

SCHOTT® Flat Glass

BOROFLOAT® for Pyrolytic Ovens Product Information



Product Description

BOROFLOAT® 33 is a registered trademark of the SCHOTT Jena^{er} GLAS GmbH for a high quality special float glass.

Its low thermal expansion, its high thermal shock resistance and its ability to withstand temperatures up to 450°C for long periods make BOROFLOAT® 33 a good choice for applications which call for good temperature stability (e.g. internal panels in pyrolytic self-cleaning ovens).

Thermal Properties

Coefficient of Linear Thermal Expansion alpha	$\alpha_{(20 - 300\text{ °C})} 3.3 \times 10^{-6} \text{ K}^{-1}$ (to ISO 7991)
Specific Thermal Capacity	$c_p (20 - 100\text{ °C}) 0.83 \text{ KJ} \times (\text{kg} \times \text{K})^{-1}$
Specific Thermal Conductivity lambda	$\lambda_{(90\text{ °C})} 1.2 \text{ W} \times (\text{m} \times \text{K})^{-1}$
Maximum Operating Temperature	
For short-term usage	Temperature $_{\text{max}} (< 10 \text{ h}) 500\text{ °C}$
For long-term usage:	Temperature $_{\text{max}} (\geq 10 \text{ h}) 450\text{ °C}$

What are the main properties of BOROFLOAT® 33?

BOROFLOAT® is, therefore, frequently used in special applications with extreme thermal and/or chemical demands, which conventional float glasses of the soda-lime glass family cannot cope with.

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Mechanical Characteristics

The impact resistance of BOROFLOAT® 33 is dependent, in addition to many other parameters, on the following factors:

- The way the glass is fitted
- Size and thickness of the glass
- The way it has been processed or worked (e.g. edge working, holes)
- The wear and tear the glass has suffered in use
- The type of impact

Assumed to be a correct assembly as indicated below, BOROFLOAT® 33 will fulfill the requirements of the impact test from EN 60 335.

- When sizing frames and panels the different thermal expansions of BOROFLOAT® and the various frame materials plus any possible manufacturing tolerances must be taken into account.
- If it is necessary for design considerations to use compression fixing of the glass in the frame, this pressure must be applied uniformly all around the edge of the panel (no uneven pressure).
- The glass must be fitted in non-distorting frames. If it is not possible to avoid a small amount of torsion, a suitable permanently elastic gasket must be used to prevent the torsion in the frame being transferred to the glass.
- There shall be no direct contact between glass and metal (or any other hard element of construction). Permanently elastic, heat-resistant materials (e.g. mineral fiber materials) are recommended as an intermediate layer between glass and metal.

BOROFLOAT® glass can be cleaned with any commercially available glass cleaner. Under no circumstances should abrasive sponges, scouring powders or other corrosive or abrasive cleaners be used, as these can cause damage to the surface of the glass.

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