Technical Construction File

EN 12150-1:2015+A1:2019, EN 12150-2:2004

Glass in building Thermally toughened soda lime silicate safety glass - Part 1: Definition and description Part 2 Evaluation of conformity Product standard

TCF Reference No..... :	TCGD21071932328
Prepared by (+ signature)..... :	Stephen Zhang / Testing Engineer .....
Approved by (+ signature)..... :	Cosco Yu / Technical Manager .....
Date of issue..... :	July 20,2021
The third party..... :	Shanghai Global Testing Services Co., Ltd.
Address..... :	Floor 2nd, Building D-1, No. 128, Shenfu Road, Minhang District, Shanghai, China.
Reviewing procedure ..... :	CE
Applicant's name..... :	Dongguan Safety Glass Products Co., Ltd.
Address..... :	Block B319, No.13 Fengxing Road, Lingtou Community, Qiaotou Town, Dongguan, China
Manufacturer's name..... :	Same as applicant
Address..... :	
Factory's name..... :	Same as manufacturer
Address..... :	
TCF specification:	
Standard..... :	☒ EN 12150-1:2015+A1:2019, EN 12150-2:2004
Non-standard TCF method…….. :	N/A
Review item description..... :	Tempered Laminated Glass
Trade Mark..... :	-
Model/Type reference..... :	5mm, 6mm, 8mm, 10mm, 12mm, 15mm, 19mm, 11.52mm, 13.52mm, 21.52mm, 25.52mm, 31.52mm
Ratings (for the Electrical Equipment) …….. :	5mm, 6mm, 8mm, 10mm, 12mm, 15mm, 19mm, 11.52mm, 13.52mm, 21.52mm, 25.52mm, 31.52mm
Other information	N/A

Possible review case verdicts:	
-review case does not apply to the test object..... :	N/A
- review object does meet the requirement..... :	P(Pass)
- review object does not meet the requirement.....:	F(Fail)
Reviewing.....:	
Date of receipt of review item.....:	July 15,2021
Date (s) of performance of reviews..... :	July 15,2021 to July 20,2021

General remarks:

The review results presented in this report relate only to the object reviewed.
This report shall not be reproduced, except in full, without the written approval of the Issuing the third party

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a comma (point) is used as the decimal separator.

General notes on tests:

This review report include the following page(s):

National deviation of EU have been considered.

Annex I: Photo Documentation, **5** page(s).

EN 12150-1			
6	Dimensions and tolerance		P
6.1	Nominal thickness and thickness tolerances the nominal thickness and thickness tolerance are give those given in the relevant product standard, some of which are reproduced in table 1 in this standard.		P
6.2	Width and length (sizes)		P
6.2.1	General when thermally toughened soda lime silicate safety glass dimensions are quoted for rectangular panes, it shall be made clear which dimension is the width, B, and which is the length, H, when related to its installed position.		P
6.2.2	Maximum and minimum sizes		-
	For maximum and minimum sizes the manufacturer should be consulted.		-
6.2.3	Tolerance and squareness The nominal dimension for width and length being given, the tolerances of finished pane sizes shall comply the tolerances given in table 2 of this standard.		P
6.2.4	Edge deformation produced by vertical toughening For vertical toughening glass, the centres of the tong marks are situated up to a maximum of 20mm in from the edge. A deformation of the edge less than 2mm can be produced in the region of the tong mark and there may also be an area of optical distortion. These deformations are included in the tolerances in table 2 of this standard.		N/A
6.3	Flatness		-
	The maximum allowable values for the overall bow, when measured according to 6.3.2, and local bow, when measured according to 6.3.3, for glass without holes and /or notches and/or cut-out are given in table 3 of this standard.		P
7	Edge work, holes, notches and cut-outs.		P
7.1	Warning Thermally toughened soda lime silicate safety glass should not be cut, sawed, drilled or edge worked after toughening.		P
7.1	Edge working of glass for toughening Every glass which is to be thermally toughened han to be edge worked prior to toughening.		P
7.3	Profiled edges Various other edge profiles can be manufactured with different types of edgework.		P
7.4	Round holes		
	This standard considers only round holes in glass that is not less than 4 mm nominal thickness.		N/A
	The diameter of holes, limitations on position of holes, tolerances on hole diameters and tolerances on position of holes should comply this standard.		-
7.5	Notches and cut-outs		-
	Many configurations of notches and cut-outs can be supplied. The manufacturer should be		N/A

