

|           |       |                            |           |         |              |            |                |                 |
|-----------|-------|----------------------------|-----------|---------|--------------|------------|----------------|-----------------|
| Brechzahl | $n_d$ | <b>1,89286</b><br>1,892860 | Abbe Zahl | $\nu_d$ | <b>20,36</b> | Dispersion | $n_F - n_C$    | <b>0,043851</b> |
| Brechzahl | $n_e$ | 1,903144                   | Abbe Zahl | $\nu_e$ | 20,20        | Dispersion | $n_F - n_{C'}$ | 0,044721        |

| Brechzahlen      |          |         |
|------------------|----------|---------|
| $\lambda(\mu m)$ |          |         |
| $n_{2325}$       | 2.32542  | 1,81864 |
| $n_{1970}$       | 1.97009  | 1,82694 |
| $n_{1530}$       | 1.52958  | 1,83681 |
| $n_{1129}$       | 1.12864  | 1,84777 |
| $n_t$            | 1.01398  | 1,85218 |
| $n_s$            | 0.85211  | 1,86088 |
| $n_{A'}$         | 0.76819  | 1,86745 |
| $n_r$            | 0.70652  | 1,87383 |
| $n_C$            | 0.65627  | 1,88048 |
| $n_{C'}$         | 0.64385  | 1,88240 |
| $n_{He-Ne}$      | 0.6328   | 1,88420 |
| $n_D$            | 0.58929  | 1,89249 |
| $n_d$            | 0.58756  | 1,89286 |
| $n_e$            | 0.54607  | 1,90314 |
| $n_F$            | 0.48613  | 1,92433 |
| $n_{F'}$         | 0.47999  | 1,92712 |
| $n_{He-Cd}$      | 0.44157  | 1,94846 |
| $n_g$            | 0.435835 | 1,95237 |
| $n_h$            | 0.404656 | 1,97853 |
| $n_i$            | 0.365015 |         |

| Konstanten der Dispersionsformel |                |
|----------------------------------|----------------|
| A <sub>1</sub>                   | 1,93563931E+00 |
| A <sub>2</sub>                   | 4,49596478E-01 |
| A <sub>3</sub>                   | 2,71828573E+00 |
| B <sub>1</sub>                   | 1,52585289E-02 |
| B <sub>2</sub>                   | 6,96815778E-02 |
| B <sub>3</sub>                   | 1,70327149E+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> )      | 94,5    |
| Torsionsmodul G (10 <sup>9</sup> N/m <sup>2</sup> )          | 37,7    |
| Poissonzahl $\sigma$                                         | 0,254   |
| Knoop Härte Hk [Klasse]                                      | 450   5 |
| Schleifhärte Aa                                              | 268     |
| Photoelastische Konstante $\beta$ (nm/cm/10 <sup>5</sup> Pa) | 3,39    |

| Teildispersion |          |
|----------------|----------|
| $n_C - n_t$    | 0,028304 |
| $n_C - n_{A'}$ | 0,013036 |
| $n_d - n_C$    | 0,012376 |
| $n_e - n_C$    | 0,022660 |
| $n_g - n_d$    | 0,059511 |
| $n_g - n_F$    | 0,028036 |
| $n_h - n_g$    | 0,026158 |
| $n_i - n_g$    |          |
| $n_{C'} - n_t$ | 0,030217 |
| $n_e - n_{C'}$ | 0,020747 |
| $n_F - n_e$    | 0,023974 |
| $n_i - n_F$    |          |

| Relative Teildispersion |        |
|-------------------------|--------|
| $\theta_{C,t}$          | 0,6455 |
| $\theta_{C,A'}$         | 0,2973 |
| $\theta_{d,C}$          | 0,2822 |
| $\theta_{e,C}$          | 0,5167 |
| $\theta_{g,d}$          | 1,3571 |
| $\theta_{g,F}$          | 0,6393 |
| $\theta_{h,g}$          | 0,5965 |
| $\theta_{i,g}$          |        |
| $\theta'_{C,t}$         | 0,6757 |
| $\theta'_{e,C'}$        | 0,4639 |
| $\theta'_{F,e}$         | 0,5361 |
| $\theta'_{i,F'}$        |        |

| Abweichung relativer Teildispersion |         |
|-------------------------------------|---------|
| $\Delta \theta_{C,t}$               | 0,0033  |
| $\Delta \theta_{C,A'}$              | -0,0032 |
| $\Delta \theta_{g,d}$               | 0,0347  |
| $\Delta \theta_{g,F}$               | 0,0308  |
| $\Delta \theta_{i,g}$               |         |

| Thermische Eigenschaften                      |       |
|-----------------------------------------------|-------|
| Untere Kühltemperatur StP (°C)                | -     |
| Obere Kühltemperatur AP (°C)                  | -     |
| Transformationstemperatur Tg (°C)             | 638   |
| Ausdehnungsgrenze At (°C)                     | 668   |
| Erweichungstemperatur SP (°C)                 | 711   |
| Ausdehnungskoeffizienten (-30~+70°C)          | 73    |
| $\alpha$ (10 <sup>-7</sup> /°C) (+100~+300°C) | 88    |
| Wärmeleitfähigkeit k (W/m·K)                  | 0,925 |

| Färbung        |     |             |     |
|----------------|-----|-------------|-----|
| $\lambda_{80}$ |     | $\lambda_5$ | 380 |
| $\lambda_{70}$ | 410 |             |     |

| Reintransmissionsgrad |     |                  |     |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$      | 409 | $\lambda_{0.05}$ | 380 |

| CCI  |      |      |
|------|------|------|
| B    | G    | R    |
| 0,00 | 4,93 | 5,17 |

| Reintransmissionsgrad |             |
|-----------------------|-------------|
| $\lambda(nm)$         | $\tau$ 10mm |
| 280                   |             |
| 290                   |             |
| 300                   |             |
| 310                   |             |
| 320                   |             |
| 330                   |             |
| 340                   |             |
| 350                   |             |
| 360                   |             |
| 370                   |             |
| 380                   | 0,06        |
| 390                   | 0,39        |
| 400                   | 0,71        |
| 420                   | 0,915       |
| 440                   | 0,951       |
| 460                   | 0,966       |
| 480                   | 0,975       |
| 500                   | 0,982       |
| 550                   | 0,993       |
| 600                   | 0,997       |
| 650                   | 0,997       |
| 700                   | 0,998       |
| 800                   | 0,999       |
| 900                   | 0,999       |
| 1000                  | 0,999       |
| 1200                  | 0,999       |
| 1400                  | 0,999       |
| 1600                  | 0,995       |
| 1800                  | 0,984       |
| 2000                  | 0,971       |
| 2200                  | 0,948       |
| 2400                  | 0,915       |

| Andere Eigenschaften |      |
|----------------------|------|
| Dichte d             | 3,61 |

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