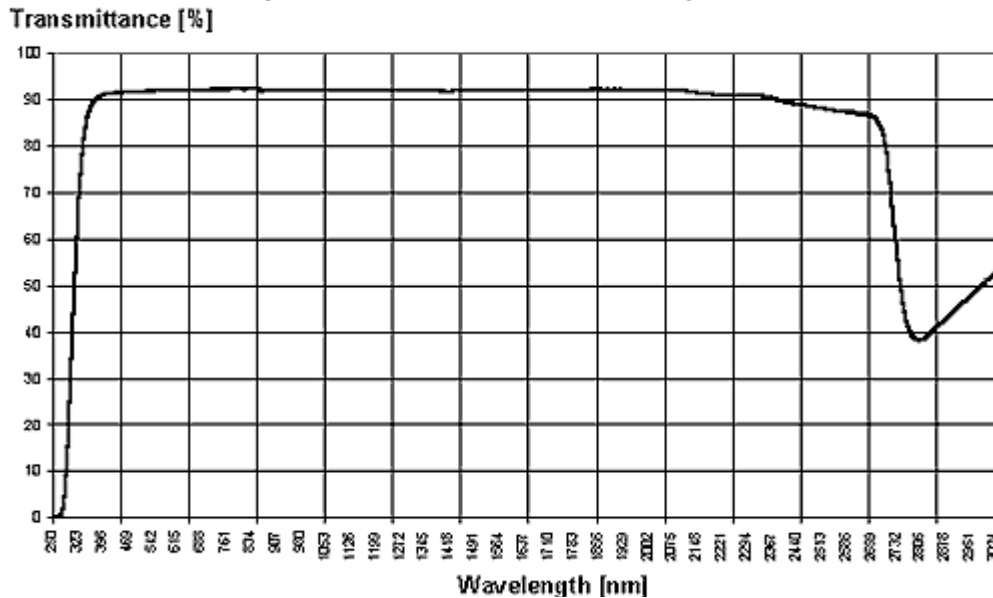


**DATA SHEET**
**SCHOTT AF45**
**Spectral Transmittance of AF45, t=1.1 mm**

**Optical Properties**

Refractive Indices		
Pretreatment of Samples	$n_g$	1.5359
Condition as supplied ['as drawn']	$n_F'$	1.5318
	$n_F$	1.5313
	$n_e$	1.5275
	$n_d$	1.5255
	$n_D$	1.5254
	$n_C'$	1.5233
	$n_C$	1.5229

**Mechanical Properties**

Density $\rho$ in $g/cm^3$ (annealed at $40^\circ C/h$ )	2.72
Stress Optical Coefficient C in $1.02 \cdot 10^{-12} m^2/N$	3.2
Young's Modulus E in $kN/mm^2$	66.0
Poisson's Ratio $\mu$	0.235
Torsion Modulus G in $kN/mm^2$	26.7
Knoop Hardness $HK_{100}$	555
Density $\rho$ in $g/cm^3$ (annealed at $40^\circ C/h$ )	2.72

# DATA SHEET

# SCHOTT AF45

## Chemical Properties

Hydrolytic Resistance acc. to DIN ISO 719	
Hydrolytic Class	HGB 1
Equivalent of Alkali (Na <sub>2</sub> O) per gram of glass grains in µg/g	6.8
Acid Resistance acc. to DIN 12116	
Acid Class	4
Half Surface Weight Loss after 6 hours in mg/dm <sup>2</sup>	> 250

## Electrical Properties

Dielectric Constant (Permittivity) $\epsilon_r$ at 1 MHz	6.2
Dissipation Factor $\tan \delta$ at 1 MHz	$9 \cdot 10^{-4}$
Electric Volume Resistivity $\rho_D$ in $\Omega \cdot \text{cm}$ at the Specified Temperatures $\rho_D$ for Direct Current	
$\theta = 250^\circ\text{C}$	$6.0 \cdot 10^{13}$
$\theta = 350^\circ\text{C}$	$3.2 \cdot 10^{11}$
$\theta = 500^\circ\text{C}$	$1.6 \cdot 10^9$
Temperature $t_{k100}$ in $^\circ\text{C}$ for a Specific Electric	
Volume Resistivity of $10^8 \Omega \cdot \text{cm}$	610

## Thermal Properties

Viscosity and Corresponding Temperature		
Designation	Viscosity $\log \eta$ [dPas]	Temperature $\theta$ [ $^\circ\text{C}$ ]
Strain Point	14.5	627
Annealing Point	13.0	663
Softening Point	7.6	883
Transformation Temperature $T_g$ in $^\circ\text{C}$	662	
Coefficient of Thermal Expansion $\alpha$		
Coefficient of Mean Linear Thermal Expansion $\alpha_{(20-300^\circ\text{C})}$ in $10^{-6} \text{K}^{-1}$ (Static Measurement)	4.5	