Technical information on how to process OPALIKA® effectively

1. Cutting

OPALIKA® comprises a transparent base glass or substrate and a thin opaque white flashed layer. It should be cut on the base glass side. Otherwise it is very difficult to control the cutting of sheets of OPALIKA® (see point 8.).

2. Laminated safety glass

Basically we recommend aligning the clear base glass side with the PVB lamination.
Recommendation for Processing

- Minimum laminate thickness 0,76mm
- From dimensions approx. 800mm x 800mm and up, the laminate should be manufactured through a vacuum sack process.

Should the milk-layer be laid on the PVB laminate due to design related reasons, the following recommendations should be considered:

- Minimum PVB foil thickness 1.14mm
- Laminate generally through vacuum sack process

The building regulations should always be observed!

3. Thermal toughening

The durability of OPALIKA® can be enhanced by thermal toughening processes. Depending on the particular glass thickness different figures are achieved. The transformation temperature of OPALIKA® is 520°C (968°F) which is significantly less than that of float glass.
It is advisable to heat up OPALIKA® more slowly than transparent glasses of the same composition an thickness.

IMPORTANT:
Contact between the white flashed opal layer and the ceramic rollers in the toughening unit must be avoided at all costs!
Even at relatively low temperatures the opaque flashed layer can stick firmly to the rollers. The damage of the rollers is the unavoidable consequence!

Contact between the transparent base glass and the ceramic rollers is perfectly safe.

4. Shaping

OPALIKA® can be deformed (shaped). Its softening point ($\eta=10^{7.6}$dPas) is 710°C (1310°F).
As already mentioned in connection with the thermal toughening, contact should with shaping materials also be avoided in this case because of the adhesion tendencies of the flashed layer! If necessary the shaping method will need to be modified as required.

5. Use with measuring equipment

Inquiries about suitability for the particular application (e.g. as a diffusion screen) should be addressed direct to SCHOTT Spezialglas AG or their agents, since from experience a certain outlay on selection is required to be able to guarantee an appropriate quality for a measurement duty.

6. Changes to opacity
In view of the temperatures normally encountered in shaping and toughening processes some change can be expected in the opacity of the flashed layer.
The phenomenon should be taken into account particularly in the case of the use of shaped glass for measurement purposes.

7. Use in high quality illuminated ceilings and large surface lighting applications
OPALIKA® is manufactured using the Fourcault drawing process. The thickness of the flashed layer varies as a result of the process at right angles to the direction of draw.

Thus, with uniform backlighting, brighter and darker zones can occur.

The variation in the thickness of the flashed layer along the direction of draw is, however, negligible.

In the case of large area use for lighting purposes a selection within the sheet is necessary in all cases. To do this the sheet must be backlit uniformly.

Apart from that, in the case of larger objects (e.g. illuminated ceilings), it is essential to use material from a linked production period, as the distribution of the flashed layer and the opacity values can be different from drawing period to drawing period.

For these reasons inquiries about cut panels for illuminated ceilings should be addressed direct to SCHOTT Spezialglas AG.
See also point 2. Laminated Safety Glass

8. Further documentation
The following information is available:
- Specification **"Physical and Chemical Properties"**
- Specification **"Technical Properties"**
- Article "Fusability of ARTISTA® and OPALIKA®" (from ARTISTA® NEWS No. 3). The text contains explanations about the change in opacity in the event of thermal processing.
- **"Cutting without problems"** a guide to cutting for SCHOTT Spezialglas AG machine-drawn flat glass products.

These publications can be called up for downloading on the Internet at the address below:

http://www.schott.com/architecture/english/download/

No Internet connection available?
On request we can supply hard copy of these documents as well.

Further information can be obtained from:

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