	consulted about edge working of notches and cut-outs.		
7.6	Shaped panes Many non-rectangular shapes can be manufactured and the manufacturer should be consulted.		P
8	Fragmentation test The fragmentation test determines whether the glass breaks in the manner prescribed for a thermally toughened soda lime silicate safety glass. The minimum particle count values: Nominal thickness 3mm: minimum 15; Nominal thickness 4-12mm: minimum 40. The length of the longest particle shall not exceed 100mm.		P
9	Other physical characteristic		P
9.3	Thermal durability The mechanical properties of thermally toughened soda lime silicate safety glass are unchanged for continuous service up to 250°C and are unaffected by sub-zero temperatures. Thermally toughened soda lime silicate safety glass is capable of resisting both sudden temperature changes and temperature differentials up to 200K.		P
9.4	Mechanical strength		-
	The mechanical strength of the tempered glass was determined according to EN 1288-3. For the float type of glass, the values for mechanical strength shall more than 120 N/mm:		P
9.5	Classification of performance under accidental human impact.		-
	Pendulum body impact resistance shall be determined and classified in accordance with EN12600……:		P
10	Marking Thermally toughened soda lime silicate safety glass conforming to this European Standard shall be permanently marked. The marking shall give the following information:		P
	- name or trademark of manufacturer;		P
	- number of this European Standard: EN 12150.	EN 12150	P

EN 12150-2			
Clause	Requirement – Test	Result	Verdict
4	Requirements		-
4.3.2.1	Safety in the case of fire - Resistance to fire Fire resistance shall be determined and classified in accordance with EN 13501-2.		P
4.3.2.2	Safety in the case of fire - Reaction to fire Thermally toughened soda lime silicate safety glass products are products/materials that do not require to be tested for reaction to fire		P
4.3.2.5	Safety in use - Explosion resistance: impact behaviour and resistance to impact Explosion resistance shall be determined and classified in accordance with EN 13541.		P
4.3.2.6	Safety in use - Burglar resistance: shatter properties and resistance to attack Burglar resistance shall be determined and classified in accordance with EN 356.		P
4.3.2.7	Safety in use - Pendulum body impact resistance: shatter properties (safe breakability) and resistance to impact Pendulum body impact resistance shall be determined and classified in accordance with EN 12600.		P
4.3.2.8	Safety in use - Mechanical resistance: Resistance against sudden temperature changes and temperature differentials The resistance against sudden temperature changes and temperature differentials is a generally accepted value that is given in EN 12150-1 and shall be ensured by compliance with this document.		P
4.3.2.9	Safety in use - Mechanical resistance: Resistance against wind, snow, permanent load and/or imposed loads of the glass unit The mechanical resistance of thermally toughened soda lime silicate safety glass is a characteristic value that is given in EN 12150-1 and shall be ensured by compliance with this document.		P
4.3.2.10	Protection against noise - Direct airborne sound reduction The sound reduction indexes shall be determined in accordance with EN 12758. However, the information supplied with the incoming glass may be used as the thermal toughening process does not alter the values.		P
4.4	Durability When products conform to the definition of thermally toughened soda lime silicate glass as 4.2 then the characteristics' performances in 4.3.2 are ensured during an economically reasonable working life.		P

4.5	Dangerous substances Materials used in products shall not release any dangerous substances in excess of the maximum permitted levels specified in a relevant European Standard for the material or permitted in the national regulations of the Member State of destination.		P

Type of equipment, model: Tempered Laminated Glass,
5mm, 6mm, 8mm, 10mm, 12mm, 15mm, 19mm, 11.52mm, 13.52mm, 21.52mm, 25.52mm, 31.52mm

Details of:

View:

[X] general

[ ] front

[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Details of:

View:

[X] general

[ ] front

[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Details of:

View:

