

|           |       |                            |           |         |              |            |                |                 |
|-----------|-------|----------------------------|-----------|---------|--------------|------------|----------------|-----------------|
| Brechzahl | $n_d$ | <b>1,84666</b><br>1,846660 | Abbe Zahl | $\nu_d$ | <b>23,78</b> | Dispersion | $n_F - n_C$    | <b>0,035608</b> |
| Brechzahl | $n_e$ | 1,855041                   | Abbe Zahl | $\nu_e$ | 23,59        | Dispersion | $n_F - n_{C'}$ | 0,036247        |

| Brechzahlen      |          |         |
|------------------|----------|---------|
| $\lambda(\mu m)$ |          |         |
| $n_{2325}$       | 2.32542  | 1,78519 |
| $n_{1970}$       | 1.97009  | 1,79199 |
| $n_{1530}$       | 1.52958  | 1,80013 |
| $n_{1129}$       | 1.12864  | 1,80925 |
| $n_t$            | 1.01398  | 1,81294 |
| $n_s$            | 0.85211  | 1,82021 |
| $n_{A'}$         | 0.76819  | 1,82568 |
| $n_r$            | 0.70652  | 1,83098 |
| $n_C$            | 0.65627  | 1,83649 |
| $n_{C'}$         | 0.64385  | 1,83807 |
| $n_{He-Ne}$      | 0.6328   | 1,83956 |
| $n_D$            | 0.58929  | 1,84635 |
| $n_d$            | 0.58756  | 1,84666 |
| $n_e$            | 0.54607  | 1,85504 |
| $n_F$            | 0.48613  | 1,87210 |
| $n_{F'}$         | 0.47999  | 1,87431 |
| $n_{He-Cd}$      | 0.44157  | 1,89114 |
| $n_g$            | 0.435835 | 1,89419 |
| $n_h$            | 0.404656 | 1,91429 |
| $n_i$            | 0.365015 |         |

| Konstanten der Dispersionsformel |                |
|----------------------------------|----------------|
| A <sub>1</sub>                   | 1,87904886E+00 |
| A <sub>2</sub>                   | 3,69719775E-01 |
| A <sub>3</sub>                   | 2,33730863E+00 |
| B <sub>1</sub>                   | 1,44121770E-02 |
| B <sub>2</sub>                   | 6,38817990E-02 |
| B <sub>3</sub>                   | 1,82668180E+02 |

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

| Mechanische Eigenschaften                                    |         |
|--------------------------------------------------------------|---------|
| Elastizitätsmodul E (10 <sup>9</sup> N/m <sup>2</sup> )      | 96,0    |
| Torsionsmodul G (10 <sup>9</sup> N/m <sup>2</sup> )          | 37,9    |
| Poissonzahl $\sigma$                                         | 0,266   |
| Knoop Härte Hk [Klasse]                                      | 530   5 |
| Schleifhärte Aa                                              | 188     |
| Photoelastische Konstante $\beta$ (nm/cm/10 <sup>5</sup> Pa) | 2,81    |

| Teildispersion |          |
|----------------|----------|
| $n_C - n_t$    | 0,023550 |
| $n_C - n_{A'}$ | 0,010806 |
| $n_d - n_C$    | 0,010172 |
| $n_e - n_C$    | 0,018553 |
| $n_g - n_d$    | 0,047529 |
| $n_g - n_F$    | 0,022093 |
| $n_h - n_g$    | 0,020105 |
| $n_i - n_g$    |          |
| $n_{C'} - n_t$ | 0,025128 |
| $n_e - n_{C'}$ | 0,016975 |
| $n_F - n_e$    | 0,019272 |
| $n_i - n_F$    |          |

| Relative Teildispersion |        |
|-------------------------|--------|
| $\theta_{C,t}$          | 0,6614 |
| $\theta_{C,A'}$         | 0,3035 |
| $\theta_{d,C}$          | 0,2857 |
| $\theta_{e,C}$          | 0,5210 |
| $\theta_{g,d}$          | 1,3348 |
| $\theta_{g,F}$          | 0,6205 |
| $\theta_{h,g}$          | 0,5646 |
| $\theta_{i,g}$          |        |
| $\theta_{C',t}$         | 0,6932 |
| $\theta_{e,C'}$         | 0,4683 |
| $\theta_{F,e}$          | 0,5317 |
| $\theta_{i,F'}$         |        |

| Abweichung relativer Teildispersion |         |
|-------------------------------------|---------|
| $\Delta \theta_{C,t}$               | 0,0032  |
| $\Delta \theta_{C,A'}$              | -0,0012 |
| $\Delta \theta_{g,d}$               | 0,0195  |
| $\Delta \theta_{g,F}$               | 0,0175  |
| $\Delta \theta_{i,g}$               |         |

| Thermische Eigenschaften                      |      |
|-----------------------------------------------|------|
| Untere Kühltemperatur StP (°C)                | 576  |
| Obere Kühltemperatur AP (°C)                  | 596  |
| Transformationstemperatur Tg (°C)             | 624  |
| Ausdehnungsgrenze At (°C)                     | 658  |
| Erweichungstemperatur SP (°C)                 | 692  |
| Ausdehnungskoeffizienten (-30~+70°C)          | 88   |
| $\alpha$ (10 <sup>-7</sup> /°C) (+100~+300°C) | 104  |
| Wärmeleitfähigkeit k (W/m·K)                  | 1,00 |

| Färbung        |     |             |     |
|----------------|-----|-------------|-----|
| $\lambda_{80}$ |     | $\lambda_5$ | 370 |
| $\lambda_{70}$ | 420 |             |     |

| Reintransmissionsgrad |     |                  |     |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$      | 408 | $\lambda_{0.05}$ | 370 |

| CCI  |      |      |
|------|------|------|
| B    | G    | R    |
| 0,00 | 4,97 | 5,06 |

| Reintransmissionsgrad |             |
|-----------------------|-------------|
| $\lambda(nm)$         | $\tau$ 10mm |
| 280                   |             |
| 290                   |             |
| 300                   |             |
| 310                   |             |
| 320                   |             |
| 330                   |             |
| 340                   |             |
| 350                   |             |
| 360                   |             |
| 370                   | 0,06        |
| 380                   | 0,35        |
| 390                   | 0,61        |
| 400                   | 0,75        |
| 420                   | 0,87        |
| 440                   | 0,927       |
| 460                   | 0,948       |
| 480                   | 0,961       |
| 500                   | 0,971       |
| 550                   | 0,987       |
| 600                   | 0,989       |
| 650                   | 0,985       |
| 700                   | 0,989       |
| 800                   | 0,997       |
| 900                   | 0,998       |
| 1000                  | 0,999       |
| 1200                  | 0,999       |
| 1400                  | 0,998       |
| 1600                  | 0,997       |
| 1800                  | 0,991       |
| 2000                  | 0,986       |
| 2200                  | 0,974       |
| 2400                  | 0,955       |

| Andere Eigenschaften |      |
|----------------------|------|
| Dichte d             | 3,54 |

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