S-TIM28

Code(d) **689311**

Code(e) **694308**

Refractive Index	n_d	**1.68893**	Abbe Number	v_d	**31.1**	Dispersion	n_F-n_C **0.02217**
		1.688931			31.07		0.022170
Refractive Index	n_e	1.694167	Abbe Number	v_e	30.83	Dispersion	n_F'-$n_{C'}$ 0.022516

Refractive Indicies		
λ(μm)		
n_{2325}	2.32542	1.64463
n_{1970}	1.97009	1.65062
n_{1530}	1.52958	1.65745
n_{1129}	1.12864	1.66438
n_t	1.01398	1.66699
n_s	0.85211	1.67192
$n_{A'}$	0.76819	1.67553
n_r	0.70652	1.67896
n_C	0.65627	1.68250
$n_{C'}$	0.64385	1.68350
n_{He-Ne}	0.6328	1.68445
n_D	0.58929	1.68874
n_d	0.58756	1.68893
n_e	0.54607	1.69417
n_F	0.48613	1.70467
$n_{F'}$	0.47999	1.70602
n_{He-Cd}	0.44157	1.71615
n_g	0.435835	1.71797
n_h	0.404656	1.72981
n_i	0.365015	

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0071
$\Delta\theta_{C,A'}$	0.0007
$\Delta\theta_{g,d}$	0.0099
$\Delta\theta_{g,F}$	0.0092
$\Delta\theta_{i,g}$	

Constants of Dispersion Formula	
A_1	1.54270810E+00
A_2	2.17113891E-01
A_3	1.81904459E+00
B_1	1.13925005E-02
B_2	5.79224572E-02
B_3	1.67697189E+02

Other Properties	
Bubble Quality Group B	
Specific Gravity d	2.98
Remarks	

Partial Dispersions	
n_C-n_t	0.015507
n_C-$n_{A'}$	0.006966
n_d-n_C	0.006436
n_e-n_C	0.011672
n_g-n_d	0.029044
n_g-n_F	0.013310
n_h-n_g	0.011834
n_i-n_g	
n_C-n_t	0.016512
n_e-$n_{C'}$	0.010667
n_F-n_e	0.011849
n_i-$n_{F'}$	

Thermal Properties		
Strain Point StP (℃)		560
Annealing Point AP (℃)		588
Transformation Temperature Tg (℃)		611
Yield Point At (℃)		637
Softening Point SP (℃)		701
Expansion Coefficients α (10^{-7}/℃)	(-30~+70℃)	82
	(+100~+300℃)	98
Thermal Conductivity k (W/m·K)		1.006

Mechanical Properties		
Young's Modulus E (10^8N/m^2)	855	
Rigidity Modulus G (10^8N/m^2)	344	
Poisson's Ratio σ	0.242	
Knoop Hardness Hk[Class]	550	6
Abrasion Aa	155	
Photoelastic Constant β (nm/cm/10^5Pa)		2.77

Chemical Properties	
Water Resistance(Powder) Group RW(P)	2
Acid Resistance(Powder) Group RA(P)	1
Weathering Resistance(Surface) Group W(S)	1
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	1.3	1.9	2.0	2.2	2.6	3.4	4.5
-20~ 0	1.3	2.0	2.1	2.3	2.7	3.6	4.7
0~20	1.3	2.1	2.2	2.5	2.9	3.8	5.0
20~40	1.4	2.2	2.3	2.6	3.0	4.0	5.2
40~60	1.4	2.3	2.4	2.7	3.1	4.2	5.5
60~80	1.4	2.4	2.5	2.8	3.3	4.4	5.7

Relative Partial Dispersions	
$\theta_{C,t}$	0.6995
$\theta_{C,A'}$	0.3142
$\theta_{d,C}$	0.2903
$\theta_{e,C}$	0.5265
$\theta_{g,d}$	1.3101
$\theta_{g,F}$	0.6004
$\theta_{h,g}$	0.5338
$\theta_{i,g}$	
$\theta'_{C',t}$	0.7333
$\theta'_{e,C'}$	0.4738
$\theta'_{F',e}$	0.5262
$\theta'_{i,F}$	

Coloring			
λ_{80}	41	λ_5	36
λ_{70}			

Internal Transmittance	
λ(nm)	τ10mm
280	
290	
300	
310	
320	
330	
340	
350	
360	0.01
370	0.23
380	0.58
390	0.79
400	0.88
420	0.951
440	0.970
460	0.978
480	0.983
500	0.987
550	0.994
600	0.995
650	0.994
700	0.995
800	0.998
900	0.998
1000	0.998
1200	0.998
1400	0.996
1600	0.996
1800	0.989
2000	0.983
2200	0.961
2400	0.948