

S-BSM18

Code(d) **639554**

Code(e) **641551**

| | | | | | |
|------------------------|----------------------------|---------------------|--------------|-------------------------|-----------------|
| Refractive Index n_d | 1.63854 1.638539 | Abbe Number ν_d | 55.38 | Dispersion n_F-n_C | 0.011531 |
| Refractive Index n_e | 1.641287 | Abbe Number ν_e | 55.10 | Dispersion $n_F-n_{C'}$ | 0.011638 |

| Refractive Indices | | |
|------------------------|----------|---------|
| $\lambda(\mu\text{m})$ | | |
| n_{2325} | 2.32542 | 1.60779 |
| n_{1970} | 1.97009 | 1.61314 |
| n_{1530} | 1.52958 | 1.61892 |
| n_{1129} | 1.12864 | 1.62411 |
| n_t | 1.01398 | 1.62586 |
| n_s | 0.85211 | 1.62896 |
| $n_{A'}$ | 0.76819 | 1.63111 |
| n_r | 0.70652 | 1.63308 |
| n_C | 0.65627 | 1.63505 |
| $n_{C'}$ | 0.64385 | 1.63560 |
| $n_{\text{He-Ne}}$ | 0.6328 | 1.63612 |
| n_D | 0.58929 | 1.63844 |
| n_d | 0.58756 | 1.63854 |
| n_e | 0.54607 | 1.64129 |
| n_F | 0.48613 | 1.64658 |
| $n_{F'}$ | 0.47999 | 1.64724 |
| $n_{\text{He-Cd}}$ | 0.44157 | 1.65207 |
| n_g | 0.435835 | 1.65291 |
| n_h | 0.404656 | 1.65818 |
| n_i | 0.365015 | 1.66720 |

| Constants of Dispersion Formula | |
|---------------------------------|----------------|
| A_1 | 9.27886025E-01 |
| A_2 | 7.08858526E-01 |
| A_3 | 1.18610897E+00 |
| B_1 | 4.17549199E-03 |
| B_2 | 1.84691838E-02 |
| B_3 | 1.22210416E+02 |

| Chemical Properties | |
|---|------|
| Water Resistance(Powder) Group RW(P) | 1 |
| Acid Resistance(Powder) Group RA(P) | 3 |
| Weathering Resistance(Surface) Group W(S) | 2 |
| Acid Resistance(Surface) Group SR | 51.2 |
| Phosphate Resistance PR | 2.0 |

| Mechanical Properties | |
|--------------------------|---------|
| Young's Modulus E (GPa) | 88.5 |
| Rigidity Modulus G (GPa) | 34.9 |
| Poisson's Ratio σ | 0.268 |
| Knoop Hardness Hk(Class) | 570 6 |
| Abrasion Aa | 155 |

| Partial Dispersions | |
|---------------------|----------|
| n_C-n_t | 0.009188 |
| $n_C-n_{A'}$ | 0.003946 |
| n_d-n_C | 0.003488 |
| n_e-n_C | 0.006236 |
| n_g-n_d | 0.014367 |
| n_g-n_F | 0.006324 |
| n_h-n_g | 0.005271 |
| n_i-n_g | 0.014291 |
| n_C-n_t | 0.009742 |
| $n_e-n_{C'}$ | 0.005682 |
| $n_{F'}-n_e$ | 0.005956 |
| $n_i-n_{F'}$ | 0.019954 |

| Relative Partial Dispersions | |
|------------------------------|--------|
| $\theta_{C,t}$ | 0.7968 |
| $\theta_{C,A'}$ | 0.3422 |
| $\theta_{d,C}$ | 0.3025 |
| $\theta_{e,C}$ | 0.5408 |
| $\theta_{g,d}$ | 1.2459 |
| $\theta_{g,F}$ | 0.5484 |
| $\theta_{h,g}$ | 0.4571 |
| $\theta_{i,g}$ | 1.2394 |
| $\theta'_{C,t}$ | 0.8371 |
| $\theta'_{e,C'}$ | 0.4882 |
| $\theta'_{F',e}$ | 0.5118 |
| $\theta'_{i,F'}$ | 1.7146 |

| Deviation of Relative Dispersions $\Delta\theta$ from "Normal" | |
|--|---------|
| $\Delta\theta_{C,t}$ | -0.0097 |
| $\Delta\theta_{C,A'}$ | -0.0008 |
| $\Delta\theta_{g,d}$ | -0.0038 |
| $\Delta\theta_{g,F}$ | -0.0035 |
| $\Delta\theta_{i,g}$ | -0.0219 |

| Thermal Properties | |
|--|-------|
| Strain Point StP (°C) | 567 |
| Annealing Point AP (°C) | 600 |
| Transformation Temperature Tg (°C) | 613 |
| Yield Point At (°C) | 655 |
| Softening Point SP (°C) | 717 |
| Expansion Coefficients (-30~+70°C) | 70 |
| α (10^{-7}K^{-1}) (+100~+300°C) | 84 |
| Thermal Conductivity λ W/(m·K) | 0.815 |

| Coloring | | | |
|----------------|-----|-------------|-----|
| λ_{80} | 350 | λ_5 | 305 |
| λ_{70} | | | |

| Internal transmission | | | |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$ | 345 | $\lambda_{0.05}$ | 309 |

| CCI | | |
|------|------|------|
| B | G | R |
| 0.00 | 0.21 | 0.22 |

| Internal Transmittance | |
|------------------------|-------------|
| $\lambda(\text{nm})$ | τ 10mm |
| 280 | |
| 290 | |
| 300 | |
| 310 | 0.08 |
| 320 | 0.31 |
| 330 | 0.57 |
| 340 | 0.75 |
| 350 | 0.86 |
| 360 | 0.929 |
| 370 | 0.961 |
| 380 | 0.977 |
| 390 | 0.985 |
| 400 | 0.990 |
| 420 | 0.993 |
| 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 | 0.998 |
| 900 | 0.998 |
| 1000 | 0.997 |
| 1200 | 0.997 |
| 1400 | 0.993 |
| 1600 | 0.994 |
| 1800 | 0.986 |
| 2000 | 0.973 |
| 2200 | 0.924 |
| 2400 | 0.84 |

| Temperature Coefficients of Refractive Index | | | | | | | |
|--|--|-----|-------|-----|-----|-----|-----|
| Range of Temperature (°C) | $\Delta n / \Delta T$ relative (10^{-6}K^{-1}) | | | | | | |
| | t | C' | He-Ne | D | e | F' | g |
| -40~-20 | 1.8 | 2.2 | 2.3 | 2.4 | 2.5 | 2.9 | 3.2 |
| -20~ 0 | 1.8 | 2.3 | 2.3 | 2.4 | 2.6 | 3.0 | 3.3 |
| 0~20 | 1.9 | 2.4 | 2.4 | 2.5 | 2.7 | 3.1 | 3.4 |
| 20~40 | 1.9 | 2.4 | 2.5 | 2.6 | 2.8 | 3.2 | 3.5 |
| 40~60 | 2.0 | 2.5 | 2.5 | 2.7 | 2.9 | 3.3 | 3.7 |
| 60~80 | 2.1 | 2.6 | 2.6 | 2.8 | 2.9 | 3.4 | 3.8 |

| Other Properties | |
|--|------|
| Photoelastic Constant β nm/(cm·10 ⁵ Pa) | 1.79 |
| Specific Gravity d | 3.69 |
| Remarks | |

OHARA 24-01

OHARA Copyright© OHARA INC. All Rights Reserved.

※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.