[X] general

[ ] front

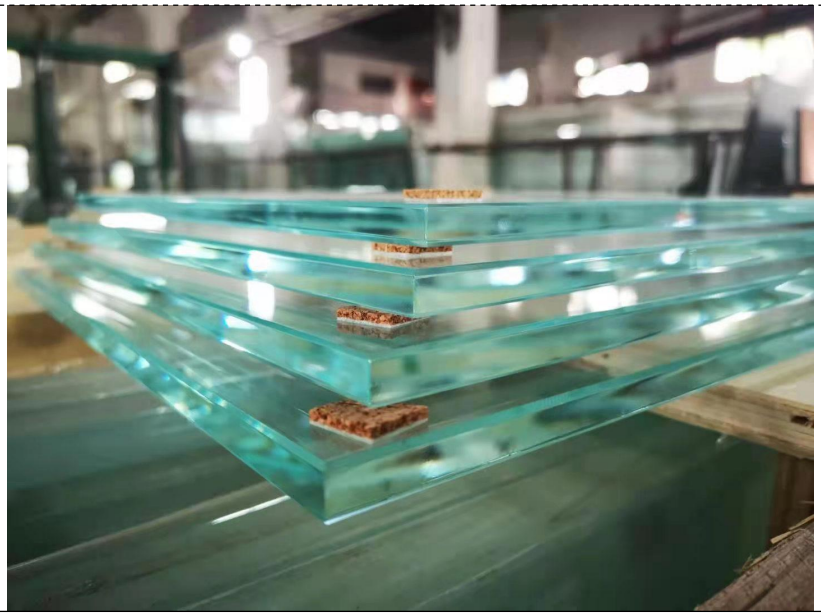
[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Details of:

View:

[X] general

[ ] front

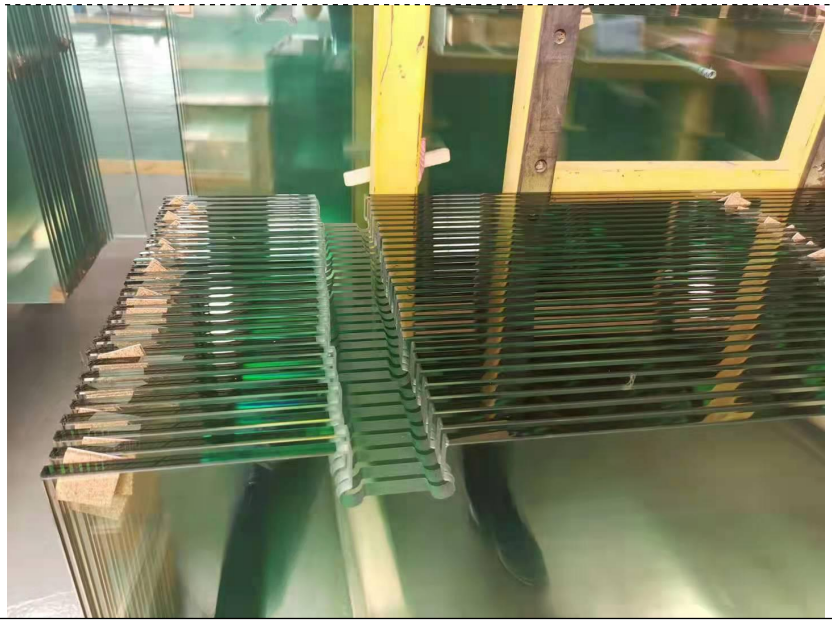
[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Details of:

View:

[X] general

[ ] front

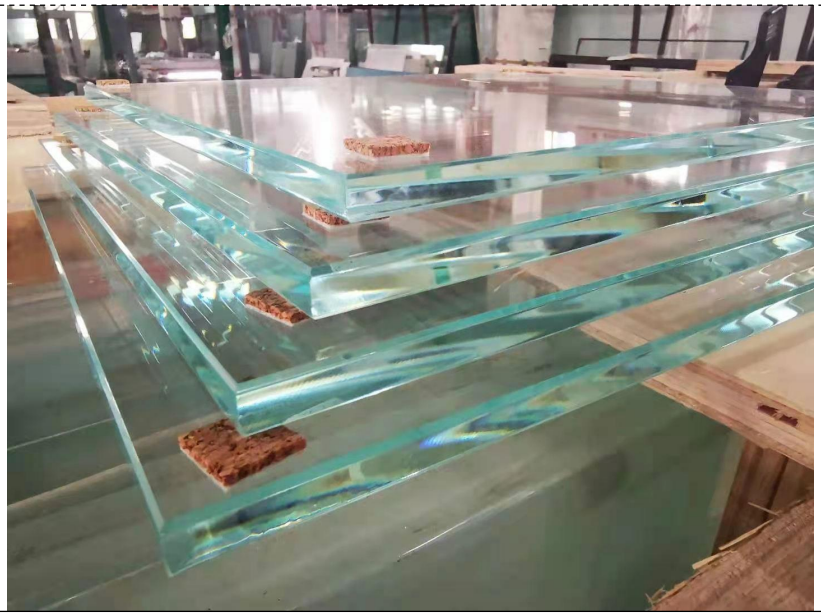
[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Details of:

