

Test report

Number: 2018-11-4922-03

Replace test report 2018-11-4922-01

Client: TPI All Seasons Company Limited
26/56 TPI Tower, Chan Tat Mai Rd.
10120 Tungmahamek, Sathorn, Bangkok
Thailand

Comission: Classification of laminated safety glass according to DIN EN 356

Number of pages: 5

Standards and test procedures:

DIN EN 356 Glass in building - Security glazing - Testing and classification
of resistance against manual attack

Rohrbach, 13. May 2019


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Dipl.-Ing. Robert Kirchner

The test results in this test report exclusively refer to the test material as indicated in this report.

Reprinting this test report requires our written approval.

Publishing this test report – even only extracts – is strictly prohibited.

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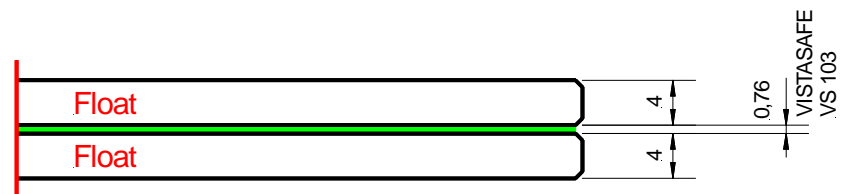
1 Test material

Basic glass: Float glass DIN EN 572-2

Processed to: Laminated safety glass

Test specimen: 4 Glass panes 900 x 1100 mm

Glass structure 4 Float / 0,76 VISTASAFE VS 103 / 4 Float



PK-Number PK 9 - 11

Receipt of specimen: 11. January 2019

2 Test equipment

- Digital caliper
- Digital micrometer
- Ball drop equipment according to EN 356


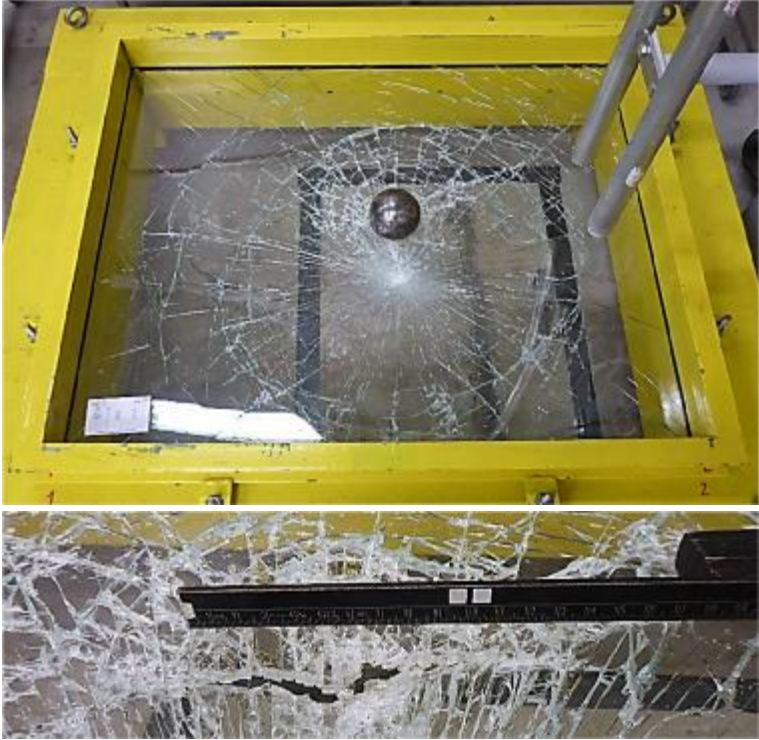
The testing device listed above is subject to the supervision for testing device.

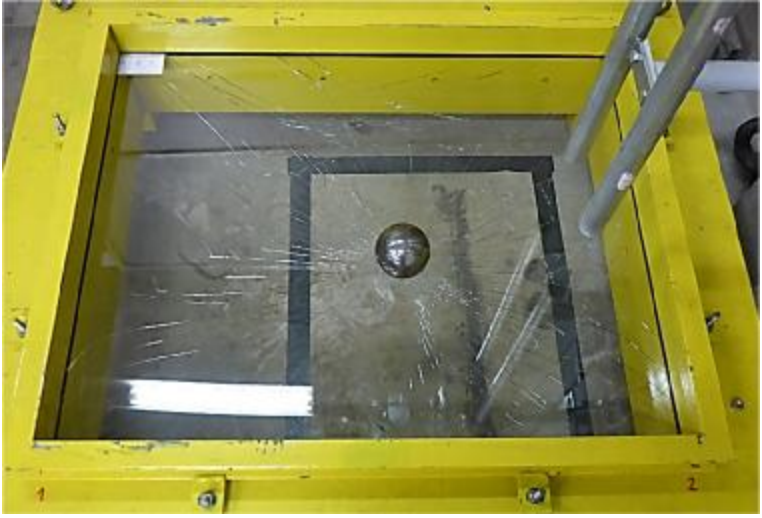

3 Tests and results


The testing had been performed on 07. February 2019 in our laboratory.

During the testing the room temperature conducted 19 °C. The test material had been stored for an adequate time under this conditions.

The testing led in the following results:

PK-Number: 9	category: P1A	drop height: 1500 mm
drop 1:	No fracture	
drop 2:	breakage of both glass panes 	
drop 3:	additional damage, 80 mm long crack 	

PK-Number: 10	category: P1A	drop height: 1500 mm
drop 1:	No fracture	
drop 2:	breakage of the lower glass pane 	
drop 3:	breakage of both glass panes 	

PK-Number: 11	category: P1A	drop height: 1500 mm
drop 1:	No fracture	
drop 2:	No fracture	
drop 3:	breakage of both glass panes 	

According to the test results, the tested product is to classify as follows:

Type	class
4 mm Float / 0,76 mm VISTASAFE VS 103 / 4 mm Float	P1A