

Refractive Index n_d	1,83400 1,834000	Abbe Number ν_d	37,21	Dispersion n_F-n_C	0,022416
Refractive Index n_e	1,839313	Abbe Number ν_e	36,95	Dispersion $n_F-n_{C'}$	0,022716

Refractive Indices		
$\lambda(\mu m)$		
n_{2325}	2.32542	1,78608
n_{1970}	1.97009	1,79301
n_{1530}	1.52958	1,80073
n_{1129}	1.12864	1,80833
n_t	1.01398	1,81114
n_s	0.85211	1,81638
$n_{A'}$	0.76819	1,82016
n_r	0.70652	1,82374
n_C	0.65627	1,82740
$n_{C'}$	0.64385	1,82844
n_{He-Ne}	0.6328	1,82941
n_D	0.58929	1,83380
n_d	0.58756	1,83400
n_e	0.54607	1,83931
n_F	0.48613	1,84981
$n_{F'}$	0.47999	1,85115
n_{He-Cd}	0.44157	1,86107
n_g	0.435835	1,86283
n_h	0.404656	1,87412
n_i	0.365015	1,89456

Constants of Dispersion Formula	
A ₁	2,05081962E+00
A ₂	2,08475257E-01
A ₃	1,31486394E+00
B ₁	1,16035991E-02
B ₂	5,26489359E-02
B ₃	9,93806500E+01

Chemical Properties	
Water Resistance (Powder) Group RW(P)	1
Acid Resistance (Powder) Group RA(P)	3
Weathering Resistance (Surface) Group	1
Acid Resistance (Surface) Group SR	51.2
Phosphate Resistance PR	1.0

Mechanical Properties	
Young's Modulus E (10 ⁹ N/m ²)	1114
Rigidity Modulus G (10 ⁹ N/m ²)	445
Poisson's Ratio σ	0,253
Knoop Hardness Hk [Class]	660 7
Abrasion Aa	57
Photoelastic Constant β (nm/cm/10 ⁹ Pa)	2,10

Partial Dispersions	
n_C-n_t	0,016264
$n_C-n_{A'}$	0,007235
n_d-n_C	0,006601
n_e-n_C	0,011914
n_g-n_d	0,028833
$n_g-n_{F'}$	0,013018
n_h-n_g	0,011289
n_i-n_g	0,031732
$n_{C'}-n_t$	0,017300
$n_e-n_{C'}$	0,010878
$n_{F'}-n_e$	0,011838
$n_i-n_{F'}$	0,043414

Relative Partial Dispersion	
$\theta_{C,t}$	0,7256
$\theta_{C,A'}$	0,3228
$\theta_{d,C}$	0,2945
$\theta_{e,C}$	0,5315
$\theta_{g,d}$	1,2863
$\theta_{g,F}$	0,5807
$\theta_{h,g}$	0,5036
$\theta_{i,g}$	1,4156
$\theta'_{C,t}$	0,7616
$\theta'_{e,C'}$	0,4789
$\theta'_{F,e}$	0,5211
$\theta'_{i,F'}$	1,9112

Deviation of Relative Dispersions	
$\Delta \theta_{C,t}$	0,0043
$\Delta \theta_{C,A'}$	0,0018
$\Delta \theta_{g,d}$	-0,0011
$\Delta \theta_{g,F}$	-0,0006
$\Delta \theta_{i,g}$	0,0022

Thermal Properties	
Strain Point STP (°C)	570
Annealing Point AP (°C)	588
Transformation Temperature Tg (°C)	603
Yield Point At (°C)	635
Softening Point SP (°C)	669
Expansion Coefficients (-30~+70°C)	58
α (10 ⁻⁷ /°C) (+100~+300°C)	73
Thermal Conductivity k (W/m·K)	0,880

Coloring			
λ_{80}	430	λ_5	350
λ_{70}			

Internal Transmittance			
$\lambda_{0.80}$	383	$\lambda_{0.05}$	350

CCI		
B	G	R
0,00	1,88	1,93

Internal Transmittance	
$\lambda(nm)$	τ 10mm
280	
290	
300	
310	
320	
330	
340	
350	0,05
360	0,29
370	0,59
380	0,77
390	0,86
400	0,909
420	0,951
440	0,968
460	0,979
480	0,986
500	0,991
550	0,996
600	0,996
650	0,996
700	0,997
800	0,999
900	0,999
1000	0,999
1200	0,999
1400	0,996
1600	0,993
1800	0,984
2000	0,961
2200	0,905
2400	0,72

Other Properties	
Bubble Quality Group B	
Density d	4,43
Remarks	

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	dn/dT relative (10 ⁻⁶ /°C)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	7,4	8,4	8,5	8,8	9,2	10,1	11,2
-20~0	7,5	8,5	8,6	8,9	9,4	10,4	11,5
0~20	7,5	8,6	8,7	9,0	9,5	10,5	11,7
20~40	7,5	8,7	8,7	9,1	9,5	10,6	11,9
40~60	7,7	8,8	8,9	9,2	9,7	10,8	12,1
60~80	7,8	9,0	9,1	9,5	10,	11,2	12,5