

BG-TE.

MORE LIGHT, MORE PERFORMANCE.



BERLINER GLAS

Technical Glass
BERLINER GLAS GROUP

BG-TE.

For many glass applications it is desired to increase the light transmission. But even if technical solutions are available, economic restrictions often prevent the use of AR coated glass as it is too expensive.

With our BG-TE product we provide a very economical version of an anti-reflective technique.

The special surface treatment of our BG-TE glass optically and structurally alters the glass surface. A porous surface inside the glass of approximately 100 nm in depth leads to a reduced refractive index and results in a significant increase in light transmission.

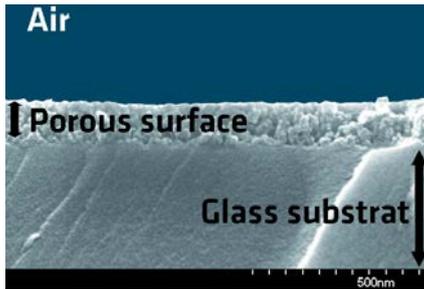


Image: Morphology of BG-TE surface on a 4.0 mm glass substrate
Source: Fraunhofer ISE

PROCESSING

BG-TE glass needs to be handled like any sputtered or coated glass. Processes such as cutting, bending, drilling, edge grinding, thermal strengthening, printing (organic or ceramic) are possible.

BG-TE glass can be processed to tempered safety glass (thermal), semi-tempered glass (thermal).

The BG-TE process can also be performed on finished thermal safety glass, without harming the safety properties of that glass.

TECHNICAL DATA

| | |
|---|--|
| Size of flat glass | Standard 1,200x2,000 mm; max. 1,250x2,130 mm |
| Glass thickness | From 2.0 mm |
| Complex geometries | Max. weight of 800 kg |
| Visual transmission* | Up to 98 % |
| Residual reflection* | 1 % |
| Reflection color | Neutral to blue/purple |
| Scratch resistance according to Mohs (DIN EN 101)** | Class 6 |
| Suitable for use with food** | |

* Dependent on base glass

** Examined by the Research Institute of Inorganic Materials – Glass/Ceramic (FGK)

KEY FUNCTIONS

Increased transmission

- ▶ Effective from the visible to the infrared range
- ▶ AR independent from the angle
- ▶ Neutral reflection color possible

SUITABLE MATERIALS FOR BG-TE

- ▶ Flat glass without structure
- ▶ Flat glass with structure such as BG-NFT, BG-Nonflex, cast glass (dull/prismatic)
- ▶ Curved glass body, for example, lenses, pipes, chamfers
- ▶ Molds such as cast glass or pressed form glass
- ▶ Safety glass, for example, thermally tempered, finished substrates
- ▶ Please note: BG-TE surface treatment is not available on low iron glass

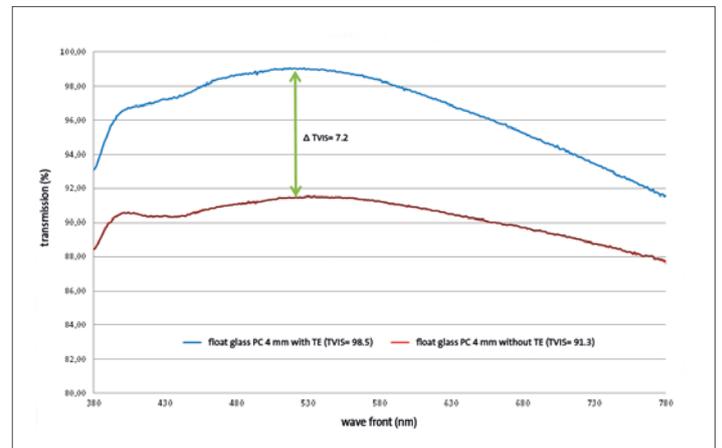
APPLICATIONS

- ▶ Lighting
- ▶ Central plate of a triple insulated glass
- ▶ Solar heat cover glass
 - ▶ Long-term stability tested according to abstracts of IEC 61215/IEC 61646
 - ▶ Performance tested by the Institute for Solar Technology SPF



OUR STRENGTHS – YOUR ADVANTAGES

- ▶ Individual consultation
- ▶ Project-related development
- ▶ Fast and reliable order processing
- ▶ Packaging optimized to customer requirements
- ▶ Quality



Example of a transmission curve of BG-TE on float glass PC