



BELGIAN CONSTRUCTION CERTIFICATION ASSOCIATION
BCCA

Founded by : BBRI and SECO

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021 PROD

CERTIFICATE OF CONFORMITY



BB – 414 – 127 – 1279-02

BCCA declares that has been established that:

Glas-Fandel GmbH & Co KG
Saarstrasse 26-29
54634 BITBURG
GERMANY

takes the necessary measures in order to ascertain that the products:

Termo-bit with PS, airfilled: 1279.PSC
Termo-bit with PS, gas - Ci,o=85%: 1279.PSGC

manufactured in the factory located at:

Europane Glas GmbH – Graf Zeppelinstrasse 2 – 54634 BITBURG – GERMANY

is in conformity with the performances described in EN 1279-5.

The detailed product description is included in a product catalogue managed by the manufacturer and validated and certified by BCCA. The product groups and the technical control of the production system are written down in the annex of this certificate.

The certificate is delivered based on a study and an acceptance of the relevant initial type tests (ITT), executed on relevant samples taken from the production unit and on bases of an initial inspection of the production and the factory production control system (FPC).

BCCA confirms that the manufacturer applies a valid production control system and executes regular testing on samples taken from the production according to a fixed testing program. BCCA supervises the production and the production control system during the yearly audit of the FPC, periodical control of the internal control results and control tests in external laboratory.

On basis of the delivery and the maintenance of this certificate, the manufacturer is authorized to use the BENOR-logo as a means to attest the conformity of his product.

This certificate was first issued on **01.03.2010** and remains valid as long as the product is according to specification and/or the manufacturing conditions in the factory of the FPC itself are not modified significantly and the latest on **28.02.2013**.

Brussels, **29.10.2010**.

ir. B. De Blaere
General Manager

ANNEX TO THE CERTIFICATE OF CONFORMITY

N° BB – 414 – 127 – 1279-02

PRODUCTION DESCRIPTION

1. INSULATING GLASS UNITS

An "insulating glass unit" (I.G.U.) is an entity of two glasses, joint in a production unit. They can be assembled in different ways. The insulating glass unit has particular thermal insulating properties.

The insulating glass units covered by the BENOR certificate are assembled with a double barrier polyisobutylene – polysulfide. Between the two glasses there is a zone filled with dry air or an appropriate gas that improves the thermal and or acoustic properties (see fig. 1 and fig. 2).

The gas concentration, ascertained by the manufacturer is: $C_{i,o}=85\%$, $C_i=C_{i,o} (+10 \%, -5\%)$.

