

|           |       |                           |           |         |              |            |                |                 |
|-----------|-------|---------------------------|-----------|---------|--------------|------------|----------------|-----------------|
| Brechzahl | $n_d$ | <b>1,51633</b><br>1,51633 | Abbe Zahl | $\nu_d$ | <b>64,06</b> | Dispersion | $n_F - n_C$    | <b>0,008060</b> |
| Brechzahl | $n_e$ | 1,518253                  | Abbe Zahl | $\nu_e$ | 63,87        | Dispersion | $n_F - n_{C'}$ | 0,008114        |

| Brechzahlen      |          |         |
|------------------|----------|---------|
| $\lambda(\mu m)$ |          |         |
| $n_{2325}$       | 2.32542  | 1,48810 |
| $n_{1970}$       | 1.97009  | 1,49404 |
| $n_{1530}$       | 1.52958  | 1,50020 |
| $n_{1129}$       | 1.12864  | 1,50523 |
| $n_t$            | 1.01398  | 1,50677 |
| $n_s$            | 0.85211  | 1,50930 |
| $n_{A'}$         | 0.76819  | 1,51094 |
| $n_r$            | 0.70652  | 1,51241 |
| $n_C$            | 0.65627  | 1,51385 |
| $n_{C'}$         | 0.64385  | 1,51424 |
| $n_{He-Ne}$      | 0.6328   | 1,51462 |
| $n_D$            | 0.58929  | 1,51626 |
| $n_d$            | 0.58756  | 1,51633 |
| $n_e$            | 0.54607  | 1,51825 |
| $n_F$            | 0.48613  | 1,52191 |
| $n_{F'}$         | 0.47999  | 1,52236 |
| $n_{He-Cd}$      | 0.44157  | 1,52564 |
| $n_g$            | 0.435835 | 1,52620 |
| $n_h$            | 0.404656 | 1,52975 |
| $n_i$            | 0.365015 | 1,53574 |

| Konstanten der Dispersionsformel |                |
|----------------------------------|----------------|
| A <sub>1</sub>                   | 9,17473918E-01 |
| A <sub>2</sub>                   | 3,52687665E-01 |
| A <sub>3</sub>                   | 1,05579788E+00 |
| B <sub>1</sub>                   | 5,27701411E-03 |
| B <sub>2</sub>                   | 1,70809497E-02 |
| B <sub>3</sub>                   | 1,04302583E+02 |

| Chemische Eigenschaften                 |     |
|-----------------------------------------|-----|
| Wasserresistenz (Pulvergruppe) RW(P)    | 2   |
| Säureresistenz (Pulvergruppe) RA(P)     | 1   |
| Klimaresistenz (Oberflächengruppe) W(S) | 3   |
| Säureresistenz (Oberflächengruppe) SR   | 1.0 |
| Phosphatresistenz PR                    | 1.2 |

| Mechanische Eigenschaften                                    |         |
|--------------------------------------------------------------|---------|
| Elastizitätsmodul E (10 <sup>9</sup> N/m <sup>2</sup> )      | 79,3    |
| Torsionsmodul G (10 <sup>9</sup> N/m <sup>2</sup> )          | 32,7    |
| Poissonzahl $\sigma$                                         | 0,214   |
| Knoop Härte Hk [Klasse]                                      | 570   6 |
| Schleifhärte Aa                                              | 72      |
| Photoelastische Konstante $\beta$ (nm/cm/10 <sup>5</sup> Pa) | 2,93    |

| Teildispersion |          |
|----------------|----------|
| $n_C - n_t$    | 0,007081 |
| $n_C - n_{A'}$ | 0,002904 |
| $n_d - n_C$    | 0,002484 |
| $n_e - n_C$    | 0,004407 |
| $n_g - n_d$    | 0,009874 |
| $n_g - n_F$    | 0,004298 |
| $n_h - n_g$    | 0,003544 |
| $n_i - n_g$    | 0,009541 |
| $n_{C'} - n_t$ | 0,007479 |
| $n_e - n_{C'}$ | 0,004009 |
| $n_F - n_e$    | 0,004105 |
| $n_i - n_F$    | 0,013387 |

