Technical / Sheet Glasses

Material / Specification: White flashed opal diffuser

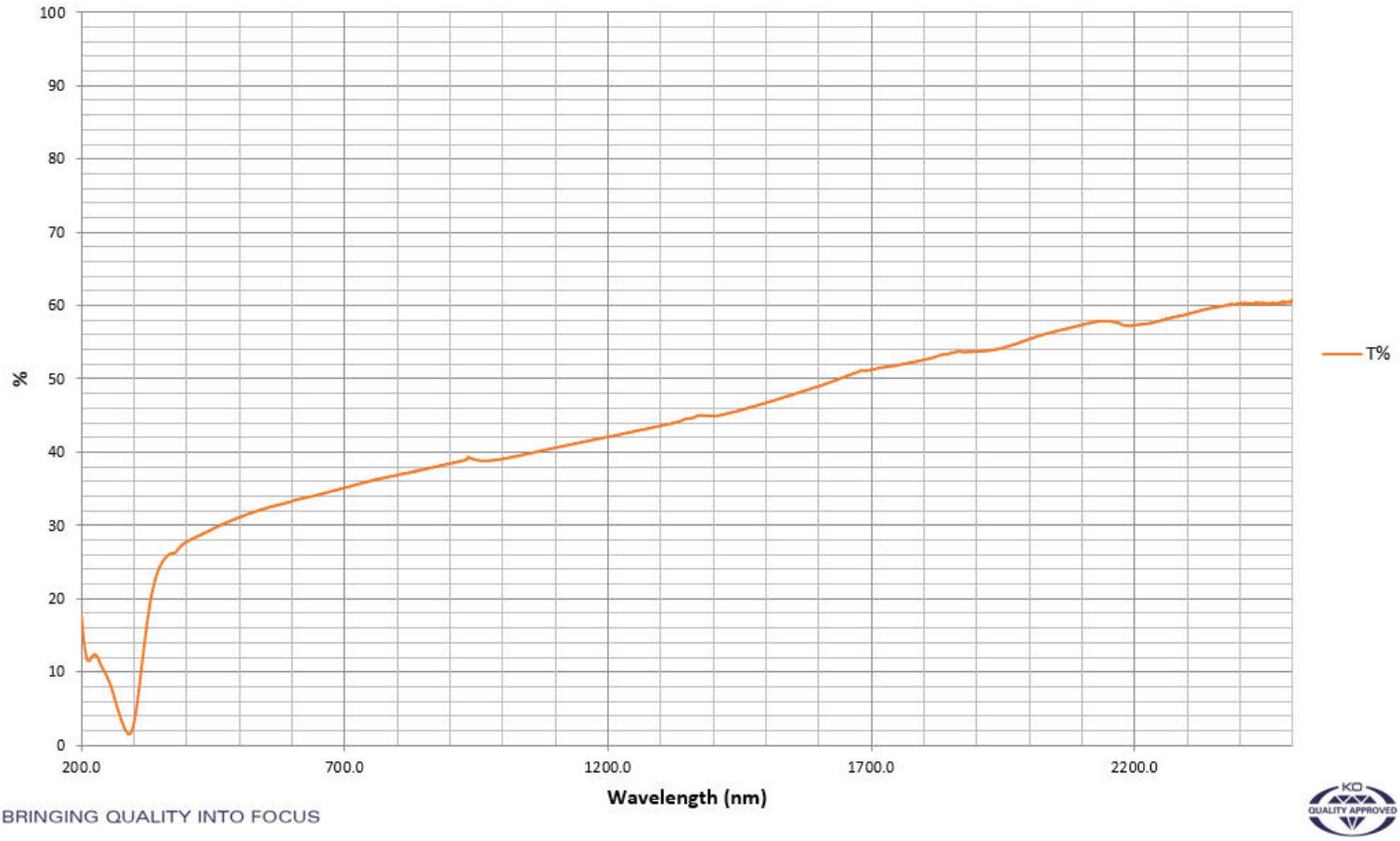
OPALIKA™ consists of a colourless base glass which serves as a carrier material and a thin white flashed layer for producing a diffuse and shadow reducing light.

OPALIKA™ is used as cover panes for drawing desks, in X-ray viewing screens and other devises in measuring techniques and medicine.

It is also used in light emitting callings and walls, in ornamental glassing in hotel foyers, in shops, in officers, banks, museums and in furniture industry.

OPALIKA™ is supplied with nearly constant white flashed layer in seven different base glass thicknesses to suit all mechanical requirements.

Chemical Properties: because both types of glass do have a different behaviour ion resistance of water, acids and alkaline solutions, the usual classification cannot be made. You can say that OPALIKA™ is largely insensitive to the action of water, acids, alkalis and salt solutions (with the exception of hydrofluoric acid)



KO | BRINGING QUALITY INTO FOCUS

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Technical / Sheet Glasses

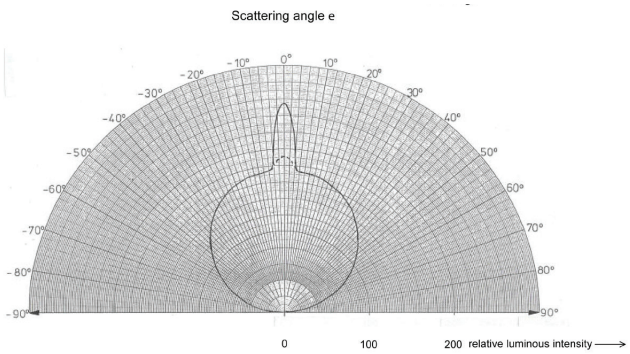
Material / Specification: White flashed opal for 380-800nm transmission
Range / Description: TSG-WOPLA

Mechanical Properties

• Density (in g/cm³) : 2.6
• Stress optical coefficient C in 1.02 -10^{-12} m²/N: 2.7
• Breaking strength
admissible value for the bending strength σ zul of technically annealed glasses as calculation basis (air) in N/mm² : 30
A higher mechanical strength is possible by thermal toughening
• Thermal toughening
The different viscosity characteristics of white flashed layer and the base glass have to be considered and to eventually comply with the requirements of safety glass need to be checked. As a result of this heat treatment, the transmissions may vary whilst at the same time the diffusion indicatrix.

Optical Properties

• Refractive index (base glass, annealed @ 40°C/h) (ne)
• Transmission data: SEE GRAPH
Plot of spectral transmittance for (λ=300nm-800nm) τvA=32%
• Luminous transmittance τ v
The luminous transmittance is dependent on the white layer, the thickness of which varies over the manufacturing width and is generally in the order of 0.45mm +0.35mm/-0.2mm. At the indicated nominal thickness of the white layer of 0.45mm the following luminous transmittance τvA in % is reached.



Thermal Properties (only base glass)

• Viscosities and corresponding temperature
Softening point is 710°C (n=$10^{7.6}$ dPas)
• Transformation temperature Tg is 520°C
• Coefficient of mean linear thermal expansion
A(20°C-300°C) in $10^{-5}K^{-1}$(s

Other Properties

• Light diffusion
In the visible range of the optical spectrum SCHOTT DESAG OPALIKA™ gives almost ideal diffusion, i.e. when represented graphically the diffusion depending on angle (diffusion indicatrix) appears nearly as a circle. The remaining proportion of the direct radiation is superimposed and at the zero axis it appears as a “nose” dependent on wavelength. There is a sharp increase with increasing wavelength from λ=800nm onwards.
For typical diffusion indicatrix (see graph)

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