

S-TIH 1

Code(d) **717295**

Code(e) **723293**

| | | | | | |
|------------------------|----------------------------|---------------------|--------------|-------------------------|-----------------|
| Refractive Index n_d | 1.71736 1.717362 | Abbe Number ν_d | 29.52 | Dispersion n_F-n_C | 0.024303 |
| Refractive Index n_e | 1.723098 | Abbe Number ν_e | 29.28 | Dispersion $n_F-n_{C'}$ | 0.024694 |

| Refractive Indices | | |
|------------------------|----------|---------|
| $\lambda(\mu\text{m})$ | | |
| n_{2325} | 2.32542 | 1.67018 |
| n_{1970} | 1.97009 | 1.67636 |
| n_{1530} | 1.52958 | 1.68344 |
| n_{1129} | 1.12864 | 1.69075 |
| n_t | 1.01398 | 1.69353 |
| n_s | 0.85211 | 1.69885 |
| $n_{A'}$ | 0.76819 | 1.70275 |
| n_r | 0.70652 | 1.70649 |
| n_C | 0.65627 | 1.71033 |
| $n_{C'}$ | 0.64385 | 1.71143 |
| $n_{\text{He-Ne}}$ | 0.6328 | 1.71246 |
| n_D | 0.58929 | 1.71715 |
| n_d | 0.58756 | 1.71736 |
| n_e | 0.54607 | 1.72310 |
| n_F | 0.48613 | 1.73463 |
| $n_{F'}$ | 0.47999 | 1.73612 |
| $n_{\text{He-Cd}}$ | 0.44157 | 1.74732 |
| n_g | 0.435835 | 1.74933 |
| n_h | 0.404656 | 1.76247 |
| n_i | 0.365015 | |

| Constants of Dispersion Formula | |
|---------------------------------|----------------|
| A_1 | 1.60326759E+00 |
| A_2 | 2.42980935E-01 |
| A_3 | 1.81313592E+00 |
| B_1 | 1.18019139E-02 |
| B_2 | 5.91363658E-02 |
| B_3 | 1.61218747E+02 |

| Chemical Properties | |
|---|-----|
| Water Resistance(Powder) Group RW(P) | 1 |
| Acid Resistance(Powder) Group RA(P) | 1 |
| Weathering Resistance(Surface) Group W(S) | 1 |
| Acid Resistance(Surface) Group SR | 1.0 |
| Phosphate Resistance PR | 1.0 |

| Mechanical Properties | |
|--------------------------|---------|
| Young's Modulus E (GPa) | 88.4 |
| Rigidity Modulus G (GPa) | 35.5 |
| Poisson's Ratio σ | 0.247 |
| Knoop Hardness Hk(Class) | 570 6 |
| Abrasion Aa | 157 |

| Partial Dispersions | |
|---------------------|----------|
| n_C-n_t | 0.016798 |
| $n_C-n_{A'}$ | 0.007579 |
| n_d-n_C | 0.007030 |
| n_e-n_C | 0.012766 |
| n_g-n_d | 0.031970 |
| n_g-n_F | 0.014697 |
| n_h-n_g | 0.013136 |
| n_i-n_g | |
| n_C-n_t | 0.017894 |
| $n_e-n_{C'}$ | 0.011670 |
| $n_{F'}-n_e$ | 0.013024 |
| $n_i-n_{F'}$ | |

| Relative Partial Dispersions | |
|------------------------------|--------|
| $\theta_{C,t}$ | 0.6912 |
| $\theta_{C,A'}$ | 0.3119 |
| $\theta_{d,C}$ | 0.2893 |
| $\theta_{e,C}$ | 0.5253 |
| $\theta_{g,d}$ | 1.3155 |
| $\theta_{g,F}$ | 0.6047 |
| $\theta_{h,g}$ | 0.5405 |
| $\theta_{i,g}$ | |
| $\theta'_{C,t}$ | 0.7246 |
| $\theta'_{e,C'}$ | 0.4726 |
| $\theta'_{F',e}$ | 0.5274 |
| $\theta'_{i,F'}$ | |

| Deviation of Relative Dispersions $\Delta\theta$ from "Normal" | |
|--|--------|
| $\Delta\theta_{C,t}$ | 0.0060 |
| $\Delta\theta_{C,A'}$ | 0.0003 |
| $\Delta\theta_{g,d}$ | 0.0121 |
| $\Delta\theta_{g,F}$ | 0.0110 |
| $\Delta\theta_{i,g}$ | |

| Thermal Properties | |
|--|------|
| Strain Point StP (°C) | 569 |
| Annealing Point AP (°C) | 597 |
| Transformation Temperature Tg (°C) | 622 |
| Yield Point At (°C) | 653 |
| Softening Point SP (°C) | 703 |
| Expansion Coefficients (-30~+70°C) | 82 |
| α (10^{-7}K^{-1}) (+100~+300°C) | 96 |
| Thermal Conductivity λ W/(m·K) | 1.02 |

| Coloring | | | |
|----------------|-----|-------------|-----|
| λ_{80} | 405 | λ_5 | 360 |
| λ_{70} | | | |

| Internal transmission | | | |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$ | 392 | $\lambda_{0.05}$ | 366 |

| CCI | | |
|------|------|------|
| B | G | R |
| 0.00 | 2.31 | 2.29 |

| Internal Transmittance | |
|------------------------|-------------|
| $\lambda(\text{nm})$ | τ 10mm |
| 280 | |
| 290 | |
| 300 | |
| 310 | |
| 320 | |
| 330 | |
| 340 | |
| 350 | |
| 360 | |
| 370 | 0.19 |
| 380 | 0.56 |
| 390 | 0.78 |
| 400 | 0.88 |
| 420 | 0.952 |
| 440 | 0.971 |
| 460 | 0.978 |
| 480 | 0.982 |
| 500 | 0.987 |
| 550 | 0.994 |
| 600 | 0.994 |
| 650 | 0.991 |
| 700 | 0.993 |
| 800 | 0.998 |
| 900 | 0.999 |
| 1000 | 0.998 |
| 1200 | 0.998 |
| 1400 | 0.996 |
| 1600 | 0.995 |
| 1800 | 0.988 |
| 2000 | 0.981 |
| 2200 | 0.957 |
| 2400 | 0.941 |

| 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 | 1.3 | 2.1 | 2.2 | 2.5 | 2.9 | 3.8 | 5.0 |
| -20~ 0 | 1.2 | 2.1 | 2.2 | 2.5 | 2.9 | 4.0 | 5.2 |
| 0~20 | 1.2 | 2.2 | 2.3 | 2.6 | 3.1 | 4.2 | 5.4 |
| 20~40 | 1.3 | 2.3 | 2.3 | 2.7 | 3.2 | 4.3 | 5.7 |
| 40~60 | 1.3 | 2.4 | 2.5 | 2.8 | 3.3 | 4.5 | 5.9 |
| 60~80 | 1.5 | 2.6 | 2.6 | 3.0 | 3.5 | 4.8 | 6.3 |

| Other Properties | |
|--|------|
| Photoelastic Constant β nm/(cm·10 ⁵ Pa) | 2.85 |
| Specific Gravity d | 3.06 |
| 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.