QM333

Certification scheme for thermally toughened soda lime silicate safety glass (TSG) as per EN 12150-2:2004

Product quality
Thermally toughened soda lime silicate safety glass
EN 12150-2:2004
No.: 693 XXX

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Accredited Certification Body
Products + Services
EN ISO/IEC 17065

DAkkS Deutsche Akkreditierungsstelle D-ZE-11349-01-00

1 Purpose and Scope

This certification scheme sets out the procedures and requirements for marking thermally toughened soda lime silicate safety glass, henceforth referred to as TSG, with the “ift-certified” label. The product standard EN 12150-2:2004 forms the basis for the certification.

Based on the certification and testing procedures specified below, the key product properties of TSG are ensured. Products with the performance characteristics of fire protection, explosion resistance and bullet resistance are not part of the certification scheme.

The certification scheme is based on the harmonised product standard. National building regulations requirements can be taken into account through additional agreements.

The provisions determined by ift-Q-Zert in the “General provisions for the certification of products” are set out in detail and supplemented by the certification scheme.

2 Basis of testing and certification

- The harmonised product standard EN 12150-2:2004 in its current version as well as its references,
- EN ISO/IEC 17065,
- “General provisions for the certification of products” by ift-Q-Zert,

3 Terms and definitions

3.1 Manufacturer

Organisation that uses glass, which meets the standards for

- Soda-lime silicate glass according to EN572-1:2012,
- Float glass according to EN 572-2:2012,
- Drawn sheet glass according to EN 572-4:2012,
- Patterned glass according to EN 572-5:2012 and
- Coated glass according to EN 1096-1:2012.

to manufacture thermally toughened soda lime silicate safety glass (TSG). The glass can also be enamelled according to EN 12150-1:2015.

3.2 Thermally toughened soda lime silicate safety glass (TSG)

Glass is heated above a defined temperature, then quickly cooled in a controlled manner, which creates a permanent stress distribution in the glass, giving it a much higher resistance to mechanical and thermal stresses.

3.3 ift-Product Passport

Summary report, issued by ift Rosenheim, which confirms the performance characteristics of the TSG specified by the manufacturer, determined by testing, calculation or assessment pursuant to EN 12150-2:2004.

3.4 ift-Certificate of Conformity

A certificate issued by ift Rosenheim, which confirms compliance with the requirements of the European product standard to the manufacturer of a building product.

4 Certification procedure

- Conclusion of a certification and surveillance contract,
- Definition of the scope of product certification/certificate,
- Evaluation of the test evidences or the product documentation (functional values of the components and supplier products),
- if necessary, initial test (in ift laboratory),
- Compilation of ift-Product Passport,
- Initial audit of production site,
- Performance of a standard test (verification of the FPC),
- If the evaluation is positive: Issue of ift-Certificate of Conformity

4.1 Initial test

As part of the initial test, evidence of all product properties adopted in the certification is to be provided by the manufacturer according to the applicable product, testing and/or classification standards.

The necessary test certificates are to be prepared by a testing body recognised by ift-Q-Zert.

The thermally toughened soda lime silicate safety glass must meet the specifications of EN 12150-1:2015.

Testing the mechanical strength and assessing the fracture pattern is done according to Section 5.2.2.2 of EN 12150-2:2004

An initial test for patterned glass shall be performed in accordance with clause 5.2.2.2 of EN 12150-2:2004 on the weakest patterned glass type as a representative specimen.

For coated TSG, the radiometric data and the emission level shall also be determined as part of the initial test after the toughening process. A valid certificate verifying the durability of the coating pursuant to EN 1096 must be submitted by a testing body recognised by ift-Q-Zert.

The initial test is carried out in the above-mentioned scope at each tempering oven of the manufacturing plant.

4.2 ift-Product Passport

The manufacturer of TSG receives an ift-Product Passport after conclusion of the monitoring and certification contract and the positive evaluation of the test evidences within the initial test (see 4.1). The ift-Product Passport or its elongation is issued for a period of 3 years. Recertification is performed every 3 years. Within this recertification, the validity of the existing evidence and documentation is checked.

4.3 Initial audit

The content and purpose of the initial visit are defined and described by ift-Q-Zert in the “General provisions for the certification of products”.

4.4 ift-Certificate of Conformity

Once a year, as part of the standard test (see 5.1), the requirements for continuity of the ift-Certificate of Conformity are checked and supplemented if necessary. The extension is granted for 3 years in each case.

5 External monitoring of the manufacturer

5.1 Regular inspection

The procedure and the content of the standard tests is based on the following policies:

- “General provisions for the certification of products” by ift-Q-Zert.

The standard test is carried out after the initial visit once a year.

If defects are identified as part of a standard test, these shall be rectified immediately, at the latest after 8 weeks, however.

5.2 Special test

If serious defects are found during a regular inspection, a special audit is carried out at the manufacturer's premises within 8 weeks of this regular inspection. Non-compliant products may not be placed on the market.

The manufacturer must immediately notify ift-Q-Zert in writing that the defects have been remedied.

A special audit can also be carried out if ift-Q-Zert has reliable information that allows conclusions to be drawn about systematically inadequate product quality.

6 Factory production control

The scope and the documentation of the factory production control is agreed between the manufacturer and ift-Q-Zert as part of the initial visit and is based on the specifications of product standard EN 12150-2:2004. A consistent quality of the TSG must be ensured. Further fundamental points regarding the factory production control are set out below:

- The manufacturer determines the scope, documentation and the applied procedures and methods,
- The manufacturer must introduce and document a procedure for the effective rectification (corrective measures) of identified defects. The same applies to customer complaints,
- As part of the external monitoring or the RE certification, the maintenance and the adjustment of the factory production control to new products or specifications is checked by ift-Q-Zert.

6.1 Test equipment monitoring

All test and measuring equipment is to be subjected to a test equipment monitoring process. The procedures for monitoring test equipment are determined by ift-Q-Zert as part of the initial visit.