DATA SHEET

Whitefloat - Low Iron

3 COMPOSITION AND PROPERTIES OF THE FLOAT GLASS

The composition and main properties of the float glass are listed hereunder.

3.1 CHEMICAL COMPOSITION

The EN 572-1 defines the magnitude of the proportions by mass of the principal constituents of float glass is as following.

SiO_2	69 to 74 %
Na_2O	10 to 16 %
CaO	5 to 14 %
MgO	0 to 6 %
Al_2O_3	0 to 3 %
Others	0 to 5 %

3.2 MECHANICAL PROPERTIES

- Weight (at 18°C): $\rho = 2\ 500\ kg/m^3$
- Density: 2,5
- Young's Modulus (modulus of Elasticity): $E = 70\ 000\ N/mm^2$
- Poisson Ratio: $\mu = 0,2$
- Shear Modulus: $G = E/[2\ (1+\nu)] \approx 29\ 166\ N/mm^2$
- Knoop Hardnes: 6 GPa
- Mohs Hardness: 6
- Characteristic bending strength: $45\ N/mm^2$

3.3 THERMAL PROPERTIES

- Softening point: ≈ 600 °C
- Fusion temperature: ≈ 1500 °C
- Linear expansion coefficient: $\alpha = 9.10^{-6}/K$ (between 20° and 300°)
- Specific heat capacity: C = 720 J/(kg.K)
- Emissivity of glass without coating:
  - Normal emissivity $\varepsilon_n = 0,89$
  - Corrected emissivity $\varepsilon = 0,837$

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3.4 OPTICAL PROPERTIES

- Refractive index N to visible radiation (380 to 780 nm):
  - air/glass: 0,67
  - glass/air: 1,50

3.5 ELECTRICAL PROPERTIES

- Specific resistance: 5.10^7 Ω.m at 1 000 Hz and 25°C
- Dielectric constant: 7,6 at 1 000 Hz and 25°C

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4 LIGHT, SOLAR AND THERMAL PROPERTIES

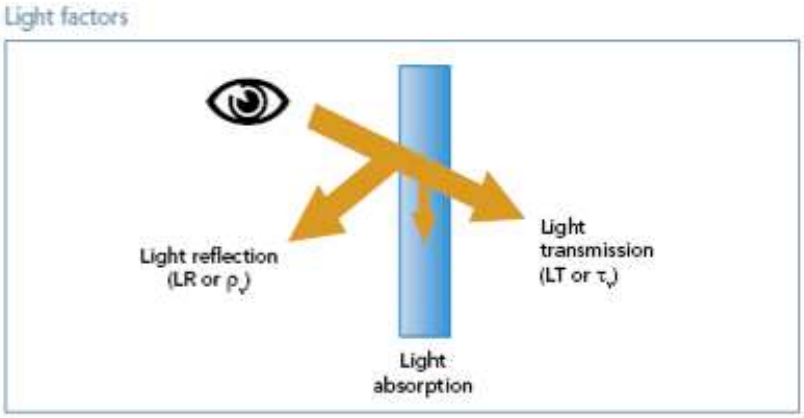
4.1 TOLERANCES ON LIGHT AND SOLAR PROPERTIES

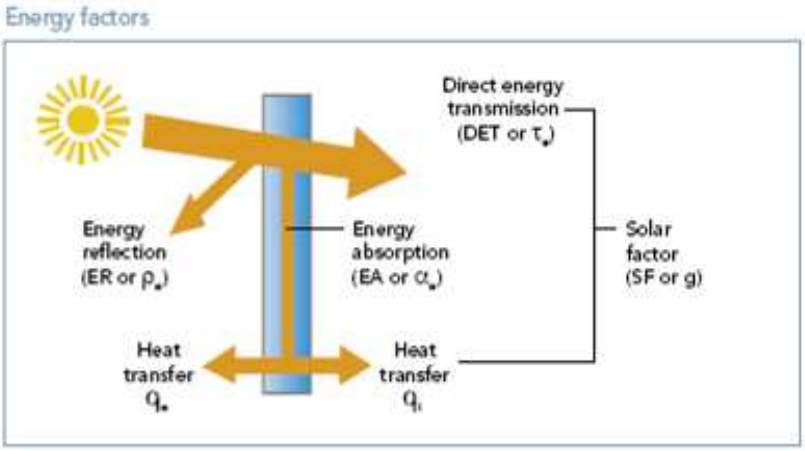
The light and solar properties are calculated using spectral measurement that conforms with standards EN 410 and WIS/WINDAT. The following properties are given:

- LT (τ_v): Light transmission
- LR (ρ_v): Light reflection
- DET (τ_e): Direct energy transmission
- ER (ρ_e): Energy reflection
- EA (α_e): Energy absorption
- SF (g): Solar factor
- SC: Shading coefficient

The tolerances on the values LT, LR, DET, ER are +/- 3 %.

Notes: they are no direct tolerances on SF, SC and EA as these values are calculated from the previous ones.





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