

Refractive Index $n_d$	<b>1,90270</b> 1,902700	Abbe Number $\nu_d$	<b>31,00</b>	Dispersion $n_F-n_C$	<b>0,029115</b>
Refractive Index $n_e$	1,909585	Abbe Number $\nu_e$	30,78	Dispersion $n_F-n_{C'}$	0,029553

Refractive Indices		
$\lambda(\mu\text{m})$		
$n_{2325}$	2.32542	1,84527
$n_{1970}$	1.97009	1,85288
$n_{1530}$	1.52958	1,86154
$n_{1129}$	1.12864	1,87044
$n_t$	1.01398	1,87383
$n_s$	0.85211	1,88029
$n_{A'}$	0.76819	1,88504
$n_r$	0.70652	1,88957
$n_C$	0.65627	1,89422
$n_{C'}$	0.64385	1,89555
$n_{\text{He-Ne}}$	0.6328	1,89679
$n_D$	0.58929	1,90245
$n_d$	0.58756	1,90270
$n_e$	0.54607	1,90958
$n_F$	0.48613	1,92334
$n_{F'}$	0.47999	1,92510
$n_{\text{He-Cd}}$	0.44157	1,93828
$n_g$	0.435835	1,94064
$n_h$	0.404656	1,95587
$n_i$	0.365015	

Constants of Dispersion Formula	
A <sub>1</sub>	2,11102709E+00
A <sub>2</sub>	3,70368094E-01
A <sub>3</sub>	1,62687484E+00
B <sub>1</sub>	1,20714135E-02
B <sub>2</sub>	5,32464416E-02
B <sub>3</sub>	1,09166396E+02

Chemical Properties	
Water Resistance (Powder) Group RW(P)	1
Acid Resistance (Powder) Group RA(P)	2
Weathering Resistance (Surface) Group	3
Acid Resistance (Surface) Group SR	4.2
Phosphate Resistance PR	2.0

Mechanical Properties	
Young's Modulus E (10 <sup>9</sup> N/m <sup>2</sup> )	1088
Rigidity Modulus G (10 <sup>9</sup> N/m <sup>2</sup> )	418
Poisson's Ratio $\sigma$	0,302
Knoop Hardness Hk [Class]	650   7
Abrasion Aa	97
Photoelastic Constant $\beta$ (nm/cm/10 <sup>9</sup> Pa)	1,83

Partial Dispersions	
$n_C-n_t$	0,020392
$n_C-n_{A'}$	0,009182
$n_d-n_C$	0,008479
$n_e-n_C$	0,015364
$n_g-n_d$	0,037938
$n_g-n_F$	0,017302
$n_h-n_g$	0,015233
$n_i-n_g$	
$n_{C'}-n_t$	0,021717
$n_e-n_{C'}$	0,014039
$n_{F'}-n_e$	0,015514
$n_i-n_{F'}$	

Relative Partial Dispersion	
$\theta_{C,t}$	0,7004
$\theta_{C,A'}$	0,3154
$\theta_{d,C}$	0,2912
$\theta_{e,C}$	0,5277
$\theta_{g,d}$	1,3030
$\theta_{g,F}$	0,5943
$\theta_{h,g}$	0,5232
$\theta_{i,g}$	
$\theta'_{C,t}$	0,7348
$\theta'_{e,C'}$	0,4750
$\theta'_{F,e}$	0,5250
$\theta'_{i,F'}$	

Deviation of Relative Dispersions	
$\Delta \theta_{C,t}$	0,0083
$\Delta \theta_{C,A'}$	0,0020
$\Delta \theta_{g,d}$	0,0027
$\Delta \theta_{g,F}$	0,0030
$\Delta \theta_{i,g}$	

Thermal Properties	
Strain Point STP (°C)	
Annealing Point AP (°C)	
Transformation Temperature Tg (°C)	578
Yield Point At (°C)	610
Softening Point SP (°C)	
Expansion Coefficients (-30~+70°C)	61
$\alpha$ (10 <sup>-7</sup> /°C) (+100~+300°C)	76
Thermal Conductivity k (W/m·K)	0,838

Coloring			
$\lambda_{80}$		$\lambda_5$	360
$\lambda_{70}$	410		

Internal Transmittance			
$\lambda_{0.80}$	398	$\lambda_{0.05}$	360

CCI		
B	G	R
0,00	3,61	3,84

Internal Transmittance	
$\lambda(\text{nm})$	$\tau$ 10mm
280	
290	
300	
310	
320	
330	
340	
350	
360	0,05
370	0,28
380	0,55
390	0,72
400	0,82
420	0,909
440	0,945
460	0,963
480	0,975
500	0,982
550	0,993
600	0,996
650	0,997
700	0,999
800	0,999
900	0,999
1000	0,999
1200	0,999
1400	0,999
1600	0,998
1800	0,992
2000	0,974
2200	0,920
2400	0,74

Other Properties	
Bubble Quality Group B	
Density d	4,90
Remarks	

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	$dn/dT$ relative (10 <sup>-6</sup> /°C)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	4,0	5,1	5,1	5,5	6,0	7,1	8,4
-20~0	4,0	5,1	5,2	5,6	6,1	7,3	8,7
0~20	4,0	5,2	5,3	5,7	6,3	7,5	9,0
20~40	4,1	5,4	5,4	5,8	6,4	7,8	9,3
40~60	4,2	5,5	5,6	6,0	6,6	8,0	9,6
60~80	4,4	5,7	5,8	6,3	6,9	8,4	10,0