S-BSM14

Code(d) **603607**
Code(e) **605604**

Refractive Index	n_d	**1.60311** / 1.603112	Abbe Number	ν_d **60.64**	Dispersion	n_F-n_C **0.009945**
Refractive Index	n_e	1.605484	Abbe Number	ν_e 60.39	Dispersion	$n_{F'}$-$n_{C'}$ 0.010027

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.57300
n_{1970}	1.97009	1.57880
n_{1530}	1.52958	1.58491
n_{1129}	1.12864	1.59013
n_t	1.01398	1.59180
n_s	0.85211	1.59467
$n_{A'}$	0.76819	1.59660
n_r	0.70652	1.59835
n_C	0.65627	1.60008
$n_{C'}$	0.64385	1.60056
n_{He-Ne}	0.6328	1.60101
n_D	0.58929	1.60302
n_d	0.58756	1.60311
n_e	0.54607	1.60548
n_F	0.48613	1.61002
$n_{F'}$	0.47999	1.61059
n_{He-Cd}	0.44157	1.61470
n_g	0.435835	1.61541
n_h	0.404656	1.61987
n_i	0.365015	1.62745

Constants of Dispersion Formula	
A_1	1.28286270E+00
A_2	2.47647429E-01
A_3	1.10383999E+00
B_1	1.22902399E-02
B_2	-6.13142361E-03
B_3	1.06883378E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	4
Weathering Resistance(Surface) Group W(S)	3
Acid Resistance(Surface) Group SR	51.2
Phosphate Resistance PR	2.2

Mechanical Properties		
Young's Modulus E (GPa)	84.9	
Rigidity Modulus G (GPa)	33.8	
Poisson's Ratio σ	0.257	
Knoop Hardness Hk[Class]	580	6
Abrasion Aa	126	

Partial Dispersions	
n_C-n_t	0.008275
n_C-$n_{A'}$	0.003482
n_d-n_C	0.003033
n_e-n_C	0.005405
n_g-n_d	0.012297
n_g-n_F	0.005385
n_h-n_g	0.004461
n_i-n_g	0.012043
n_C-n_t	0.008758
n_e-$n_{C'}$	0.004922
$n_{F'}$-n_e	0.005105
n_i-$n_{F'}$	0.016863

Relative Partial Dispersions	
$\theta_{C,t}$	0.8321
$\theta_{C,A'}$	0.3501
$\theta_{d,C}$	0.3050
$\theta_{e,C}$	0.5435
$\theta_{g,d}$	1.2365
$\theta_{g,F}$	0.5415
$\theta_{h,g}$	0.4486
$\theta_{i,g}$	1.2110
$\theta'_{C',t}$	0.8734
$\theta'_{e,C'}$	0.4909
$\theta'_{F',e}$	0.5091
$\theta'_{i,F'}$	1.6818

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0009
$\Delta\theta_{C,A'}$	0.0007
$\Delta\theta_{g,d}$	-0.0023
$\Delta\theta_{g,F}$	-0.0019
$\Delta\theta_{i,g}$	-0.0062

Thermal Properties		
Strain Point StP (℃)		614
Annealing Point AP (℃)		641
Transformation Temperature Tg (℃)		663
Yield Point At (℃)		698
Softening Point SP (℃)		757
Expansion Coefficients α (10^{-7} K^{-1})	(-30~+70℃)	62
	(+100~+300℃)	73
Thermal Conductivity λ W/(m·K)		0.891

Coloring			
λ_{80}	350	λ_5	295
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	339	$\lambda_{0.05}$	306

CCI		
B	G	R
0.00	0.19	0.20

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	0.17
320	0.45
330	0.68
340	0.82
350	0.906
360	0.948
370	0.968
380	0.980
390	0.987
400	0.991
420	0.994
440	0.994
460	0.995
480	0.996
500	0.997
550	0.998
600	0.998
650	0.998
700	0.998
800	0.999
900	0.998
1000	0.998
1200	0.998
1400	0.990
1600	0.995
1800	0.988
2000	0.976
2200	0.919
2400	0.81

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	2.5	2.7	2.7	2.8	2.9	3.1	3.4
-20~ 0	2.5	2.8	2.8	2.9	3.0	3.3	3.5
0~20	2.6	2.9	2.9	3.0	3.1	3.4	3.7
20~40	2.6	2.9	3.0	3.1	3.2	3.5	3.8
40~60	2.7	3.0	3.1	3.2	3.3	3.6	4.0
60~80	2.7	3.1	3.1	3.3	3.4	3.8	4.1

Other Properties	
Photoelastic Constant β nm/(cm·10^5Pa)	2.01
Specific Gravity d	3.43
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.