



Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
Refractive Index **1.76000** at 589.3 nm and 25 ° C

Compositition Diiodomethane and Sulfur
Appearance Light Yellow Liquid
Odor Slight: unpleasant
Color Stability In Direct Sun: may darken after 1 day, quite dark after 1 month
Index Change Rate High : +0.00031 to +0.00098
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.76355
Pour Point ** °C
Boiling Point > 180 °C (760 mm Hg)
Flash Point > 110 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 3.170 g / cc at 25 °C
Density Temp Coef -0.0025 g / cc / °C
Coef of Thermal Expansion 0.0008 cc / cc / °C
Thermal Conductivity n/a cal / sec / cm² / °C - 1 cm thickness

Viscosity 2 cSt at 25 °C 8 cP at 25 °C
Surface Tension 34 dynes/cm at 25 °C

Soluble n/a

Partly Soluble Acetone, Carbon Tetrachloride, Ethyl Ether, Methylene Chloride, Toluene, Xylene

Insoluble Ethanol, Heptane, Naphtha, Turpentine, Water

Compatible 10 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Latex, Neoprene, Silicone and Fluorosilicone Rubbers, Aluminum

Incompatible Epoxy, Polystyrene, Tygon, Brass, Copper, Steel

** : Crystals will form between 10 - 15 °C. Whole liquid will freeze below 6 °C



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Cauchy Coefficients
 A 1.713020E+00 B 1.3095E+04 C 1.1183553E+09

Cauchy Equation at 25°C $A + B / \lambda^2 + C / \lambda^4$ (λ = Wavelength in nm)

| Wavelength (nm) | Refractive Index | Transmittance | | | |
|-----------------|------------------|---------------|------|------|-------|
| | | 0.1 mm | 1 mm | 1 cm | 10 cm |
| 225.0 | - | - | - | - | - |
| 240.0 | - | - | - | - | - |
| 250.0 | - | - | - | - | - |
| 270.0 | - | - | - | - | - |
| 290.0 | - | - | - | - | - |
| 308.0 | - | - | - | - | - |
| 355.0 | - | - | - | - | - |
| 365.0 | - | - | - | - | - |
| 406.0 | 1.8336 | 69 | 2 | 0 | 0 |
| 473.0 | 1.7939 | 100 | 99 | 93 | 50 |
| 532.0 | 1.7732 | 100 | 100 | 97 | 77 |
| 589.3 | 1.7600 | 100 | 100 | 98 | 84 |
| 632.8 | 1.7527 | 100 | 100 | 99 | 90 |
| 656.3 | 1.7494 | 100 | 100 | 99 | 90 |
| 790.0 | 1.7369 | 100 | 100 | 99 | 92 |
| 828.0 | 1.7345 | 100 | 100 | 99 | 92 |
| 981.0 | 1.728 | 100 | 99 | 95 | 59 |
| 1310.0 | 1.721 | 100 | 100 | 99 | 92 |
| 1550.0 | 1.719 | 100 | 99 | 95 | 57 |
| 2500.0 | - | - | - | - | - |
| 3700.0 | - | - | - | - | - |

($n_F - n_C$) 0.0390

Abbe v_D 19.5

Temp. Coefficient -0.000710 dn_D/dt (15 - 35 °C)

Shelf Life: 18 Months from Date of Manufacture for Unopened Bottles; Half the Remaining Time after Opening