PBH56

Code(d) **841246**
Code(e) **849244**

Refractive Index	n_d	**1.84139** 1.841390	Abbe Number	ν_d	24.56	Dispersion	n_F-n_C	0.034260
Refractive Index	n_e	1.849468	Abbe Number	ν_e	24.37	Dispersion	$n_{F'}$-$n_{C'}$	0.034856

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.78567
n_{1970}	1.97009	1.79100
n_{1530}	1.52958	1.79764
n_{1129}	1.12864	1.80566
n_t	1.01398	1.80906
n_s	0.85211	1.81592
$n_{A'}$	0.76819	1.82116
n_r	0.70652	1.82626
n_C	0.65627	1.83157
$n_{C'}$	0.64385	1.83310
n_{He-Ne}	0.6328	1.83453
n_D	0.58929	1.84110
n_d	0.58756	1.84139
n_e	0.54607	1.84947
n_F	0.48613	1.86583
$n_{F'}$	0.47999	1.86795
n_{He-Cd}	0.44157	1.88394
n_g	0.435835	1.88682
n_h	0.404656	1.90566
n_i	0.365015	

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	-0.0048
$\Delta\theta_{C,A'}$	-0.0017
$\Delta\theta_{g,d}$	0.0124
$\Delta\theta_{g,F}$	0.0110
$\Delta\theta_{i,g}$	

Constants of Dispersion Formula	
A_1	1.78552677E+00
A_2	4.46684871E-01
A_3	1.21749317E+00
B_1	1.36046011E-02
B_2	5.70875152E-02
B_3	1.29967536E+02

Other Properties	
Bubble Quality Group B	
Specific Gravity d	5.35
Remarks	

Partial Dispersions	
n_C-n_t	0.022511
n_C-$n_{A'}$	0.010410
n_d-n_C	0.009817
n_e-n_C	0.017895
n_g-n_d	0.045433
n_g-n_F	0.020990
n_h-n_g	0.018839
n_i-n_g	
$n_{C'}$-n_t	0.024034
n_e-$n_{C'}$	0.016372
$n_{F'}$-n_e	0.018484
n_i-$n_{F'}$	

Thermal Properties		
Strain Point StP (℃)		336
Annealing Point AP (℃)		363
Transformation Temperature Tg (℃)		386
Yield Point At (℃)		413
Softening Point SP (℃)		443
Expansion Coefficients α (10^{-7}/℃)	(-30~+70℃)	84
	(+100~+300℃)	96
Thermal Conductivity k (W/m·K)		0.635

Mechanical Properties		
Young's Modulus E (10^8N/m^2)	592	
Rigidity Modulus G (10^8N/m^2)	237	
Poisson's Ratio σ	0.250	
Knoop Hardness Hk[Class]	360	4
Abrasion Aa	316	
Photoelastic Constant β (nm/cm/10^5Pa)		0.09

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	4
Weathering Resistance(Surface) Group W(S)	2
Acid Resistance(Surface) Group SR	53.3
Phosphate Resistance PR	4.0

Relative Partial Dispersions	
$\theta_{C,t}$	0.6571
$\theta_{C,A'}$	0.3039
$\theta_{d,C}$	0.2865
$\theta_{e,C}$	0.5223
$\theta_{g,d}$	1.3261
$\theta_{g,F}$	0.6127
$\theta_{h,g}$	0.5499
$\theta_{i,g}$	
$\theta'_{C',t}$	0.6895
$\theta'_{e,C'}$	0.4697
$\theta'_{F',e}$	0.5303
$\theta'_{i,F}$	

Coloring			
λ_{80}	400	λ_5	355
λ_{70}			

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	
320	
330	
340	
350	
360	0.22
370	0.62
380	0.84
390	0.927
400	0.962
420	0.985
440	0.992
460	0.995
480	0.996
500	0.998
550	0.999
600	0.998
650	0.998
700	0.998
800	0.998
900	0.999
1000	0.999
1200	0.999
1400	0.996
1600	0.996
1800	0.986
2000	0.975
2200	0.942
2400	0.905

Temperature Coefficients of Refractive Index							
Range of Temperature (℃)	dn/dT relative (10^{-6}/℃)						
	t	C'	He-Ne	D	e	F'	g
-40~20	7.2	9.5	9.7	10.4	11.4	13.8	16.6
-20~ 0	7.4	9.7	9.9	10.7	11.7	14.2	17.1
0~20	7.5	9.9	10.1	10.9	12.0	14.5	17.6
20~40	7.6	10.2	10.3	11.1	12.2	14.9	18.0
40~60	7.8	10.4	10.6	11.4	12.5	15.3	18.5
60~80	7.9	10.6	10.8	11.6	12.8	15.6	18.9