



BCCA

BENOR CERTIFICATE

issued on the basis of the provisions of the Implementation Rules for BENOR certification of insulating glazing products, TRA BB 414, to the company

Press Glass sa

Ul. Geodetów 4, PL - 97-500 Radomsko,

for the production of products with the following designation

**IGU Press Glass
with PU,PS - gas Ci,o=90%**

manufactured in the production unit

Press Glass d.o.o.

dr. Marijana Mlinarica 5, Poduzetnicka Zona Jalzabet, HR - 42203 Jalzabet

in accordance with the

NBN EN 1279-5:2018

By issuing the certificate, BCCA declares that, on the basis of (I) the initial assessment of the product characteristics by means of testing; (II) the initial evaluation and acceptance of the quality assurance in production; (III) the regular external control of the implementation of the quality assurance processes and the control schemes agreed upon; (IV) regular control tests in a recognised external laboratory, sufficient confidence can be given to the measures taken by the certificate holder for guaranteeing conformity with the prescriptions.

The annex to this certificate gives the data with regard to the certified product. This document is an annex to the certificate and is authenticated by BCCA.

Following the issuing of this certificate and as long as it is maintained valid, BCCA grants the right to use the BENOR mark to the certificate holder. The proof of delivery of a product under the BENOR mark is given by a suitable identification on the product. The use of the BENOR mark does not relieve the certificate holder of his responsibilities with regard to the delivered product.

The validity of this certificate can be checked via www.bcca.be.

N° certificate 51859-BB-414-12932-1279-02 | Valid from 2024-03-26 until 2027-03-25

Issued in Brussels, on 21 May 2024.

Olivier DELBROUCK
General Manager

The validity of this certificate can be checked on the website www.bcca.be.
Further clarification regarding the scope of this certificate and the applicability of the requirements of the standard may be obtained from the certified organisation.

BELGIAN CONSTRUCTION CERTIFICATION ASSOCIATION NPO

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Annex to the BENOR Certificate

51859-BB-414-12932-1279-02

Production description

1. PREFABRICATED INSULATING GLAZING

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 – polyurethane or polysulfide. Between the 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 second barrier of gas filled I.G.U's is of polyurethane or polysulfide, holder of a UBAtc approval (ATG H).

The gas concentration, ascertained by the manufacturer is: $C_{i,o}=90\%$, $C_i=C_{i,o} (+10\%, -5\%)$.

