Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

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European Technical Assessment ETA-18/0340 of 19 July 2018

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	"Fini Curve Float" and "Fini Curve Safe"
Product family to which the construction product belongs	Thermally curved annealed glass and laminated safety glass made of thermally curved annealed glass
Manufacturer	Finiglas Veredelungs GmbH Wierlings Hook 5 48249 Dülmen DEUTSCHLAND
Manufacturing plant	Finiglas Veredelungs GmbH Wierlings Hook 5 48249 Dülmen
This European Technical Assessment contains	8 pages including 2 annexes which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 300008-00-0404

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Specific Part

1 Definition of the product

This European Technical Assessment (ETA) applies to thermally curved annealed glass "Fini Curve Float" and to laminated safety glass made of thermally curved annealed glass "Fini Curve Safe". The basic product is soda lime silicate glass according to EN 572-9. This basic product is thermally curved with circular uniaxial shape to achieve a circular-cylindrical form. The minimum radius of the curved glass differs depending on the thickness of the glass, which amounts from 3 mm up to 15 mm respecting the tolerances according to EN 572-2. The available dimensions are provided in Annex A. As edge working arrissed edges are required. The basic product may be coated glass according to EN 1096-4. The interlayer for the laminated safety glass is made of polyvinyl butyral (PVB) with a minimum thickness of 0.76 mm and a maximum thickness of 3.04 mm. For the laminating process it is essential that the panes are curved with an identical shape.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The performances given in Section 3 are only valid if the thermally curved annealed glass "Fini Curve Float" and the laminated safety glass made of thermally curved annealed glass "Fini Curve Safe" are used in compliance with the specifications and conditions given in the Annexes A and B.

The products are intended to be used vertically in façades with an inclination angle ≤ 10° and supported linearly.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of "Fini Curve Float" and "Fini Curve Safe" of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire of "Fini Curve Float"	A 1
Reaction to fire of "Fini Curve Safe"	No performance determined

3.2 Safety and accessibilty (BWR 4)

Essential characteristic	Performance
Characteristic tensile bending strength of "Fini Curve Float" respecting the edge influence	35 N/mm^2
"Fini Curve Float": Residual stresses	No residual stresses according to the scratching test
"Fini Curve Safe": PVB-interlayer	Tensile strength: > 20 N/mm^2 Elongation at rupture: > 250 %
"Fini Curve Safe": Durability and appearance	Tests passed according to EN ISO 12543-4, -5, -6

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with EAD 300008-00-0404 the applicable European legal act is: 2000/245/EC[1].

The systems to be applied are:

- System 3 for "safety-in –use" risk - Table (4/6) of ANNEX III of Decision 2000/245/EC
- System 4 for "other use" - Table (6/6) of ANNEX III of Decision 2000/245/EC

In addition, with regard to e.g. reaction to fire for products covered by this EAD the applicable European legal act is: 2003/656/EC[2]

The systems to be applied are:

- System 1, 3, 4

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

6 Reference list

As far as no edition date is given in the list of standards thereafter, the standard in its current version is of relevance.

EN 572-2:	Glass in building – Basic soda lime silicate glass products – Part 2: Float glass
EN 572-9	Glass in building – Basic soda lime silicate glass products – Part 9: Evaluation of conformity / Product standard
EN 1096-4	Glass in building – Coated glass – Part 4: Evaluation of conformity / Product standard
EN 13501-1	Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests
EN ISO 12543-4:2011	Glass in building – Laminated glass and laminated safety glass – Part 4: Test methods for durability
EN ISO 12543-5	Glass in building – Laminated glass and laminated safety glass – Part 5: Dimensions and edge finishing

[1] Official Journal of the European Communities no L 77/17 of 28.3.2000
[2] Official Journal of the European Communities no L 231/15 of 17.9.2003

EN ISO 12543-6:	Glass in building – Laminated glass and laminated safety glass – Part 6: Appearance

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Annex A

Annealed glass: Thickness, radius, dimensions

Oven group 1	**Annealed glass**	
Nominal thickness [mm]	Minimum radius [mm]	Maximum size [mm]
3	100	1900 x 3300
4	100	1900 x 3300
5	150	1900 x 3300
6	200	1900 x 3300
8	250	1900 x 3300
10	300	1900 x 3300
12	400	1900 x 3300
15	600	1900 x 3300
Oven group 1	**Annealed glass with coating Emissivity ε: 0,25 ≥ ε > 0,10**	
Nominal thickness [mm]	Minimum radius [mm]	Maximum size [mm]
4	150	1900 x 3300
6	250	1900 x 3300
8	250	1900 x 3300
10	300	1900 x 3300
12	400	1900 x 3300
Oven group 2	**Annealed glass**	
Nominal thickness [mm]	Minimum radius [mm]	Maximum size [mm]
3	100	2850 x 3850
4	100	2850 x 3850
5	150	2850 x 3850
6	200	2850 x 3850
8	250	2850 x 3850
10	300	2850 x 3850
12	400	2850 x 3850
15	600	2850 x 3850
Oven group 2	**Annealed glass with coating Emissivity ε: 0,25 ≥ ε > 0,10**	
Nominal thickness [mm]	Minimum radius [mm]	Maximum size [mm]
4	150	2850 x 3850
6	250	2850 x 3850
8	250	2850 x 3850
10	300	2850 x 3850
12	400	2850 x 3850
Oven group 2	**Annealed glass with coating Emissivity ε: 0,10 ≥ ε**	
Nominal thickness [mm]	Minimum radius [mm]	Maximum size [mm]
4	200	2850x 3850
6	300	2850x 3850
8	300	2850x 3850
10	400	2850x 3850
12	500	2850x 3850

Oven group 3	**Annealed glass**	
Nominal thickness [mm]	Minimum radius [mm]	Maximum size [mm]
3	100	3210 x 6000
4	100	3210 x 6000
5	150	3210 x 6000
6	200	3210 x 6000
8	250	3210 x 6000
10	300	3210 x 6000
12	400	3210 x 6000
15	600	3210 x 6000
Oven group 3	**Annealed glass with coating Emissivity ε: 0,25 ≥ ε > 0,10**	
Nominal thickness [mm]	Minimum radius [mm]	Maximum size [mm]
4	150	3210 x 6000
6	250	3210 x 6000
8	250	3210 x 6000
10	300	3210 x 6000
12	400	3210 x 6000
Oven group 3	**Annealed glass with coating Emissivity ε: 0,10 ≥ ε**	
Nominal thickness [mm]	Minimum radius [mm]	Maximum size [mm]
4	200	3210 x 6000
6	300	3210 x 6000
8	300	3210 x 6000
10	400	3210 x 6000
12	500	3210 x 6000

Annex B

Details for structural design calculation and installation

The verification of durability is part of testing the essential characteristics. Durability is only ensured if the specifications of intended use according to the following requirements and provisions are taken into account.

For the structural design calculation the design codes of the Member State, in which the panes will be used, shall be respected.

A positive compound effect for shear stress between two panes of the laminated safety glass is subject of national safety requirements and may be considered in the structural design calculation according national regulations.

The performance for using the curved glass as barrier against falling down is not provided by this ETA.