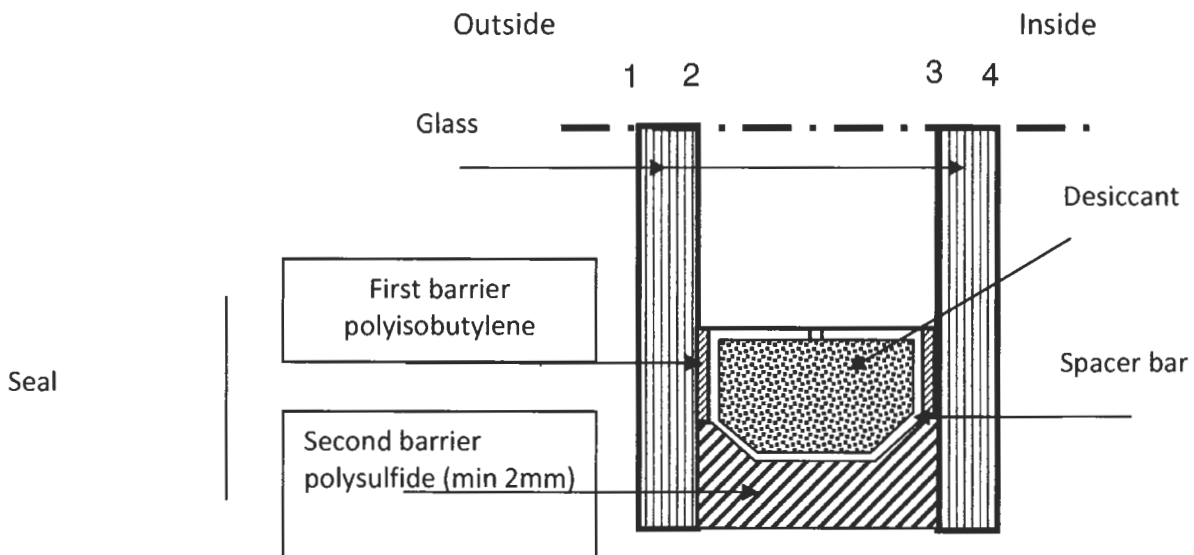


Fig.1

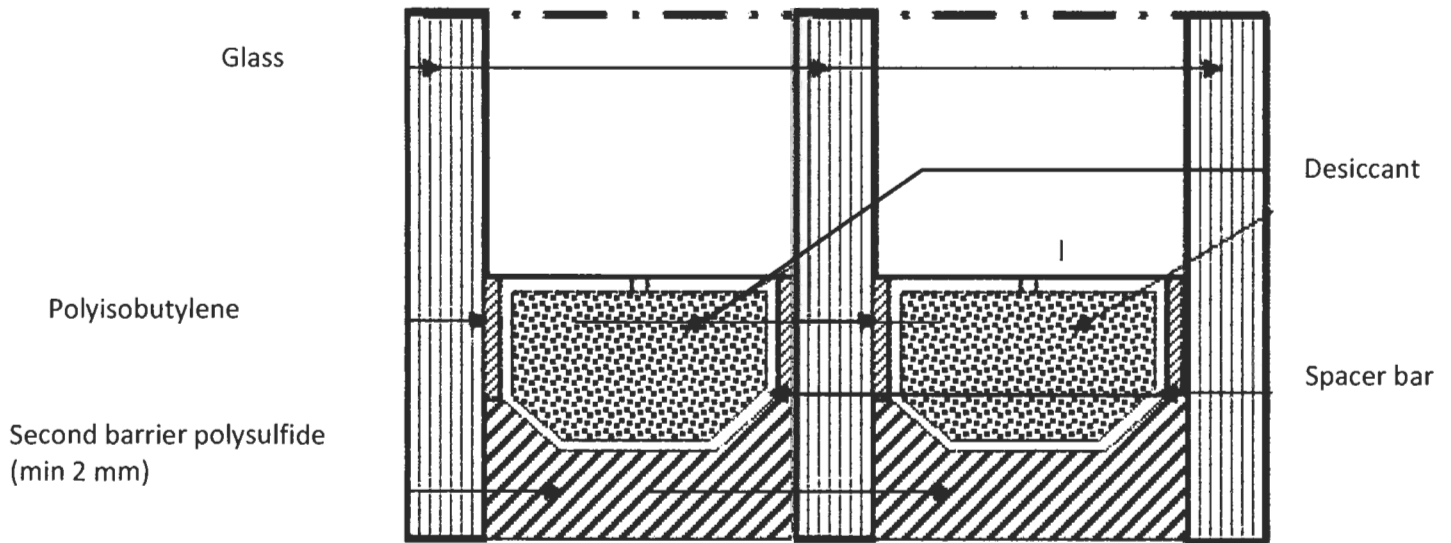


Fig
2

2. ELEMENTS

The manufacturer Glas Fandel GmbH & Co KG produces IGU's for different applications. The performances can be retrieved at the manufacturer and can be checked in the declaration tables on the website of the manufacturer via www.glas-fandel.de. Those performances are validated by BCCA.

The IGU's are composed of the product mentioned in § 3.

Each modification or substitution of components is assessed according to annex B of NBN EN 1279-1.

The maximum dimensions, as a function of the compositions, are withheld in the technical data sheet of the manufacturer.

Pyrolytic coatings or coatings applied according to the "sputtering magnetron" technique need to be in the position as specified in the product description of the manufacturer.

Inserts are possible.

3. MATERIALS

The insulating glass unit can be composed of the following materials:

- clear or in the mass colored float glass (NBN EN 572-1 en 2)
- patterned glass, patterns position 1 and/or 4 (NBN EN 572-5)
- thermally toughened glass (NBN EN 12150)
- toughened glass "heat soak" (NBN EN 14179-1)

- heat strengthened glass (NBN EN 1863)
- mat or sandblasted glass
- laminated glass (NBN EN ISO 12543)
- coated glass (NBN EN 1096 /ATG H).
- spacer bars in galvanised steel or in not-anodised aluminium
- joint keys and corner keys in galvanised steel, in not-anodised aluminium or in plastic
- desiccant: zeolite granulate 3 Angström with BUtgb approval (ATG H)
- inner and outer sealants:
 - First barrier: polyisobutylene
 - second barrier: polysulfide (ATG H).
- inserts: aluminium natural color or colored, which have given proof of a good fitness for use.

4. FABRICATION

The glass sheets are computer controlled cut to dimensions on a flat table. In case of coated glass, this is cut on the coated side

The assembly of the IGU's has to be executed according to the requirements specified in the BUtgb approval of the coated glass. The coatings, applied with the sputtering magnetron technique, have to be removed when required in order to place them in position 2 or 3 in order to be in conformity with the requirements of annex D of NBN EN 1279-4.

The glass sheets are cleaned with adopted brushes and demineralised water. They are dried with hot air.

After drying in the production line, each glass sheet is controlled separately in order to eliminate defects in the glass.

The spacer bars are cut to dimensions in order to assure that the second sealant is at least 2 mm thick for a polysulfide- and polyurethane sealant. These spacer bars are bent or assembled at the corners and filled with butyl sealant. The bent spacer bars are drilled at the sites in order to fill them with a molecular sieve. The holes are sealed with butyl. The at the corners assembled spacer bars are filled on the vibration table.

The spacer bars are marked.

The sides of the framework are finished with an extruded butyl rope.

The IGU's are assembled on a fully automated assembly line. The framework is applied on one of the glass plates, held in vertical position. The second glass plate is positioned automatically to the frame work. The whole is compressed in order to compress the butyl rope and to result in the required thickness.

The polysulfide is applied in the spacing formed by the two glasses and the distance holder.

The glass volumes are, if necessary, balanced and warehoused in a vertical position during the time needed to result in the required polymerization degree of the polysulfide sealant.

The production of the coated and/or gas filled IGU is identical as the ones air filled in which case an appropriate gas is replacing partially or fully the air. The type of gas is indicated on the IGU's and/or the accompanying documents.



ir. B. DE BLAERE
General Manager