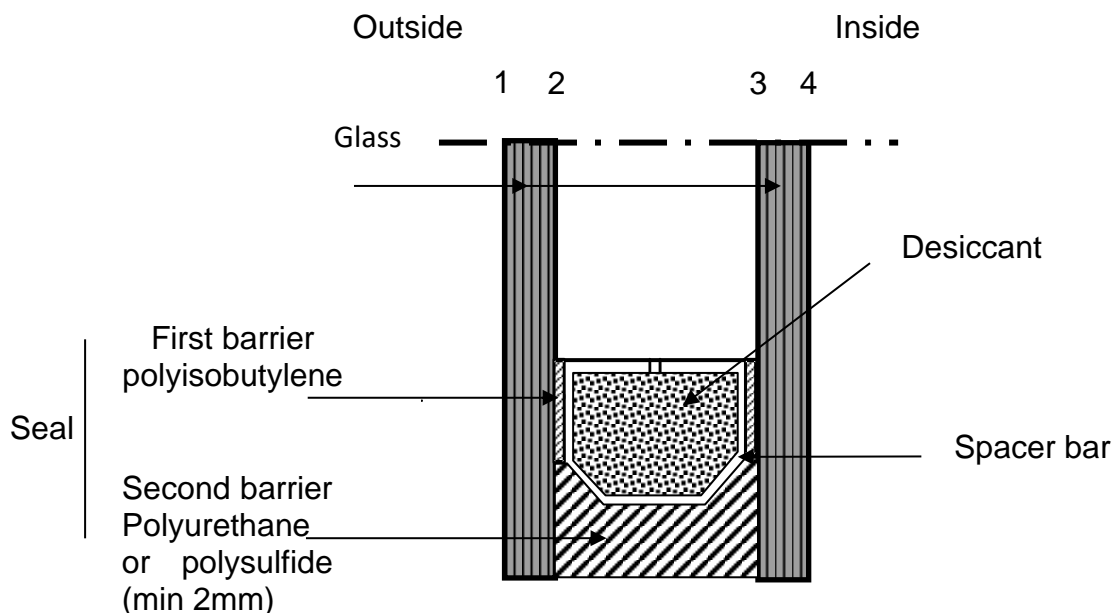


Fig. 1

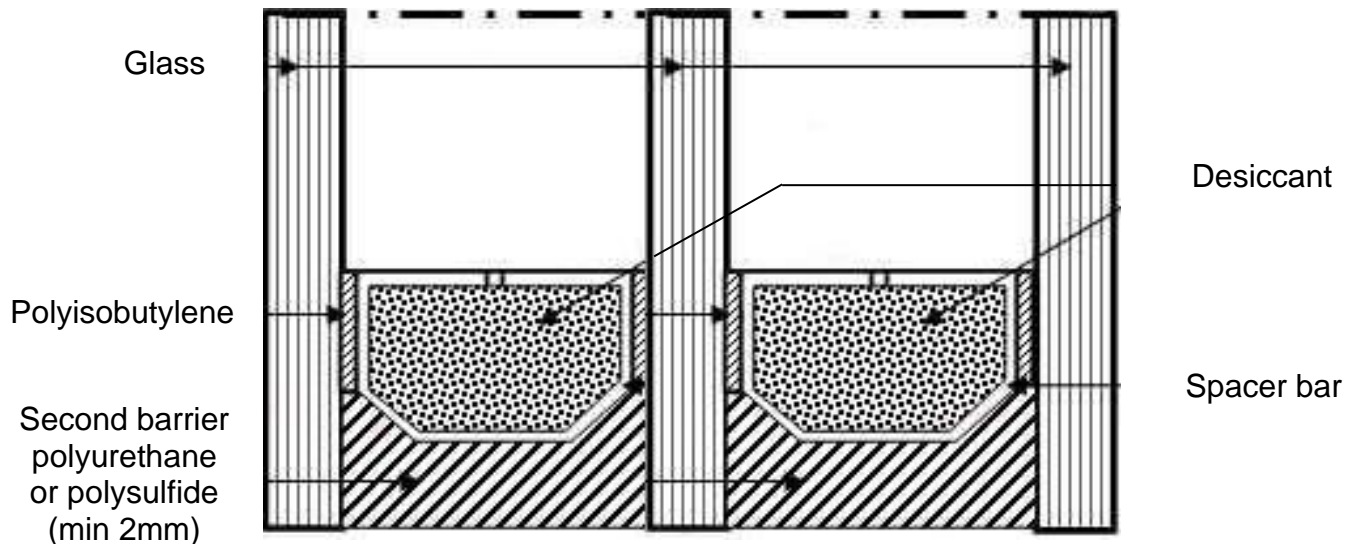


Fig. 2

2. ELEMENTS

The manufacturer Press Glass d.o.o. produces IGU's for different applications. The performances can be retrieved at the manufacturer and can be checked in the DoP document on the website of the manufacturer via <http://www.pressglass.eu>. Those performances are verified by BCCA.

The IGU's are composed of the products 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 and 2)
- patterned glass, patterns position 1 and/or 4 (NBN EN 572-5)
- thermally toughened glass (NBN EN 12150-1)
- 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).

- rigid hollow fully metallic spacer with metallic adhesion surface

- rigid hollow non-fully metallic spacer with metallic adhesion surface

- rigid hollow non-fully metallic spacer with non-metallic adhesion surface
- straight connectors in metal or plastic and plastic corner keys
- desiccant: zeolite granulate 3 of 4 Angström with UBAtc approval (ATG H)

-inner and outer sealants:

- first barrier: polyisobutylene
- second barrier: polyurethane or polysulfide (ATG H).

-inserts: pvc or aluminium natural color or colored, which have given proof of a good fitness for use.

4. PRODUCTION

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 polyurethane or polysulfide 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 frame work is applied on one of the glass plates, held in vertical position. The second glass plate is positioned automatically to the framework. The whole is compressed in order to compress the butyl rope and to result in the required thickness.

The polyurethane or 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 polyurethane or 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.

This annex is valid as long as the BENOR certificate remains valid.

Issued in Brussels, on 21 May 2024.



Olivier DELBROUCK
General Manager