

Test Report



Number	21-003863-PR01 (PB-H05-05-en-01)
Owner (Client)	GUTMANN P V B PLASTIC SHEETS MANUFACTURING L.L.C Dubai Investment Park 2 Dubai United Arab Emirates
Product	Laminated safety glass (LSG)
Designation	Shipping name: 13.52 mm Clear Laminated Glass
Details	Overall dimensions (W x H) 876 mm x 1938 mm ; Glass configuration TSG 6 mm / PVB-Foil 1.52 mm / TSG 6 mm ; Measured thickness 13.25 mm ; Nominal thickness 13.52 mm ; Surface weight 30 kg/m²
Special features	-/-
Order	Pendulum test as per EN 12600
Contents	The test report contains a total of 4 pages and annexes (4 pages).
Note	The test report shall only be published in its unabbreviated form. The "Guidance Sheet for the Use of ift Test Docu- ments" applies.

Ve-PB0-4390-en/ (01.11.2019

No. 21-003863-PR01 (PB-H05-05-en-01) dated 05.05.2022
Owner (client) GUTMANN P V B PLASTIC SHEETS MANUFACTURING L.L.C, Dubai (United Arabic Emirates)



Pendulum test as per EN 12600

1 Execution

1.1 Sampling and product description

The following details have been presented to ift:

Sampler: GUTMANN P V B PLASTIC SHEETS MANUFACTURING L.L.C Dubai (United Arabic Emirates)
Sampling date: 07.02.2022
Evidence: A sampling report has been presented to ift.
Date of delivery: 08.04.2022
Description: For product identification the specimen tested is described/represented in the Annex. Material specifications, item numbers and other company-specific descriptions are details provided by the client and will be checked for plausibility by ift.

Test specimen no.: 21-003863-PK01 / WE: 55893-001

1.2 Basic documents *) of the procedures

EN 12600:2002 - 11

Glass in building - Pendulum test - Impact test method and classification for float glass

*) and the relevant national versions, e.g. DIN EN

1.3 Short description of the procedures

Pendulum test according to EN 12600:2002-11

This test comprises the pendulum test for the impact test and classification for flat glass. A test specimen made of glass was clamped into a vertical frame and loaded with a free swinging pendulum with a mass of (50 ± 0.1) kg. The pendulum was dropped on to the test specimen from different heights, depending on the category to be tested. Subsequently, the test specimen was examined for breakage and punctures.



Pendulum test as per EN 12600

2 Detailed results

Pendulum test according to EN 12600:2002-11

Project-No. 21-003863-PR01
 Basis EN 12600:2002-11
 Glass in building - Pendulum test - Impact test method and classification for float glass

Test equipment PstA/020292 - Zwillingsreifen nach EN 12600
 Pst/022836 - Pendelschlag nach EN 12600

Test specimen 13.52 mm Clear Laminated Glass (6 mm / 1.52 mm / 6 mm)
 Test specimen No. 55893
 Date of test 04.05.2022
 Test engineer in charge Stefan Hehn
 Test engineer Stefan Hehn

Implementation of tests
 Deviations There have been no deviations from the test method as specified in the standard/basis.

Ambient conditions The ambient conditions are in accordance with the standard/basis requirements.

Measurement data/Results

Test specimen N°	Drop height 190 mm	Drop height 450 mm	Drop height 1200 mm	Comments
55893-007	No breakage	No breakage	No breakage	Breakage pattern was determined according to Annex C
55893-008	No breakage	No breakage	No breakage	Breakage pattern was determined according to Annex C
55893-009	No breakage	No breakage	No breakage	Breakage pattern was determined according to Annex C
55893-010	No breakage	No breakage	No breakage	Breakage pattern was determined according to Annex C

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Pendulum test as per EN 12600

3 Summary

3.1 Result

The test results are shown in the measuring data sheet, see item "Detailed results".

3.2 Instructions for use

This test does not allow any statement to be made on further characteristics of the present structure regarding performance and quality.

The test was performed according to standard and the details for identification of the test specimen are complete; on the basis of this Test Report an "ift-Nachweis" (Evidence) can be issued.

ift Rosenheim

05.05.2022

A handwritten signature in blue ink, appearing to read 'Stefan Hehn'.

Stefan Hehn, Dipl.-Ing. (FH)
Deputy Head of Testing Department
Security/Safety Testing

A handwritten signature in blue ink, appearing to read 'K. El Harda'.

Khalid El Harda, Dipl.-Ing. (FH)
Operating Testing Officer
Security/Safety Testing

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Die Beschreibung des geprüften Probekörpers dient der normkonformen Identifizierung des Produkttyps, für den die festgestellten Werte gelten. Alternativ zur vorgegebenen tabellarischen Datenerfassung kann die Beschreibung auch in Form von technischen Zeichnungen, Verarbeitungsrichtlinien, Stücklisten etc. erfolgen. Zusätzliche Produktdetails bitte ergänzen.