View:

[X] general

[ ] front

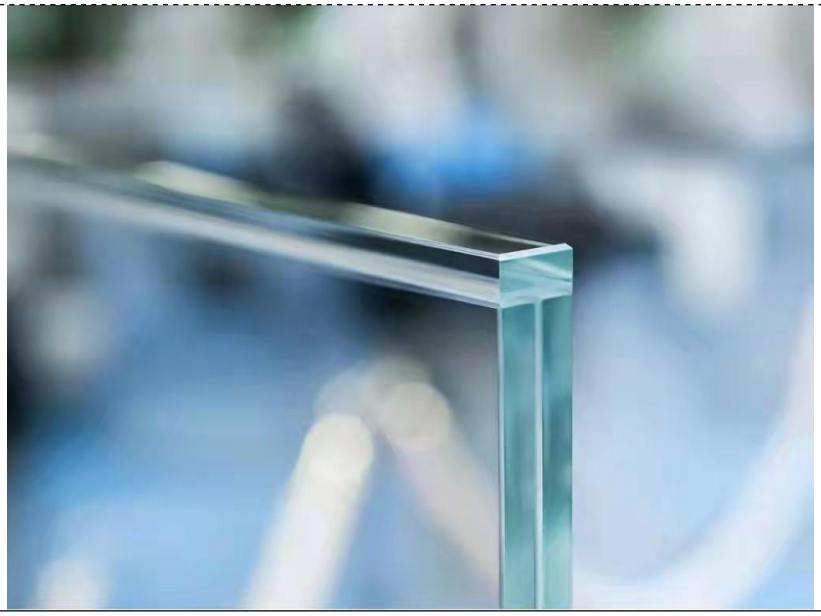
[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Details of:

View:

[X] general

[ ] front

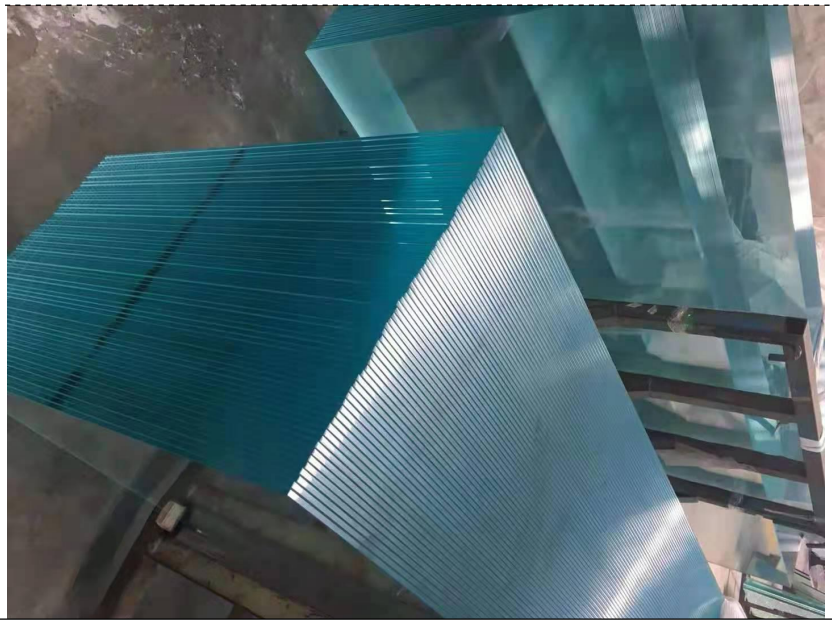
[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Details of:

View:

[X] general

[ ] front

[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



Details of:

View:

[X] general

[ ] front

[ ] rear

[ ] right

[ ] left

[ ] top

[ ] bottom



- End of Annex I -