

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 | | |
|------------------------|----------|---------|
| $\lambda(\mu\text{m})$ | | |
| 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 |
| $n_{\text{He-Ne}}$ | 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 |
| $n_{\text{He-Cd}}$ | 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 (10^9N/m^2) | 762 |
| Rigidity Modulus G (10^8N/m^2) | 306 |
| Poisson's Ratio σ | 0.244 |
| Knoop Hardness Hk[Class] | 520 5 |
| Abrasion Aa | 151 |
| Photoelastic Constant β (nm/cm/ 10^9Pa) | 2.41 |

| Temperature Coefficients of Refractive Index | | | | | | | |
|--|---|-----|-------|-----|-----|-----|-----|
| Range of Temperature (°C) | dn/dT relative ($10^{-6}/^\circ\text{C}$) | | | | | | |
| | 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 |

| 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 $\Delta\theta$ from "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 (°C) | 548 |
| Annealing Point AP (°C) | 577 |
| Transformation Temperature Tg (°C) | 599 |
| Yield Point At (°C) | 641 |
| Softening Point SP (°C) | 722 |
| Expansion Coefficients (-30~+70°C) | 84 |
| α ($10^{-7}/^\circ\text{C}$) (+100~+300°C) | 97 |
| Thermal Conductivity k (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 | |
|------------------------|-------------|
| $\lambda(\text{nm})$ | 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 |

| Other Properties | |
|------------------------|------|
| Bubble Quality Group B | |
| Specific Gravity d | 2.91 |
| Remarks | |

OHARA 17-04