

<p>Specification Physical and chemical properties</p>	<p>PCE - BK D 0785</p>						
<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">LaSF 1.8/35</td> <td style="width: 40%; text-align: right;">D 0785</td> </tr> <tr> <td>Colour:</td> <td>clear</td> </tr> <tr> <td>Application:</td> <td>High index light weight glass for corrective lenses with very high power</td> </tr> </table> <p>The subsequent properties are based primarily upon the measuring results of the very latest standards and measuring methods, which are defined in corresponding "Measuring and Test Procedures". SCHOTT DESAG retains the right to change the data in keeping with the latest technical standards. Non-toleranced numerical values are reference values of an average production quality.</p> <p>Because this glass type is produced by another Schott Group company we specified the original data sheet values of the manufacturer in <i>italic letters</i> and added another SCHOTT DESAG specific characteristic values.</p> <p>Values marked with \diamond do not apply to the type of glass or no values are available.</p> <p>Requirements deviating from these specifications must be defined in writing in a customer agreement.</p> <p>Date of release: 30 May 1994</p>		LaSF 1.8/35	D 0785	Colour:	clear	Application:	High index light weight glass for corrective lenses with very high power
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Form 0050/6A

Specification		PCE - BK	
Physical and chemical properties		D 0785	
1.2.2.2	Shade N / Filter category		
	<i>N</i> for mean thickness <i>d</i> = mm (<i>t</i> _{VD65} = %)		◇
	<i>N</i> for mean thickness <i>d</i> = mm (<i>t</i> _{VD65} = %)		◇
	filter category for nominal transmittance <i>t</i> _{VD65} = %		◇
1.2.3	Special transmittance values in % (<i>d</i> = 2.0 mm)		
1.2.3.1	UV - transmittance		
		<i>t</i> _{UVA}	34.8
		<i>t</i> _{SUV}	◇
		<i>t</i> _{SUVA}	◇
		<i>t</i> _{SUVB}	◇
1.2.3.2	IR - transmittance	<i>t</i> _{SIR}	86
1.2.3.3	Solar blue - light transmittance	<i>t</i> _{sb}	◇
1.3	Colour		
1.3.1	Visual evaluation		◇
1.3.2	Colorimetry		
	Chromaticity coordinates	<i>x</i> ₁₀	0.315
		<i>y</i> ₁₀	0.333
	Chromaticity coordinates (colour locus) are referred to the Standard Illuminant D ₆₅ according to CIE 10°-observer for the nominal transmittance <i>t</i> _{VD65} = 84.9 % (refer to 1.2.2.1)		
1.3.3	Signal recognition		
	Relative visual attenuation coefficient <i>Q</i>	<i>Q</i> _{blue}	1.00
	for signal lights referred to the	<i>Q</i> _{green}	1.00
	nominal transmittance <i>t</i> _{VD65} = 84.9 %	<i>Q</i> _{yellow}	1.00
	(refer to 1.2.2.1)	<i>Q</i> _{red}	1.00
1.3.4	Yellowness index (<i>d</i> = 10 mm)		
		<i>Y</i> _i	5.2

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2.	Thermal properties	
2.1	Viscosities and corresponding temperatures	
	Designation	Viscosity log <i>h</i> in dPas
		Temperature <i>J</i> in °C
	Strain point	14.5
	Annealing point	13.0
	Softening point	7.6
	Forming temperature	6.0
	Forming temperature	5.0
	Forming temperature	4.0
2.2	Transformation temperature <i>T_g</i> in °C	655
2.3	Coefficient of mean linear thermal expansion <i>a</i> (20°C-300°C) in 10 ⁻⁶ K ⁻¹ (Static measurement)	8.6
2.4	Fuseability	◇
2.5	Mean specific heat capacity <i>c_p</i> (20°C-100°C) in J/(g · K)	0.672
3.	Mechanical properties	
3.1	Density <i>r</i> in g/cm³	3.60
3.2	Stress optical coefficient <i>C</i> in 1.02 × 10⁻¹² m²/N	2.04
3.3	Breaking strength	
	A higher mechanical strength can be realized only by thermal toughening.	
3.3.1	Chemical toughening	not possible
3.3.2	Thermal toughening	
	Recommended minimum thickness <i>d</i> in mm for toughened safety glass lenses without corrective effect as per ball drop test (DIN EN 168)	2.5
3.4	Young´s modulus <i>E</i> in kN/mm²	115
3.5	Poisson´s ratio <i>m</i>	0.283
3.6	Torsion modulus <i>G</i> in kN/mm²	45
3.7	Knoop hardness <i>HK</i>₁₀₀	570

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4. Chemical properties			
4.1 Hydrolytic resistance acc. to DIN ISO 719			
		Hydrolytic class	HGB 1
Equivalent of alkali (Na ₂ O) per gram of glass grains in µg/g			11
4.2 Acid resistance acc. to DIN 12 116			
		Acid class	4
Half surface weight loss after 6 hours in mg/dm ²			> 250
4.3 Alkali resistance acc. to DIN ISO 695			
		Class	A 1
Surface weight loss after 3 hours in mg/dm ²			23
5. Electrical properties		disregard	
6. Other properties		disregard	
7. Annex (diagrams, curves)			

Specification

Physical and chemical properties

PCE - BK

D 0785

Spectral Transmittance

Type of Glass: LaSF 1.8/35
Thickness: 2.00 mm

