# Data Sheet

SCHOTT

## N-BASF2
## 664360.315

| | | |
|---|---|---|
| $n_d = 1.66446$ | $\nu_d = 36.00$ | $n_F - n_C = 0.018457$ |
| $n_e = 1.66883$ | $\nu_e = 35.73$ | $n_{F'} - n_{C'} = 0.018720$ |

### Refractive Indices

| | λ [nm] | |
|---|---|---|
| $n_{2325.4}$ | 2325.4 | 1.62552 |
| $n_{1970.1}$ | 1970.1 | 1.63109 |
| $n_{1529.6}$ | 1529.6 | 1.63734 |
| $n_{1060.0}$ | 1060.0 | 1.64484 |
| $n_t$ | 1014.0 | 1.64581 |
| $n_s$ | 852.1 | 1.65007 |
| $n_r$ | 706.5 | 1.65607 |
| $n_C$ | 656.3 | 1.65905 |
| $n_{C'}$ | 643.8 | 1.65990 |
| $n_{632.8}$ | 632.8 | 1.66070 |
| $n_D$ | 589.3 | 1.66430 |
| $n_d$ | 587.6 | 1.66446 |
| $n_e$ | 546.1 | 1.66883 |
| $n_F$ | 486.1 | 1.67751 |
| $n_{F'}$ | 480.0 | 1.67862 |
| $n_g$ | 435.8 | 1.68838 |
| $n_h$ | 404.7 | 1.69792 |
| $n_i$ | 365.0 | |
| $n_{334.1}$ | 334.1 | |
| $n_{312.6}$ | 312.6 | |
| $n_{296.7}$ | 296.7 | |
| $n_{280.4}$ | 280.4 | |
| $n_{248.3}$ | 248.3 | |

### Constants of Dispersion Formula

| | |
|---|---|
| $B_1$ | 1.53652081 |
| $B_2$ | 0.156971102 |
| $B_3$ | 1.30196815 |
| $C_1$ | 0.0108435729 |
| $C_2$ | 0.0562278762 |
| $C_3$ | 131.3397 |

### Constants of Dispersion dn/dT

| | |
|---|---|
| $D_0$ | $1.89 \cdot 10^{-6}$ |
| $D_1$ | $1.22 \cdot 10^{-8}$ |
| $D_2$ | $-1.61 \cdot 10^{-11}$ |
| $E_0$ | $7.77 \cdot 10^{-7}$ |
| $E_1$ | $9.96 \cdot 10^{-10}$ |
| $\lambda_{TK}$ [µm] | 0.256 |

### Internal Transmittance $\tau_i$

| λ [nm] | $\tau_i$ (10mm) | $\tau_i$ (25mm) |
|---|---|---|
| **2500** | 0.857 | 0.680 |
| **2325** | 0.896 | 0.760 |
| **1970** | 0.971 | 0.930 |
| **1530** | 0.994 | 0.985 |
| **1060** | 0.999 | 0.997 |
| **700** | 0.996 | 0.990 |
| **660** | 0.994 | 0.985 |
| **620** | 0.994 | 0.985 |
| **580** | 0.995 | 0.987 |
| **546** | 0.994 | 0.985 |
| **500** | 0.988 | 0.971 |
| **460** | 0.980 | 0.951 |
| **436** | 0.971 | 0.930 |
| **420** | 0.954 | 0.890 |
| **405** | 0.915 | 0.800 |
| **400** | 0.891 | 0.750 |
| **390** | 0.804 | 0.580 |
| **380** | 0.634 | 0.320 |
| **370** | 0.325 | 0.060 |
| **365** | 0.158 | |
| **350** | | |
| **334** | | |
| **320** | | |
| **310** | | |
| **300** | | |
| **290** | | |
| **280** | | |
| **270** | | |
| **260** | | |
| **250** | | |
| | | |
| | | |

### Color Code

| | |
|---|---|
| $\lambda_{80}/\lambda_5$ | 41/36 |
| (*= $\lambda_{70}/\lambda_5$) | |

### Remarks

### Relative Partial Dispersion

| | |
|---|---|
| $P_{s,t}$ | 0.2309 |
| $P_{C,s}$ | 0.4869 |
| $P_{d,C}$ | 0.2929 |
| $P_{e,d}$ | 0.2367 |
| $P_{g,F}$ | 0.5890 |
| $P_{i,h}$ | |
| | |
| $P'_{s,t}$ | 0.2277 |
| $P'_{C',s}$ | 0.5253 |
| $P'_{d,C'}$ | 0.2435 |
| $P'_{e,d}$ | 0.2333 |
| $P'_{g,F'}$ | 0.5214 |
| $P'_{i,h}$ | |

### Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

| | |
|---|---|
| $\Delta P_{C,t}$ | 0.0021 |
| $\Delta P_{C,s}$ | 0.0001 |
| $\Delta P_{F,e}$ | 0.0010 |
| $\Delta P_{g,F}$ | 0.0057 |
| $\Delta P_{i,g}$ | |

### Other Properties

| | |
|---|---|
| $\alpha_{-30/+70°C}$ [$10^{-6}$/K] | 7.1 |
| $\alpha_{+20/+300°C}$ [$10^{-6}$/K] | 8.1 |
| $T_g$ [°C] | 619 |
| $T_{10}^{13.0}$ [°C] | 622 |
| $T_{10}^{7.6}$ [°C] | 766 |
| $c_p$ [J/(g·K)] | 0.660 |
| λ [W/(m·K)] | 0.940 |
| | |
| ρ [g/cm$^3$] | 3.15 |
| **E** [$10^3$ N/mm$^2$] | 84 |
| μ | 0.247 |
| **K** [$10^{-6}$ mm$^2$/N] | 3.04 |
| **HK**$_{0.1/20}$ | 580 |
| **HG** | 3 |
| | |
| | |
| | |
| **CR** | 1 |
| **FR** | 0 |
| **SR** | 1 |
| **AR** | 1 |
| **PR** | 1 |
| | |
| | |
| | |

### Temperature Coefficients of Refractive Index

| | $\Delta n_{rel}/\Delta T$ [$10^{-6}$/K] | | | $\Delta n_{abs}/\Delta T$ [$10^{-6}$/K] | | |
|---|---|---|---|---|---|---|
| **[°C]** | **1060.0** | **e** | **g** | **1060.0** | **e** | **g** |
| **-40/ -20** | 2.8 | 4.1 | 5.6 | 0.6 | 1.9 | 3.3 |
| **+20/ +40** | 2.9 | 4.4 | 6.2 | 1.5 | 3.0 | 4.7 |
| **+60/ +80** | 3.1 | 4.8 | 6.7 | 2.0 | 3.6 | 5.5 |