

S-BAH32

Code(d) **670393**

Code(e) **674390**

Refractive Index n_d	1.66998 1.669979	Abbe Number v_d	39.3 39.27	Dispersion n_F-n_C	0.01706 0.017061
Refractive Index n_e	1.674022	Abbe Number v_e	38.99	Dispersion $n_F'-n_C'$	0.017287

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.63134
n_{1970}	1.97009	1.63728
n_{1530}	1.52958	1.64386
n_{1129}	1.12864	1.65013
n_t	1.01398	1.65237
n_s	0.85211	1.65648
$n_{A'}$	0.76819	1.65941
n_r	0.70652	1.66216
n_C	0.65627	1.66495
$n_{C'}$	0.64385	1.66574
$n_{\text{He-Ne}}$	0.6328	1.66648
n_D	0.58929	1.66983
n_d	0.58756	1.66998
n_e	0.54607	1.67402
n_F	0.48613	1.68201
$n_{F'}$	0.47999	1.68303
$n_{\text{He-Cd}}$	0.44157	1.69059
n_g	0.435835	1.69193
n_h	0.404656	1.70056
n_i	0.365015	1.71630

Partial Dispersions	
n_C-n_t	0.012577
$n_C-n_{A'}$	0.005542
n_d-n_C	0.005030
n_e-n_C	0.009073
n_g-n_d	0.021950
n_g-n_F	0.009919
n_h-n_g	0.008632
n_i-n_g	0.024370
$n_C'-n_t$	0.013368
$n_e-n_{C'}$	0.008282
$n_{F'}-n_e$	0.009005
$n_i-n_{F'}$	0.033272

Relative Partial Dispersions	
$\theta_{C,t}$	0.7372
$\theta_{C,A'}$	0.3248
$\theta_{d,C}$	0.2948
$\theta_{e,C}$	0.5318
$\theta_{g,d}$	1.2866
$\theta_{g,F}$	0.5814
$\theta_{h,g}$	0.5059
$\theta_{i,g}$	1.4284
$\theta'_{C,t}$	0.7733
$\theta'_{e,C'}$	0.4791
$\theta'_{F',e}$	0.5209
$\theta'_{i,F}$	1.9247

Thermal Properties	
Strain Point StP (°C)	546
Annealing Point AP (°C)	563
Transformation Temperature Tg (°C)	608
Yield Point At (°C)	657
Softening Point SP (°C)	726
Expansion Coefficients (-30~+70°C)	69
α (10 ⁻⁷ /°C) (+100~+300°C)	78
Thermal Conductivity k (W/m·K)	0.921

Coloring			
λ_{80}	40	λ_5	36
λ_{70}			

Internal Transmittance	
$\lambda(\text{nm})$	$\tau_{10\text{mm}}$
280	
290	
300	
310	
320	
330	
340	
350	
360	0.16
370	0.51
380	0.74
390	0.85
400	0.910
420	0.955
440	0.971
460	0.978
480	0.984
500	0.988
550	0.994
600	0.994
650	0.994
700	0.996
800	0.998
900	0.997
1000	0.997
1200	0.996
1400	0.992
1600	0.993
1800	0.988
2000	0.980
2200	0.948
2400	0.88

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0063
$\Delta\theta_{C,A'}$	0.0013
$\Delta\theta_{g,d}$	0.0034
$\Delta\theta_{g,F}$	0.0035
$\Delta\theta_{i,g}$	0.0322

Mechanical Properties	
Young's Modulus E (10 ⁸ N/m ²)	904
Rigidity Modulus G (10 ⁸ N/m ²)	359
Poisson's Ratio σ	0.260
Knoop Hardness Hk[Class]	580 6
Abrasion Aa	138
Photoelastic Constant β (nm/cm/10 ⁵ Pa)	2.74

Constants of Dispersion Formula	
A ₁	1.58023630E+00
A ₂	1.37504632E-01
A ₃	1.60603298E+00
B ₁	1.03578062E-02
B ₂	5.48393088E-02
B ₃	1.47982885E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	1
Weathering Resistance(Surface) Group W(S)	1 ~ 2
Acid Resistance(Surface) Group SR	1.0
Phosphate Resistance PR	1.0

Other Properties	
Bubble Quality Group B	
Specific Gravity d	3.26
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	3.7	4.3	4.3	4.6	4.8	5.4	6.2
-20~0	3.7	4.4	4.4	4.7	4.9	5.6	6.4
0~20	3.7	4.4	4.5	4.7	5.0	5.7	6.5
20~40	3.8	4.5	4.6	4.8	5.1	5.9	6.7
40~60	3.8	4.6	4.7	4.9	5.3	6.0	6.9
60~80	3.8	4.7	4.8	5.0	5.4	6.2	7.1