

Refractive Index n_d	1.84666 1.846660	Abbe Number ν_d	23.8 23.78	Dispersion $n_F - n_C$	0.03561 0.035608
Refractive Index n_e	1.855041	Abbe Number ν_e	23.59	Dispersion $n_{F'} - n_{C'}$	0.036247

Refractive Indices		
	λ (μm)	
n_{2325}	2.32542	1.78519
n_{1970}	1.97009	1.79199
n_{1530}	1.52958	1.80013
n_{1129}	1.12864	1.80925
n_t	1.01398	1.81294
n_s	0.85211	1.82021
$n_{A'}$	0.76819	1.82568
n_r	0.70652	1.83098
n_C	0.65627	1.83649
$n_{C'}$	0.64385	1.83807
$n_{\text{He-Ne}}$	0.6328	1.83956
n_D	0.58929	1.84635
n_d	0.58756	1.84666
n_e	0.54607	1.85504
n_F	0.48613	1.87210
$n_{F'}$	0.47999	1.87431
$n_{\text{He-Cd}}$	0.44157	1.89114
n_g	0.435835	1.89419
n_h	0.404656	1.91429
n_i	0.365015	—

Deviation of Relative Partial Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0032
$\Delta\theta_{C,A'}$	-0.0012
$\Delta\theta_{g,d}$	0.0195
$\Delta\theta_{g,F}$	0.0175
$\Delta\theta_{i,g}$	—

Constants of Dispersion Formula	
A_1	1.87904886
A_2	$3.69719775 \cdot 10^{-1}$
A_3	2.33730863
B_1	$1.44121770 \cdot 10^{-2}$
B_2	$6.38817990 \cdot 10^{-2}$
B_3	$1.82668180 \cdot 10^2$

Other Properties		
Bubble Quality Group	B	B
Specific Gravity	d	3.54
Remarks		

Partial Dispersions	
$n_C - n_t$	0.023550
$n_C - n_{A'}$	0.010806
$n_d - n_C$	0.010172
$n_e - n_C$	0.018553
$n_g - n_d$	0.047529
$n_g - n_F$	0.022093
$n_h - n_g$	0.020105
$n_i - n_g$	—
$n_{C'} - n_t$	0.025128
$n_e - n_{C'}$	0.016975
$n_{F'} - n_e$	0.019272
$n_i - n_{F'}$	—

Thermal Properties		
Strain Point StP ($^{\circ}\text{C}$)		576
Annealing Point AP ($^{\circ}\text{C}$)		596
Transformation Temperature Tg ($^{\circ}\text{C}$)		624
Yield Point At ($^{\circ}\text{C}$)		658
Softening Point SP ($^{\circ}\text{C}$)		692
Expansion Coefficients ($-30 \sim +70^{\circ}\text{C}$)		88
α ($10^{-7}/^{\circ}\text{C}$) ($+100 \sim +300^{\circ}\text{C}$)		104
Thermal Conductivity k (W/m \cdot K)		1.000

Mechanical Properties		
Young's Modulus E ($10^9\text{N}/\text{m}^2$)		960
Rigidity Modulus G ($10^9\text{N}/\text{m}^2$)		379
Poisson's Ratio σ		0.266
Knoop Hardness Hk		520[5]
Abrasion Aa		170
Photoelastic Constant β (nm/cm/ 10^5Pa)		2.81

Chemical Properties	
Water Resistance (Powder) Group RW (P)	1
Acid Resistance (Powder) Group RA (P)	1
Weathering Resistance (Surface) Group W (S)	1
Acid Resistance (Surface) Group SR	1.0
Phosphate Resistance PR	1.0

Relative Partial Dispersions	
$\theta_{C,t}$	0.6614
$\theta_{C,A'}$	0.3035
$\theta_{d,C}$	0.2857
$\theta_{e,C}$	0.5210
$\theta_{g,d}$	1.3348
$\theta_{g,F}$	0.6205
$\theta_{h,g}$	0.5646
$\theta_{i,g}$	—
$\theta'_{C',t}$	0.6932
$\theta'_{e,C'}$	0.4683
$\theta'_{F',e}$	0.5317
$\theta'_{i,F'}$	—

Coloring	
λ_{70} / λ_5	42/37

Internal Transmittance	
λ (nm)	τ 10mm
280	
290	
300	
310	
320	
330	
340	
350	
360	
370	0.06
380	0.35
390	0.61
400	0.75
420	0.87
440	0.927
460	0.948
480	0.961
500	0.971
550	0.987
600	0.989
650	0.985
700	0.989
800	0.997
900	0.998
1000	0.999
1200	0.999
1400	0.998
1600	0.997
1800	0.991
2000	0.986
2200	0.974
2400	0.955

Temperature Coefficients of Refractive Index							
Range of Temperature ($^{\circ}\text{C}$)	dn / dt relative ($10^{-6} / ^{\circ}\text{C}$)						
	t	C'	He-Ne	D	e	F'	g
-40 ~ -20	-0.8	0.4	0.4	0.9	1.4	2.8	4.5
-20 ~ 0	-0.8	0.5	0.6	1.0	1.6	3.1	5.0
0 ~ 20	-0.7	0.6	0.7	1.2	1.8	3.4	5.4
20 ~ 40	-0.7	0.7	0.8	1.3	2.0	3.7	5.8
40 ~ 60	-0.6	0.9	1.0	1.5	2.2	4.0	6.2
60 ~ 80	-0.6	1.0	1.1	1.6	2.4	4.3	6.6