S-BAM 4

Code(d) **606437**

Code(e) **609434**

Refractive Index	n_d	**1.60562** / 1.605620	Abbe Number	ν_d **43.70**	Dispersion	n_F-n_C **0.013857**
Refractive Index	n_e	1.608909	Abbe Number	ν_e 43.41	Dispersion	$n_{F'}$-$n_{C'}$ 0.014026

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.57351
n_{1970}	1.97009	1.57850
n_{1530}	1.52958	1.58402
n_{1129}	1.12864	1.58926
n_t	1.01398	1.59113
n_s	0.85211	1.59453
$n_{A'}$	0.76819	1.59695
n_r	0.70652	1.59921
n_C	0.65627	1.60151
$n_{C'}$	0.64385	1.60215
n_{He-Ne}	0.6328	1.60276
n_D	0.58929	1.60550
n_d	0.58756	1.60562
n_e	0.54607	1.60891
n_F	0.48613	1.61536
$n_{F'}$	0.47999	1.61618
n_{He-Cd}	0.44157	1.62222
n_g	0.435835	1.62329
n_h	0.404656	1.63010
n_i	0.365015	1.64228

Constants of Dispersion Formula	
A_1	1.41059317E+00
A_2	1.11201306E-01
A_3	1.34148939E+00
B_1	9.63312192E-03
B_2	4.98778210E-02
B_3	1.52237696E+02

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

Mechanical Properties		
Young's Modulus E (GPa)	76.2	
Rigidity Modulus G (GPa)	30.6	
Poisson's Ratio σ	0.244	
Knoop Hardness Hk[Class]	530	5
Abrasion Aa	159	

Partial Dispersions	
n_C-n_t	0.010380
n_C-$n_{A'}$	0.004557
n_d-n_C	0.004113
n_e-n_C	0.007402
n_g-n_d	0.017671
n_g-n_F	0.007927
n_h-n_g	0.006811
n_i-n_g	0.018992
n_C-n_t	0.011028
n_e-$n_{C'}$	0.006754
$n_{F'}$-n_e	0.007272
n_i-$n_{F'}$	0.026102

Relative Partial Dispersions	
$\theta_{C,t}$	0.7491
$\theta_{C,A'}$	0.3289
$\theta_{d,C}$	0.2968
$\theta_{e,C}$	0.5342
$\theta_{g,d}$	1.2752
$\theta_{g,F}$	0.5721
$\theta_{h,g}$	0.4915
$\theta_{i,g}$	1.3706
$\theta'_{C',t}$	0.7863
$\theta'_{e,C'}$	0.4815
$\theta'_{F',e}$	0.5185
$\theta'_{i,F'}$	1.8610

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	-0.0026
$\Delta\theta_{C,A'}$	0.0001
$\Delta\theta_{g,d}$	0.0012
$\Delta\theta_{g,F}$	0.0013
$\Delta\theta_{i,g}$	0.0115

Thermal Properties		
Strain Point StP (℃)		548
Annealing Point AP (℃)		577
Transformation Temperature Tg (℃)		599
Yield Point At (℃)		641
Softening Point SP (℃)		722
Expansion Coefficients α (10^{-7} K^{-1})	(-30~+70℃)	84
	(+100~+300℃)	97
Thermal Conductivity λ W/(m·K)		0.931

Coloring			
λ_{80}	380	λ_5	345
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	375	$\lambda_{0.05}$	350

CCI		
B	G	R
0.00	0.69	0.65

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	
320	
330	
340	
350	0.06
360	0.41
370	0.72
380	0.87
390	0.938
400	0.965
420	0.986
440	0.991
460	0.991
480	0.993
500	0.995
550	0.998
600	0.997
650	0.996
700	0.997
800	0.999
900	0.998
1000	0.998
1200	0.998
1400	0.995
1600	0.994
1800	0.980
2000	0.962
2200	0.919
2400	0.89

Temperature Coefficients of Refractive Index							
Range of Temperature (℃)	Δn/ΔT relative ($10^{-6}$$K^{-1}$)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	0.6	1.0	1.0	1.2	1.4	1.9	2.4
-20~ 0	0.7	1.1	1.1	1.3	1.5	2.0	2.6
0~20	0.7	1.1	1.2	1.3	1.6	2.1	2.7
20~40	0.8	1.2	1.2	1.4	1.7	2.2	2.9
40~60	0.8	1.3	1.3	1.5	1.8	2.4	3.0
60~80	0.9	1.4	1.4	1.6	1.9	2.5	3.2

Other Properties	
Photoelastic Constant β nm/(cm·10^5Pa)	2.41
Specific Gravity d	2.91
Remarks	

OHARA 24-01

※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.