S-LAM58

Code(d) **720420**

Code(e) **724417**

Refractive Index	n_d	**1.72000** 1.720000	Abbe Number	v_d	**42.0** 41.98	Dispersion	n_F-n_C	**0.01715** 0.017152
Refractive Index	n_e	1.724072	Abbe Number	v_e	41.69	Dispersion	n_F'-$n_{C'}$	0.017366

Refractive Indicies		
λ(μm)		
n_{2325}	2.32542	1.68205
n_{1970}	1.97009	1.68764
n_{1530}	1.52958	1.69390
n_{1129}	1.12864	1.70001
n_t	1.01398	1.70224
n_s	0.85211	1.70636
$n_{A'}$	0.76819	1.70931
n_r	0.70652	1.71209
n_C	0.65627	1.71492
$n_{C'}$	0.64385	1.71572
n_{He-Ne}	0.6328	1.71647
n_D	0.58929	1.71985
n_d	0.58756	1.72000
n_e	0.54607	1.72407
n_F	0.48613	1.73207
$n_{F'}$	0.47999	1.73308
n_{He-Cd}	0.44157	1.74058
n_g	0.435835	1.74190
n_h	0.404656	1.75033
n_i	0.365015	1.76538

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	-0.0043
$\Delta\theta_{C,A'}$	0.0001
$\Delta\theta_{g,d}$	-0.0008
$\Delta\theta_{g,F}$	-0.0006
$\Delta\theta_{i,g}$	-0.0043

Constants of Dispersion Formula	
A_1	1.70984856E+00
A_2	1.73342897E-01
A_3	1.64833565E+00
B_1	1.00852127E-02
B_2	4.70890831E-02
B_3	1.57468520E+02

Other Properties	
Bubble Quality Group B	
Specific Gravity d	4.00
Remarks	

Partial Dispersions	
n_C-n_t	0.012680
n_C-$n_{A'}$	0.005606
n_d-n_C	0.005081
n_e-n_C	0.009153
n_g-n_d	0.021898
n_g-n_F	0.009827
n_h-n_g	0.008436
n_i-n_g	0.023484
n_C-n_t	0.013479
n_e-$n_{C'}$	0.008354
n_F-n_e	0.009012
n_i-$n_{F'}$	0.032298

Thermal Properties		
Strain Point StP (℃)		632
Annealing Point AP (℃)		658
Transformation Temperature Tg (℃)		681
Yield Point At (℃)		726
Softening Point SP (℃)		791
Expansion Coefficients α (10^{-7}/℃)	(-30~+70℃)	66
	(+100~+300℃)	77
Thermal Conductivity k (W/m·K)		0.771

Mechanical Properties		
Young's Modulus E (10^8N/m^2)	919	
Rigidity Modulus G (10^8N/m^2)	359	
Poisson's Ratio σ	0.279	
Knoop Hardness Hk[Class]	560	6
Abrasion Aa	151	
Photoelastic Constant β (nm/cm/10^5Pa)		2.03

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	2
Weathering Resistance(Surface) Group W(S)	1
Acid Resistance(Surface) Group SR	3.2
Phosphate Resistance PR	1.0

Relative Partial Dispersions	
$\theta_{C,t}$	0.7393
$\theta_{C,A'}$	0.3268
$\theta_{d,C}$	0.2962
$\theta_{e,C}$	0.5336
$\theta_{g,d}$	1.2767
$\theta_{g,F}$	0.5729
$\theta_{h,g}$	0.4918
$\theta_{i,g}$	1.3692
$\theta'_{C',t}$	0.7762
$\theta'_{e,C'}$	0.4811
$\theta'_{F',e}$	0.5189
$\theta'_{i,F}$	1.8598

Coloring			
λ_{80}	41	λ_5	35
λ_{70}			

Internal Transmittance	
λ(nm)	τ10mm
280	
290	
300	
310	
320	
330	
340	
350	0.04
360	0.27
370	0.55
380	0.74
390	0.85
400	0.911
420	0.960
440	0.976
460	0.983
480	0.988
500	0.991
550	0.996
600	0.996
650	0.995
700	0.997
800	0.998
900	0.998
1000	0.998
1200	0.999
1400	0.997
1600	0.997
1800	0.992
2000	0.984
2200	0.956
2400	0.89

Temperature Coefficients of Refractive Index							
Range of Temperature (℃)	dn/dt relative (10^{-6}/℃)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	3.3	3.9	3.9	4.1	4.4	5.0	5.7
-20~ 0	3.4	4.0	4.0	4.3	4.6	5.2	5.9
0~20	3.4	4.1	4.2	4.4	4.7	5.4	6.1
20~40	3.6	4.3	4.3	4.6	4.9	5.6	6.3
40~60	3.6	4.4	4.5	4.7	5.0	5.7	6.5
60~80	3.7	4.5	4.6	4.8	5.2	5.9	6.8