

S-LAM60

Code(d) **743493**

Code(e) **747491**

Refractive Index n_d	1.74320 1.743198	Abbe Number ν_d	49.34	Dispersion n_F-n_C	0.015063
Refractive Index n_e	1.746784	Abbe Number ν_e	49.10	Dispersion n_F-n_C'	0.015210

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.70181
n_{1970}	1.97009	1.70932
n_{1530}	1.52958	1.71730
n_{1129}	1.12864	1.72431
n_t	1.01398	1.72663
n_s	0.85211	1.73071
$n_{A'}$	0.76819	1.73351
n_r	0.70652	1.73608
n_C	0.65627	1.73865
$n_{C'}$	0.64385	1.73937
$n_{\text{He-Ne}}$	0.6328	1.74005
n_D	0.58929	1.74306
n_d	0.58756	1.74320
n_e	0.54607	1.74678
n_F	0.48613	1.75372
$n_{F'}$	0.47999	1.75458
$n_{\text{He-Cd}}$	0.44157	1.76094
n_g	0.435835	1.76205
n_h	0.404656	1.76904
n_i	0.365015	1.78113

Constants of Dispersion Formula	
A_1	1.60673056E+00
A_2	3.66415640E-01
A_3	1.31761804E+00
B_1	7.75046140E-03
B_2	2.89967611E-02
B_3	9.30720709E+01

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	52.0
Phosphate Resistance PR	2.0

Mechanical Properties	
Young's Modulus E (10^9N/m^2)	1132
Rigidity Modulus G (10^9N/m^2)	438
Poisson's Ratio σ	0.294
Knoop Hardness Hk[Class]	730 7
Abrasion Aa	70
Photoelastic Constant β nm/(cm \cdot 10 5 Pa)	1.90

Partial Dispersions	
n_C-n_t	0.012019
$n_C-n_{A'}$	0.005143
n_d-n_C	0.004545
n_e-n_C	0.008131
n_g-n_d	0.018849
n_g-n_F	0.008331
n_h-n_g	0.006993
n_i-n_g	0.019083
n_C-n_t	0.012740
$n_e-n_{C'}$	0.007410
n_F-n_e	0.007800
$n_i-n_{F'}$	0.026546

Relative Partial Dispersions	
$\theta_{C,t}$	0.7979
$\theta_{C,A'}$	0.3414
$\theta_{d,C}$	0.3017
$\theta_{e,C}$	0.5398
$\theta_{g,d}$	1.2513
$\theta_{g,F}$	0.5531
$\theta_{h,g}$	0.4643
$\theta_{i,g}$	1.2669
$\theta'_{C,t}$	0.8376
$\theta'_{e,C'}$	0.4872
$\theta'_{F,e}$	0.5128
$\theta'_{i,F'}$	1.7453

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0197
$\Delta\theta_{C,A'}$	0.0057
$\Delta\theta_{g,d}$	-0.0109
$\Delta\theta_{g,F}$	-0.0085
$\Delta\theta_{i,g}$	-0.0450

Thermal Properties	
Strain Point StP (°C)	594
Annealing Point AP (°C)	615
Transformation Temperature Tg (°C)	643
Yield Point At (°C)	658
Softening Point SP (°C)	693
Expansion Coefficients (-30~+70°C)	54
α ($10^{-7}/^\circ\text{C}$) (+100~+300°C)	66
Thermal Conductivity λ W/(m \cdot K)	0.845

Coloring			
λ_{80}	375	λ_5	330
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	360	$\lambda_{0.05}$	331

CCI		
B	G	R
0.00	0.51	0.52

Internal Transmittance	
$\lambda(\text{nm})$	τ 10mm
280	
290	
300	
310	
320	
330	0.03
340	0.29
350	0.60
360	0.79
370	0.89
380	0.937
390	0.961
400	0.974
420	0.985
440	0.990
460	0.993
480	0.995
500	0.997
550	0.998
600	0.997
650	0.998
700	0.998
800	0.998
900	0.998
1000	0.997
1200	0.997
1400	0.991
1600	0.991
1800	0.980
2000	0.953
2200	0.87
2400	0.62

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	$\Delta n/\Delta T$ relative ($10^{-6}/^\circ\text{C}$)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	5.3	5.7	5.7	5.9	6.1	6.6	7.1
-20~ 0	5.4	5.8	5.9	6.1	6.3	6.8	7.3
0~20	5.5	6.0	6.0	6.2	6.4	7.0	7.5
20~40	5.6	6.1	6.2	6.4	6.6	7.2	7.7
40~60	5.7	6.3	6.3	6.5	6.8	7.4	7.9
60~80	5.9	6.5	6.5	6.6	7.0	7.5	8.1

Other Properties	
Bubble Quality Group B	
Specific Gravity d	4.06
Remarks	

OHARA 17-04

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※The name of the glass type is the model number assigned based on the main components of the composition: large, medium, small refractive index and serial number.