| Relative Teildispersion |        |
|-------------------------|--------|
| $\theta_{C,t}$          | 0,8785 |
| $\theta_{C,A'}$         | 0,3603 |
| $\theta_{d,C}$          | 0,3082 |
| $\theta_{e,C}$          | 0,5468 |
| $\theta_{g,d}$          | 1,2251 |
| $\theta_{g,F}$          | 0,5333 |
| $\theta_{h,g}$          | 0,4397 |
| $\theta_{i,g}$          | 1,1837 |
| $\theta'_{C,t}$         | 0,9217 |
| $\theta'_{e,C'}$        | 0,4941 |
| $\theta'_{F,e}$         | 0,5059 |
| $\theta'_{i,F'}$        | 1,6499 |

| Abweichung relativer Teildispersion |         |
|-------------------------------------|---------|
| $\Delta \theta_{C,t}$               | 0,0312  |
| $\Delta \theta_{C,A'}$              | 0,0068  |
| $\Delta \theta_{g,d}$               | -0,0066 |
| $\Delta \theta_{g,F}$               | -0,0045 |
| $\Delta \theta_{i,g}$               | -0,0049 |

| Thermische Eigenschaften                      |      |
|-----------------------------------------------|------|
| Untere Kühltemperatur StP (°C)                | 464  |
| Obere Kühltemperatur AP (°C)                  | 488  |
| Transformationstemperatur Tg (°C)             | 497  |
| Ausdehnungsgrenze At (°C)                     | 560  |
| Erweichungstemperatur SP (°C)                 | 630  |
| Ausdehnungskoeffizienten (-30~+70°C)          | 59   |
| $\alpha$ (10 <sup>-7</sup> /°C) (+100~+300°C) | 72   |
| Wärmeleitfähigkeit k (W/m·K)                  | 1,17 |

| Temperaturkoeffizienten der Brechzahl |                                      |     |       |     |     |     |     |
|---------------------------------------|--------------------------------------|-----|-------|-----|-----|-----|-----|
| Temperaturbereich<br>(°C)             | dn/dT relativ (10 <sup>-6</sup> /°C) |     |       |     |     |     |     |
|                                       | t                                    | C'  | He-Ne | D   | e   | F'  | g   |
| -40~-20                               | 4,0                                  | 4,3 | 4,3   | 4,4 | 4,5 | 4,7 | 4,9 |
| -20~0                                 | 4,1                                  | 4,4 | 4,4   | 4,5 | 4,6 | 4,8 | 5,1 |
| 0~20                                  | 4,1                                  | 4,5 | 4,5   | 4,6 | 4,7 | 4,9 | 5,2 |
| 20~40                                 | 4,2                                  | 4,6 | 4,6   | 4,7 | 4,8 | 5,1 | 5,3 |
| 40~60                                 | 4,3                                  | 4,7 | 4,7   | 4,8 | 4,9 | 5,2 | 5,5 |
| 60~80                                 | 4,4                                  | 4,7 | 4,8   | 4,9 | 5,0 | 5,3 | 5,6 |

| Färbung        |     |             |     |
|----------------|-----|-------------|-----|
| $\lambda_{80}$ | 330 | $\lambda_5$ | 295 |
| $\lambda_{70}$ |     |             |     |

| Reintransmissionsgrad |     |                  |     |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$      | 326 | $\lambda_{0.05}$ | 299 |

| CCI  |      |      |
|------|------|------|
| B    | G    | R    |
| 0,00 | 0,08 | 0,09 |

| Reintransmissionsgrad |             |
|-----------------------|-------------|
| $\lambda(nm)$         | $\tau$ 10mm |
| 280                   |             |
| 290                   |             |
| 300                   | 0,08        |
| 310                   | 0,40        |
| 320                   | 0,71        |
| 330                   | 0,87        |
| 340                   | 0,942       |
| 350                   | 0,973       |
| 360                   | 0,986       |
| 370                   | 0,992       |
| 380                   | 0,994       |
| 390                   | 0,996       |
| 400                   | 0,997       |
| 420                   | 0,997       |
| 440                   | 0,997       |
| 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                  | 0,974       |
| 1600                  | 0,994       |
| 1800                  | 0,988       |
| 2000                  | 0,974       |
| 2200                  | 0,87        |
| 2400                  | 0,80        |

| Andere Eigenschaften |      |
|----------------------|------|
| Dichte d             | 2,38 |