

|           |       |                            |           |         |              |            |              |                 |
|-----------|-------|----------------------------|-----------|---------|--------------|------------|--------------|-----------------|
| Brechzahl | $n_d$ | <b>1,83400</b><br>1,834000 | Abbe Zahl | $\nu_d$ | <b>37,16</b> | Dispersion | $n_F-n_C$    | <b>0,022443</b> |
| Brechzahl | $n_e$ | 1,839323                   | Abbe Zahl | $\nu_e$ | 36,92        | Dispersion | $n_F-n_{C'}$ | 0,022736        |

| Brechzahlen      |          |         |
|------------------|----------|---------|
| $\lambda(\mu m)$ |          |         |
| $n_{2325}$       | 2.32542  | 1,78473 |
| $n_{1970}$       | 1.97009  | 1,79205 |
| $n_{1530}$       | 1.52958  | 1,80018 |
| $n_{1129}$       | 1.12864  | 1,80807 |
| $n_t$            | 1.01398  | 1,81094 |
| $n_s$            | 0.85211  | 1,81627 |
| $n_{A'}$         | 0.76819  | 1,82009 |
| $n_r$            | 0.70652  | 1,82370 |
| $n_C$            | 0.65627  | 1,82738 |
| $n_{C'}$         | 0.64385  | 1,82842 |
| $n_{He-Ne}$      | 0.6328   | 1,82939 |
| $n_D$            | 0.58929  | 1,83380 |
| $n_d$            | 0.58756  | 1,83400 |
| $n_e$            | 0.54607  | 1,83932 |
| $n_F$            | 0.48613  | 1,84982 |
| $n_{F'}$         | 0.47999  | 1,85115 |
| $n_{He-Cd}$      | 0.44157  | 1,86103 |
| $n_g$            | 0.435835 | 1,86278 |
| $n_h$            | 0.404656 | 1,87396 |
| $n_i$            | 0.365015 | 1,89403 |

| Konstanten der Dispersionsformel |                |
|----------------------------------|----------------|
| A <sub>1</sub>                   | 1,95243469E+00 |
| A <sub>2</sub>                   | 3,07100210E-01 |
| A <sub>3</sub>                   | 1,56578094E+00 |
| B <sub>1</sub>                   | 1,06442437E-02 |
| B <sub>2</sub>                   | 4,56735302E-02 |
| B <sub>3</sub>                   | 1,10281410E+02 |

| Chemische Eigenschaften                 |     |
|-----------------------------------------|-----|
| Wasserresistenz (Pulvergruppe) RW(P)    | 1   |
| Säureresistenz (Pulvergruppe) RA(P)     | 3   |
| Klimaresistenz (Oberflächengruppe) W(S) | 1   |
| Säureresistenz (Oberflächengruppe) SR   | 4.2 |
| Phosphatresistenz PR                    | 1.0 |

| Mechanische Eigenschaften                                    |         |
|--------------------------------------------------------------|---------|
| Elastizitätsmodul E (10 <sup>9</sup> N/m <sup>2</sup> )      | 124,8   |
| Torsionsmodul G (10 <sup>9</sup> N/m <sup>2</sup> )          | 48,1    |
| Poissonzahl $\sigma$                                         | 0,296   |
| Knoop Härte Hk [Klasse]                                      | 660   7 |
| Schleifhärte Aa                                              | 79      |
| Photoelastische Konstante $\beta$ (nm/cm/10 <sup>9</sup> Pa) | 2,15    |

| Teildispersion |          |
|----------------|----------|
| $n_C-n_t$      | 0,016437 |
| $n_C-n_{A'}$   | 0,007283 |
| $n_d-n_C$      | 0,006624 |
| $n_e-n_C$      | 0,011947 |
| $n_g-n_d$      | 0,028781 |
| $n_g-n_F$      | 0,012962 |
| $n_h-n_g$      | 0,011183 |
| $n_i-n_g$      | 0,031249 |
| $n_{C'}-n_t$   | 0,017477 |
| $n_e-n_{C'}$   | 0,010907 |
| $n_F-n_e$      | 0,011829 |
| $n_i-n_F$      | 0,042878 |

| Relative Teildispersion |        |
|-------------------------|--------|
| $\theta_{C,t}$          | 0,7324 |
| $\theta_{C,A'}$         | 0,3245 |
| $\theta_{d,C}$          | 0,2951 |
| $\theta_{e,C}$          | 0,5323 |
| $\theta_{g,d}$          | 1,2824 |
| $\theta_{g,F}$          | 0,5776 |
| $\theta_{h,g}$          | 0,4983 |
| $\theta_{i,g}$          | 1,3924 |
| $\theta'_{C',t}$        | 0,7687 |
| $\theta'_{e,C'}$        | 0,4797 |
| $\theta'_{F,e}$         | 0,5203 |
| $\theta'_{i,F'}$        | 1,8859 |

| Abweichung relativer Teildispersion |         |
|-------------------------------------|---------|
| $\Delta \theta_{C,t}$               | 0,0114  |
| $\Delta \theta_{C,A'}$              | 0,0036  |
| $\Delta \theta_{g,d}$               | -0,0051 |
| $\Delta \theta_{g,F}$               | -0,0037 |
| $\Delta \theta_{i,g}$               | -0,0215 |

| Thermische Eigenschaften                      |       |
|-----------------------------------------------|-------|
| Untere Kühltemperatur StP (°C)                | -     |
| Obere Kühltemperatur AP (°C)                  | -     |
| Transformationstemperatur Tg (°C)             | 612   |
| Ausdehnungsgrenze At (°C)                     | 632   |
| Erweichungstemperatur SP (°C)                 | 676   |
| Ausdehnungskoeffizienten (-30~+70°C)          | 56    |
| $\alpha$ (10 <sup>-7</sup> /°C) (+100~+300°C) | 71    |
| Wärmeleitfähigkeit k (W/m·K)                  | 0,872 |

| Färbung        |     |             |     |
|----------------|-----|-------------|-----|
| $\lambda_{80}$ | 420 | $\lambda_5$ | 340 |
| $\lambda_{70}$ |     |             |     |

| Reintransmissionsgrad |     |                  |     |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$      | 377 | $\lambda_{0.05}$ | 341 |

| CCI  |      |      |
|------|------|------|
| B    | G    | R    |
| 0,00 | 1,57 | 1,66 |

| Reintransmissionsgrad |             |
|-----------------------|-------------|
| $\lambda(nm)$         | $\tau$ 10mm |
| 280                   |             |
| 290                   |             |
| 300                   |             |
| 310                   |             |
| 320                   |             |
| 330                   |             |
| 340                   | 0,03        |
| 350                   | 0,27        |
| 360                   | 0,54        |
| 370                   | 0,72        |
| 380                   | 0,83        |
| 390                   | 0,88        |
| 400                   | 0,924       |
| 420                   | 0,957       |
| 440                   | 0,972       |
| 460                   | 0,980       |
| 480                   | 0,986       |
| 500                   | 0,990       |
| 550                   | 0,996       |
| 600                   | 0,997       |
| 650                   | 0,997       |
| 700                   | 0,998       |
| 800                   | 0,999       |
| 900                   | 0,998       |
| 1000                  | 0,997       |
| 1200                  | 0,996       |
| 1400                  | 0,993       |
| 1600                  | 0,992       |
| 1800                  | 0,984       |
| 2000                  | 0,964       |
| 2200                  | 0,906       |
| 2400                  | 0,72        |

| Andere Eigenschaften |      |
|----------------------|------|
| Dichte d             | 4,43 |

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