S-TIM 3

Code(d) **613370**

Code(e) **617367**

Refractive Index	n_d	**1.61293**	Abbe Number	v_d	**37.0**	Dispersion	n_F-n_C **0.01657**
		1.612929			37.00		0.016564
Refractive Index	n_e	1.616851	Abbe Number	v_e	36.73	Dispersion	n_F'-$n_{C'}$ 0.016792

Refractive Indicies		
λ(μm)		
n_{2325}	2.32542	1.57589
n_{1970}	1.97009	1.58154
n_{1530}	1.52958	1.58781
n_{1129}	1.12864	1.59381
n_t	1.01398	1.59595
n_s	0.85211	1.59990
$n_{A'}$	0.76819	1.60272
n_r	0.70652	1.60537
n_C	0.65627	1.60806
$n_{C'}$	0.64385	1.60883
n_{He-Ne}	0.6328	1.60954
n_D	0.58929	1.61278
n_d	0.58756	1.61293
n_e	0.54607	1.61685
n_F	0.48613	1.62463
$n_{F'}$	0.47999	1.62562
n_{He-Cd}	0.44157	1.63302
n_g	0.435835	1.63434
n_h	0.404656	1.64284
n_i	0.365015	1.65850

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0107
$\Delta\theta_{C,A'}$	0.0021
$\Delta\theta_{g,d}$	0.0045
$\Delta\theta_{g,F}$	0.0046
$\Delta\theta_{i,g}$	0.0438

Constants of Dispersion Formula	
A_1	1.40691144E+00
A_2	1.28369745E-01
A_3	1.51826191E+00
B_1	1.05633641E-02
B_2	5.68483105E-02
B_3	1.52107924E+02

Other Properties	
Bubble Quality Group B	
Specific Gravity d	2.67
Remarks	

Partial Dispersions	
n_C-n_t	0.012109
n_C-$n_{A'}$	0.005347
n_d-n_C	0.004867
n_e-n_C	0.008789
n_g-n_d	0.021407
n_g-n_F	0.009710
n_h-n_g	0.008506
n_i-n_g	0.024167
n_C-n_t	0.012873
n_e-$n_{C'}$	0.008025
n_F-n_e	0.008767
n_i-$n_{F'}$	0.032885

Thermal Properties		
Strain Point StP (℃)		548
Annealing Point AP (℃)		577
Transformation Temperature Tg (℃)		597
Yield Point At (℃)		633
Softening Point SP (℃)		708
Expansion Coefficients α (10^{-7}/℃)	(-30~+70℃)	77
	(+100~+300℃)	91
Thermal Conductivity k (W/m·K)		1.044

Mechanical Properties		
Young's Modulus E (10^8N/m^2)	779	
Rigidity Modulus G (10^8N/m^2)	317	
Poisson's Ratio σ	0.229	
Knoop Hardness Hk[Class]	510	5
Abrasion Aa	129	
Photoelastic Constant β (nm/cm/10^5Pa)		2.91

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

Temperature Coefficients of Refractive Index							
Range of Temperature (℃)	dn/dt relative (10^{-6}/℃)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	1.8	2.4	2.5	2.7	3.0	3.6	4.3
-20~ 0	1.8	2.5	2.6	2.8	3.1	3.8	4.5
0~20	2.0	2.6	2.7	3.0	3.2	3.9	4.7
20~40	2.1	2.8	2.8	3.1	3.4	4.1	5.0
40~60	2.2	2.9	2.9	3.2	3.5	4.3	5.2
60~80	2.3	3.0	3.0	3.3	3.6	4.4	5.4

Relative Partial Dispersions	
$\theta_{C,t}$	0.7310
$\theta_{C,A'}$	0.3228
$\theta_{d,C}$	0.2938
$\theta_{e,C}$	0.5306
$\theta_{g,d}$	1.2924
$\theta_{g,F}$	0.5862
$\theta_{h,g}$	0.5135
$\theta_{i,g}$	1.4590
$\theta'_{C',t}$	0.7666
$\theta'_{e,C'}$	0.4779
$\theta'_{F',e}$	0.5221
$\theta'_{i,F}$	1.9584

Coloring			
λ_{80}	39	λ_5	36
λ_{70}			

Internal Transmittance	
λ(nm)	τ10mm
280	
290	
300	
310	
320	
330	
340	
350	
360	0.13
370	0.53
380	0.79
390	0.907
400	0.950
420	0.976
440	0.984
460	0.986
480	0.989
500	0.992
550	0.996
600	0.996
650	0.995
700	0.997
800	0.999
900	0.998
1000	0.996
1200	0.996
1400	0.994
1600	0.994
1800	0.983
2000	0.971
2200	0.929
2400	0.913