

S-LAH97

Code(d) **755523**

Code(e) **758521**

| | | | | | |
|------------------------|----------------------------|---------------------|--------------|-------------------------|-----------------|
| Refractive Index n_d | 1.75500 1.755000 | Abbe Number ν_d | 52.32 | Dispersion n_F-n_C | 0.014431 |
| Refractive Index n_e | 1.758440 | Abbe Number ν_e | 52.08 | Dispersion $n_F-n_{C'}$ | 0.014562 |

| Refractive Indices | | |
|------------------------|----------|---------|
| $\lambda(\mu\text{m})$ | | |
| n_{2325} | 2.32542 | 1.71414 |
| n_{1970} | 1.97009 | 1.72171 |
| n_{1530} | 1.52958 | 1.72970 |
| n_{1129} | 1.12864 | 1.73666 |
| n_t | 1.01398 | 1.73895 |
| n_s | 0.85211 | 1.74293 |
| $n_{A'}$ | 0.76819 | 1.74565 |
| n_r | 0.70652 | 1.74814 |
| n_C | 0.65627 | 1.75063 |
| $n_{C'}$ | 0.64385 | 1.75132 |
| $n_{\text{He-Ne}}$ | 0.6328 | 1.75197 |
| n_D | 0.58929 | 1.75487 |
| n_d | 0.58756 | 1.75500 |
| n_e | 0.54607 | 1.75844 |
| n_F | 0.48613 | 1.76506 |
| $n_{F'}$ | 0.47999 | 1.76588 |
| $n_{\text{He-Cd}}$ | 0.44157 | 1.77191 |
| n_g | 0.435835 | 1.77296 |
| n_h | 0.404656 | 1.77954 |
| n_i | 0.365015 | 1.79082 |

| Constants of Dispersion Formula | |
|---------------------------------|----------------|
| A_1 | 1.02730180E+00 |
| A_2 | 9.89293564E-01 |
| A_3 | 1.25781057E+00 |
| B_1 | 1.83406129E-02 |
| B_2 | 3.71264195E-03 |
| B_3 | 8.78510500E+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 | 51.2 |
| Phosphate Resistance PR | 2.0 |

| Mechanical Properties | |
|--|---------|
| Young's Modulus E (10^9N/m^2) | 1209 |
| Rigidity Modulus G (10^9N/m^2) | 467 |
| Poisson's Ratio σ | 0.295 |
| Knoop Hardness Hk[Class] | 730 7 |
| Abrasion Aa | 62 |
| Photoelastic Constant β nm/(cm \cdot 10 5 Pa) | 1.39 |

| Partial Dispersions | |
|---------------------|----------|
| n_C-n_t | 0.011678 |
| $n_C-n_{A'}$ | 0.004974 |
| n_d-n_C | 0.004373 |
| n_e-n_C | 0.007813 |
| n_g-n_d | 0.017958 |
| n_g-n_F | 0.007900 |
| n_h-n_g | 0.006585 |
| n_i-n_g | 0.017860 |
| n_C-n_t | 0.012373 |
| $n_e-n_{C'}$ | 0.007118 |
| n_F-n_e | 0.007444 |
| $n_i-n_{F'}$ | 0.024934 |

| Relative Partial Dispersions | |
|------------------------------|--------|
| $\theta_{C,t}$ | 0.8092 |
| $\theta_{C,A'}$ | 0.3447 |
| $\theta_{d,C}$ | 0.3030 |
| $\theta_{e,C}$ | 0.5414 |
| $\theta_{g,d}$ | 1.2444 |
| $\theta_{g,F}$ | 0.5474 |
| $\theta_{h,g}$ | 0.4563 |
| $\theta_{i,g}$ | 1.2376 |
| $\theta'_{C,t}$ | 0.8497 |
| $\theta'_{e,C'}$ | 0.4888 |
| $\theta'_{F',e}$ | 0.5112 |
| $\theta'_{i,F'}$ | 1.7123 |

| Deviation of Relative Dispersions $\Delta\theta$ from "Normal" | |
|--|---------|
| $\Delta\theta_{C,t}$ | 0.0170 |
| $\Delta\theta_{C,A'}$ | 0.0054 |
| $\Delta\theta_{g,d}$ | -0.0117 |
| $\Delta\theta_{g,F}$ | -0.0094 |
| $\Delta\theta_{i,g}$ | -0.0493 |

| Thermal Properties | |
|---|-------|
| Strain Point StP ($^{\circ}\text{C}$) | 644 |
| Annealing Point AP ($^{\circ}\text{C}$) | 670 |
| Transformation Temperature Tg ($^{\circ}\text{C}$) | 692 |
| Yield Point At ($^{\circ}\text{C}$) | 709 |
| Softening Point SP ($^{\circ}\text{C}$) | 721 |
| Expansion Coefficients (-30~+70 $^{\circ}\text{C}$) | 58 |
| α ($10^{-7}/^{\circ}\text{C}$) (+100~+300 $^{\circ}\text{C}$) | 72 |
| Thermal Conductivity λ W/(m \cdot K) | 0.863 |

| Coloring | | |
|----------------|-----|-------------|
| λ_{80} | 355 | λ_5 |
| λ_{70} | | |

| Internal transmission | | | |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$ | 328 | $\lambda_{0.05}$ | 272 |

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

| Internal Transmittance | |
|------------------------|-------------|
| $\lambda(\text{nm})$ | τ 10mm |
| 280 | 0.28 |
| 290 | 0.43 |
| 300 | 0.55 |
| 310 | 0.65 |
| 320 | 0.74 |
| 330 | 0.82 |
| 340 | 0.88 |
| 350 | 0.923 |
| 360 | 0.951 |
| 370 | 0.969 |
| 380 | 0.980 |
| 390 | 0.986 |
| 400 | 0.990 |
| 420 | 0.993 |
| 440 | 0.995 |
| 460 | 0.997 |
| 480 | 0.998 |
| 500 | 0.999 |
| 550 | 0.999 |
| 600 | 0.999 |
| 650 | 0.999 |
| 700 | 0.999 |
| 800 | 0.999 |
| 900 | 0.999 |
| 1000 | 0.999 |
| 1200 | 0.999 |
| 1400 | 0.995 |
| 1600 | 0.994 |
| 1800 | 0.984 |
| 2000 | 0.956 |
| 2200 | 0.87 |
| 2400 | 0.61 |

| Temperature Coefficients of Refractive Index | | | | | | | |
|--|---|-----|-------|-----|-----|-----|-----|
| Range of Temperature ($^{\circ}\text{C}$) | $\Delta n/\Delta T$ relative ($10^{-6}/^{\circ}\text{C}$) | | | | | | |
| | t | C' | He-Ne | D | e | F' | g |
| -40~-20 | 3.4 | 3.8 | 3.9 | 4.0 | 4.2 | 4.6 | 5.0 |
| -20~ 0 | 3.3 | 3.8 | 3.9 | 4.0 | 4.2 | 4.6 | 5.1 |
| 0~20 | 3.3 | 3.9 | 3.9 | 4.1 | 4.3 | 4.7 | 5.2 |
| 20~40 | 3.4 | 3.9 | 4.0 | 4.1 | 4.3 | 4.8 | 5.3 |
| 40~60 | 3.5 | 4.0 | 4.1 | 4.3 | 4.5 | 4.9 | 5.4 |
| 60~80 | 3.6 | 4.2 | 4.2 | 4.4 | 4.6 | 5.1 | 5.6 |

| Other Properties | |
|------------------------|------|
| Bubble Quality Group B | |
| Specific Gravity d | 4.17 |
| Remarks | |

OHARA 17-06

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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.