Die Angaben sind Voraussetzung für die Erstellung eines ift-Nachweises. Nur bei Angabe aller in diesem Dokument angeforderten Daten ist ggf. eine nachträgliche Gutachtliche Stellungnahme möglich. Alle Angaben des Auftraggebers werden vom ift auf Plausibilität geprüft; ggf. festgestellte Abweichungen und/oder ergänzende Feststellungen werden dokumentiert.

The description of the specimen to be tested serves to identify, in conformity with the standards, the product type, for which the values determined will apply. Alternatively to the specified tabulated data collection, the description may also be made by technical drawings, processing instructions, parts lists, etc. Please supplement additional product details.

The details are the precondition for issuing the "ift-Nachweis". Only upon provision of all requested data subsequently requested Expert Statements may be issued. All details provided by the client will be checked for plausibility by ift, any deviations observed and/or additional findings will be documented.

Wareneingang-Nr.: 55893

ID of goods received :

ift Mitarbeiter: Stefan Hehn

ift staff member :

Alle Maßangaben in mm

All dimensions in mm

Eigenschaft Characteristic	Angaben des Auftraggebers (unverändert) Information provided by client (unchanged)	Festgestellte Abweichungen bei ift-Kontrolle Deviations observed at ift-check
Produkt / Bauart / Komponente (Einscheibensicherheitsglas ESG / heißgelagertes Einscheibensicherheitsglas ESG-H / Teilvorgespanntes Verbundglas TVG / Floatglas / Verbundsicherheitsglas VSG / Mehrscheibenisolierverglas MIG) Product / design / component (Thermally toughened safety glass TSG / Heat soaked thermally toughened safety glass TSG-H / Heat strengthened glass HSG / Float glass / Laminated safety glass LSG / Insulating glass unit IGU)	13.52 mm CELAR LAMINATED GLASS CONSIST OF 6 mm CLEAR GLASS + 1.52 CLEAR PVB + 6 mm CLEAR GLASS	
Hersteller, Standort Manufacturer, site	GUTMANN PVB PLASTIC SHEETS MANUFACTURING L.L.C.	
Bezeichnung / Typ / Art.-Nr. Designation / type / item no.	6 QTY FROM EACH TYPE	
Basismaterial Basis material	GLASS and PVB FILM	Glass from TSG
Außenmaß (L x B)¹ Overall dimensions (L x W) ¹	EACH SAMPLE 876 mm x 1938 mm	OK
Gesamtdicke Total thickness	13.52 mm	13.25 mm
Flächengewicht (in kg/m²) Mass per unit area (in kg/m ²)	30	
Aufbau Configuration	6 mm CLEAR GLASS + 1.52 CLEAR PVB + 6 mm CLEAR GLASS	

¹ Anforderungen requirements:

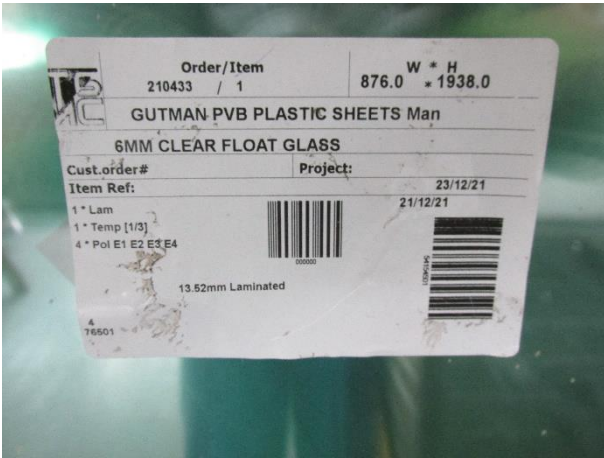
in EN 12600 in EN 12600: 876 (± 2) x 1938 (± 2)

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Eigenschaft Characteristic	Angaben des Auftraggebers (unverändert) Information provided by client (unchanged)	Festgestellte Abweichungen bei ift-Kontrolle Deviations observed at ift-check
Beschichtung Coating	CLEAR	
Emissionsgrad Emissivity	CLEAR	
Besonderheiten Special features	NONE	
Folie (nur bei VSG) Films (for laminated safety glass (LSG) only)	1.52 PVB CLEAR	
Hersteller Manufacturer	GUTMANN PVB PLASTIC SHEETS MANUFACTURING L.L.C.	
Bezeichnung der Folie Product designation film	SAFETY GLASS	
Aufbau Configuration	1.52 PVB CLEAR	
Dicke Thickness		
Folienanzahl Number of films	ONE FILM 1.52 PVB	
Kantenbearbeitung (roh / gesäumt / maßgeschliffen mit blanken Stellen / maßgeschliffen ohne blanke Stellen / poliert) Edge finishing (crude / arrissed / ground to size with blank spots / ground to size without blank spots / polished)	POLISHED	OK

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Picture 1 Glass label



Picture 2 Measured thickness



Picture 3 Sample before the pendulum impact



Picture 4 Test sample after 190 mm drop height

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Picture 5 Test sample after 450 mm drop height



Picture 6 Test sample after 1200 mm drop height



Picture 7 Manual grit according to appendix C