SCHOTT

Specification Physical and chemical properties	**PCP** **Goetheglass clear 0189**

Goetheglass clear 0189

Clear Fourcault Glass with slightly wavy surface.
It is similar to old window glass and preferably used for protection historical glazing.

The subsequent properties are based primarily on the measuring results of the very latest standards and measuring methods. These are defined in the corresponding "Measuring and Test Procedures".
We retain the right to change the data in keeping with the latest technical standards.
Non-toleranced numerical values are reference values of a typical production quality.

Values marked with ◊ do not apply to the type of glass or no values are available.

Requirements deviating from these specifications must be defined in writing in a **customer agreement**.

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1.	**Optical properties**		
1.1	**Refractive index**	n_e	1.52
1.2	**Transmittance data**		
1.2.1	**Spectral transmittance $\tau(\lambda)$**		
1.2.1.1	**$\tau(\lambda)$ - curve**		
	Plot of spectral transmittance $\tau(\lambda)$ for d = 4.5 mm (λ = 250 nm to 1500 nm)		see annex
1.2.2	**Luminous transmittance τ_v in %**		
	d = 4.5 mm	τ_{vD65}	91
		τ_{vA}	91
	d = 8.0 mm	τ_{vD65}	91
		τ_{vA}	91
1.2.3	**Special transmittance values in %**		◊
1.3	**Colour**		
1.3.1	**Visual evaluation**		disregarded
1.3.2	**Colorimetry (d = 4.5 mm)**		
	Chromaticity coordinates (colour locus) for	x	0.313
	standard illuminant D_{65} acc. to CIE 2°- observer	y	0.330
2.	**Thermal properties**		
2.1	**Viscosities and corresponding temperatures**		
	Softening point in °C ($\eta = 10^{7.6}$ dPas)		719
2.2	**Transformation temperature *Tg* in °C**		533
2.3	**Coefficient of thermal expansion α**		
2.3.1	**Coefficient of mean linear thermal expansion α (20 °C;300 °C) in 10^{-6} K^{-1} (static measurement)**		9.4

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3.	**Mechanical properties**	
3.1	**Density ρ in g/cm³** (annealed at 40 °C/h)	2.5
3.2	**Stress optical coefficient *C* in 1.02 · 10^{-12} m²/N**	◊
3.3	**Breaking strength**	
	Admissible value for the bending strength σ_{zul} of technically annealed glasses as calculation basis (air) in N/mm²	30
4.	**Chemical properties**	
4.1	**Hydrolytic resistance acc. to DIN ISO 719**	
	Hydrolytic class	HGB 3
	Equivalent of alkali (Na_2O) per gram of glass grains in µg/g	170
4.2	**Acid resistance acc. to DIN 12 116**	
	Acid class	S 2
	Half surface weight loss after 6 hours in mg/dm²	1.4
4.3	**Alkali resistance acc. to DIN ISO 695**	
	Class	A 2
	Surface weight loss after 3 hours in mg/dm²	140
4.4	**Hazardous Substances**	
	EC-directive 2002/95/EC (RoHS-directive)	upon request
5.	**Electrical properties**	disregarded
6.	**Other properties**	disregarded
7.	**Annex** (diagrams, curves)	

Specification

Physical and chemical properties

PCP

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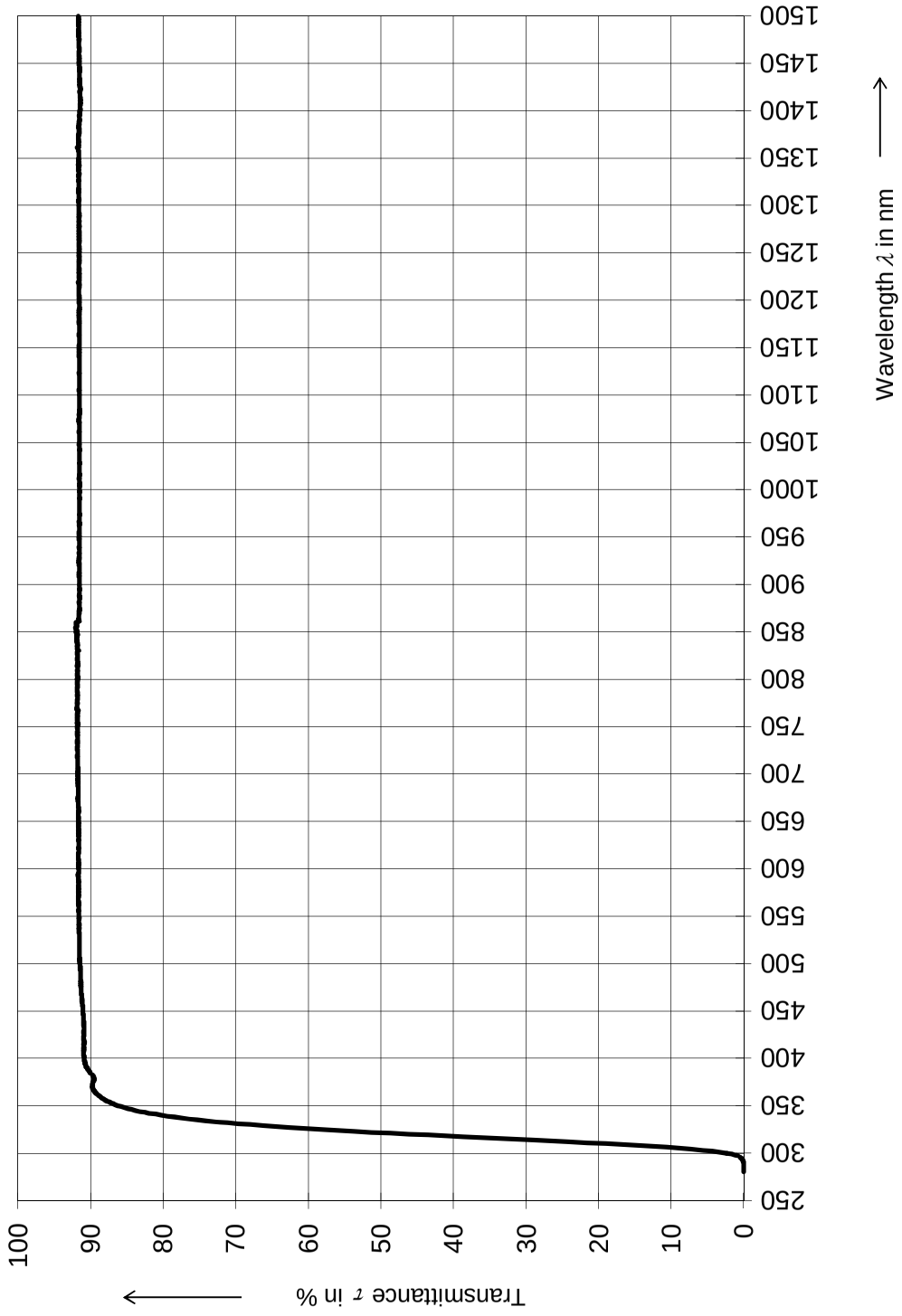
Spectral Transmittance

Type of Glass: Goetheglass clear 0189
Thickness: 4.5 mm



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