

|           |       |                            |           |         |              |            |              |                 |
|-----------|-------|----------------------------|-----------|---------|--------------|------------|--------------|-----------------|
| Brechzahl | $n_d$ | <b>1,71736</b><br>1,717362 | Abbe Zahl | $\nu_d$ | <b>29,52</b> | Dispersion | $n_F-n_C$    | <b>0,024303</b> |
| Brechzahl | $n_e$ | 1,723098                   | Abbe Zahl | $\nu_e$ | 29,28        | Dispersion | $n_F-n_{C'}$ | 0,024694        |

| Brechzahlen      |          |         |
|------------------|----------|---------|
| $\lambda(\mu m)$ |          |         |
| $n_{2325}$       | 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 |
| $n_{He-Ne}$      | 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 |
| $n_{He-Cd}$      | 0.44157  | 1,74732 |
| $n_g$            | 0.435835 | 1,74933 |
| $n_h$            | 0.404656 | 1,76247 |
| $n_i$            | 0.365015 |         |

| Konstanten der Dispersionsformel |                |
|----------------------------------|----------------|
| A <sub>1</sub>                   | 1,60326759E+00 |
| A <sub>2</sub>                   | 2,42980935E-01 |
| A <sub>3</sub>                   | 1,81313592E+00 |
| B <sub>1</sub>                   | 1,18019139E-02 |
| B <sub>2</sub>                   | 5,91363658E-02 |
| B <sub>3</sub>                   | 1,61218747E+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> )      | 88,4    |
| Torsionsmodul G (10 <sup>9</sup> N/m <sup>2</sup> )          | 35,5    |
| Poissonzahl $\sigma$                                         | 0,247   |
| Knoop Härte Hk [Klasse]                                      | 570   6 |
| Schleifhärte Aa                                              | 157     |
| Photoelastische Konstante $\beta$ (nm/cm/10 <sup>5</sup> Pa) | 2,85    |

| Teildispersion |          |
|----------------|----------|
| $n_C-n_t$      | 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 Teildispersion |        |
|-------------------------|--------|
| $\theta_{C,t}$          | 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 |
| $\theta_{i,F'}$         |        |

| Abweichung relativer Teildispersion |        |
|-------------------------------------|--------|
| $\Delta \theta_{C,t}$               | 0,0060 |
| $\Delta \theta_{C,A'}$              | 0,0003 |
| $\Delta \theta_{g,d}$               | 0,0121 |
| $\Delta \theta_{g,F}$               | 0,0110 |
| $\Delta \theta_{i,g}$               |        |

| Thermische Eigenschaften                      |      |
|-----------------------------------------------|------|
| Untere Kühltemperatur StP (°C)                | 569  |
| Obere Kühltemperatur AP (°C)                  | 597  |
| Transformationstemperatur Tg (°C)             | 622  |
| Ausdehnungsgrenze At (°C)                     | 653  |
| Erweichungstemperatur SP (°C)                 | 703  |
| Ausdehnungskoeffizienten (-30~+70°C)          | 82   |
| $\alpha$ (10 <sup>-7</sup> /°C) (+100~+300°C) | 96   |
| Wärmeleitfähigkeit k (W/m·K)                  | 1,02 |

| Färbung        |     |             |     |
|----------------|-----|-------------|-----|
| $\lambda_{80}$ | 405 | $\lambda_5$ | 360 |
| $\lambda_{70}$ |     |             |     |

| Reintransmissionsgrad |     |                  |     |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$      | 392 | $\lambda_{0.05}$ | 366 |

| CCI  |      |      |
|------|------|------|
| B    | G    | R    |
| 0,00 | 2,31 | 2,29 |

| Reintransmissionsgrad |             |
|-----------------------|-------------|
| $\lambda(nm)$         | $\tau$ 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       |

| Andere Eigenschaften |      |
|----------------------|------|
| Dichte d             | 3,06 |

| Temperaturkoeffizienten der Brechzahl |                                      |     |       |     |     |     |     |
|---------------------------------------|--------------------------------------|-----|-------|-----|-----|-----|-----|
| Temperaturbereich<br>(°C)             | dn/dT relativ (10 <sup>-6</sup> /°C) |     |       |     |     |     |     |
|                                       | 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 |