Specialty Glass
Weld Shield

Description: Weld shield is a leaded glass specifically designed for welding masks and other eye protection equipment. The glass blocks out harmful ultraviolet light and can cause “arc eye”. It is available in different shades for varying degrees of protection, and can be cut to size as ordered.

For more information about this product please contact us at:

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Specialty Glass Materials
Products & Specifications

Specialty Glass
White Flashed Opal

Description:
White Flashed Opal consists of a colorless base soda-lime glass which is fused to a thin white flashed layer. Using white flashed opal one can create an ambiance in diffused lighting similar to daylight with very little shadow. Flashed opal is perfect for creating a pleasant atmosphere in professional or residential areas.

Features:
- Average transmission of approximately 35%
- Can be heat strengthened or tempered
- Helps create a similar effect as a skylight
- Scratch resistant, non-deforming, and non-combustible
- Readily available off the shelf in (MR11) - 1.370” diameter and (MR16) - 1.965” diameter sizes

Dimensions:
- Thicknesses: 2.7mm to 3.3mm & 4.0mm to 6.0mm
- Sizes: 55” x 67” Max (1397 x 1701.8mm)

Transmission:
The transmission properties of White Flashed Opal glass are for the most part dependent solely upon the white layer, the thickness of which varies over the manufacturing width and is generally in the order of 0.45 ± 0.2mm. The visual light transmission in the case of standard illuminant A is on average \( \tau_{\text{vA}} = 35 \% \) (± 10 %).

Light Diffusion:
In the visible spectrum of the DESAG, White Flashed Opal glass provides almost ideal diffusion. In the near infrared range a directed component is superimposed which appears on the diffusion indicatrix (fig. 2) as a small “nose”. From \( \lambda = 800\text{nm} \), the proportion of the directed transmission increases relatively sharply and where \( \lambda = 2000 \text{ nm} \), values of 50 % may be reached.

Chemical Properties:
White Flashed Opal glass is largely insensitive to the action of water acids, alkalis, and salt solutions (with the exception of hydrofluoric acid).

Electrical Properties:
Specific electrical resistivity > 10\(^{10}\) \(\Omega\cdot\text{cm}\)

Thermal Properties:
Thermal conductivity at 90°C = 1.06 W/(m · K)
Transformation temperature \( T_g = 521°C \)
Mean linear thermal coefficient of expansion \( \alpha \) (20-300°C): 9.5 • 10\(^{-6}\) K\(^{-1}\)

Mechanical Properties:
Compressive strength 800-930 N/mm\(^2\)
Bending tensile strength 30 N/mm\(^2\) (characteristic value)
Density \( \varrho = 2.6 \text{ g/cm}^2 \)
Specialty Glass
X-Ray Glass or Radiation Shielding Glass

Description:
X-Ray leaded glass is a radiation shielding glass that contains a high content of heavy metallic oxides. Most notably the lead oxide (PbO) provides the protective qualities against X-rays and Y-rays for use in the medical and technical fields. Despite the high metallic oxide content, Radiation Shielding Glass features high optical transmission, making it a perfect fit for view windows for X-ray rooms.

Features:
- Protection from X-rays and Y-rays
- Good optical transmission

Applications:
- Control windows for X-ray rooms
- Protection windows in materials testing houses, baggage control units, and laboratories

Physical Properties:
- Optical Transmission in Visible Spectrum: 86-88%

Dimensions:
- Thicknesses: 8 mm
- Sizes: Up to 31” x 29” (787.4 x 736.6mm)