SİM CAM SAN. VE DIŞ. TİC. A.Ş.

1 x IKATES, s.r.o. (archive)

**Report was prepared by :**

**For correctness and validity of report is responsible :**  
\_\_\_\_\_ end of the test report \_\_\_\_\_

**Michal Hnilicka**

