

S-BAH28

Code(d) **723380**

Code(e) **728377**

Refractive Index n_d	1.72342 1.723420	Abbe Number v_d	38.0 37.95	Dispersion n_F-n_C	0.01906 0.019060
Refractive Index n_e	1.727935	Abbe Number v_e	37.68	Dispersion n_F-n_C	0.019320

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.68198
n_{1970}	1.97009	1.68808
n_{1530}	1.52958	1.69490
n_{1129}	1.12864	1.70154
n_t	1.01398	1.70396
n_s	0.85211	1.70844
$n_{A'}$	0.76819	1.71167
n_r	0.70652	1.71471
n_C	0.65627	1.71782
$n_{C'}$	0.64385	1.71870
$n_{\text{He-Ne}}$	0.6328	1.71952
n_D	0.58929	1.72325
n_d	0.58756	1.72342
n_e	0.54607	1.72794
n_F	0.48613	1.73688
$n_{F'}$	0.47999	1.73802
$n_{\text{He-Cd}}$	0.44157	1.74649
n_g	0.435835	1.74800
n_h	0.404656	1.75769
n_i	0.365015	

Partial Dispersions	
n_C-n_t	0.013857
$n_C-n_{A'}$	0.006146
n_d-n_C	0.005604
n_e-n_C	0.010119
n_g-n_d	0.024580
n_g-n_F	0.011124
n_h-n_g	0.009689
n_i-n_g	
n_C-n_t	0.014736
$n_e-n_{C'}$	0.009240
$n_{F'-n_e}$	0.010080
$n_i-n_{F'}$	

Relative Partial Dispersions	
$\theta_{C,t}$	0.7270
$\theta_{C,A'}$	0.3225
$\theta_{d,C}$	0.2940
$\theta_{e,C}$	0.5309
$\theta_{g,d}$	1.2896
$\theta_{g,F}$	0.5836
$\theta_{h,g}$	0.5083
$\theta_{i,g}$	
$\theta'_{C,t}$	0.7627
$\theta'_{e,C'}$	0.4783
$\theta'_{F',e}$	0.5217
$\theta'_{i,F}$	

Thermal Properties	
Strain Point StP (°C)	599
Annealing Point AP (°C)	626
Transformation Temperature Tg (°C)	643
Yield Point At (°C)	676
Softening Point SP (°C)	739
Expansion Coefficients (-30~+70°C)	66
α ($10^{-7}/^\circ\text{C}$) (+100~+300°C)	73
Thermal Conductivity k (W/m-K)	0.889

Coloring			
λ_{80}	42	λ_5	36
λ_{70}			

Internal Transmittance	
$\lambda(\text{nm})$	$\tau_{10\text{mm}}$
280	
290	
300	
310	
320	
330	
340	
350	
360	0.06
370	0.32
380	0.58
390	0.75
400	0.85
420	0.934
440	0.963
460	0.975
480	0.982
500	0.987
550	0.994
600	0.995
650	0.995
700	0.996
800	0.998
900	0.998
1000	0.998
1200	0.998
1400	0.994
1600	0.995
1800	0.990
2000	0.979
2200	0.938
2400	0.84

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0023
$\Delta\theta_{C,A'}$	0.0006
$\Delta\theta_{g,d}$	0.0037
$\Delta\theta_{g,F}$	0.0035
$\Delta\theta_{i,g}$	

Mechanical Properties	
Young's Modulus E (10^8N/m^2)	911
Rigidity Modulus G (10^8N/m^2)	375
Poisson's Ratio σ	0.213
Knoop Hardness Hk[Class]	600 6
Abrasion Aa	138
Photoelastic Constant β (nm/cm/ 10^5Pa)	2.31

Constants of Dispersion Formula	
A ₁	1.69493484E+00
A ₂	1.92890298E-01
A ₃	1.56385948E+00
B ₁	1.02723190E-02
B ₂	5.21187640E-02
B ₃	1.37818035E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	1 ~ 2
Acid Resistance(Surface) Group SR	4.0
Phosphate Resistance PR	1.0

Other Properties	
Bubble Quality Group B	
Specific Gravity d	3.67
Remarks	

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	dn/dt relative ($10^{-6}/^\circ\text{C}$)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	3.8	4.5	4.5	4.8	5.1	5.8	6.6
-20~0	3.9	4.6	4.7	4.9	5.3	6.0	6.9
0~20	4.0	4.8	4.8	5.1	5.4	6.2	7.1
20~40	4.1	4.9	5.0	5.2	5.6	6.5	7.4
40~60	4.2	5.1	5.1	5.4	5.8	6.7	7.7
60~80	4.3	5.2	5.3	5.6	6.0	6.9	7.9