



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.52000** at 589.3 nm and 25 ° C

Composition Aliphatic / Alicyclic Hydrocarbons and Hydrogenated Terphenyl
Appearance Colorless to light yellow liquid
Odor Slight
Color Stability In Direct Sun: may slightly darken after 1 day, more after 4 months, dark after 6 years
Index Change Rate Low : -0.00002 to +0.00005
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.52203
Pour Point < -7 °C
Boiling Point > 262 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 91.6 at 20°C
Density 0.925 g / cc at 25 °C
Density Temp Coef -0.0007 g / cc / °C
Coef of Thermal Expansion 0.0007 cc / cc / °C
Thermal Conductivity n/a cal / sec / cm² / °C - 1 cm thickness

Viscosity 41 cSt at 25 °C 38 cP at 25 °C
Surface Tension 32 dynes/cm at 25 °C

Soluble Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene

Partly Soluble Acetone, Ethanol

Insoluble Water

Compatible 10 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Silicone (Sylgard 184) and Fluorosilicone (730 RTV) Rubbers, Tygon F-4040-A, Tygothane; Aluminum, Brass, Copper, Steel

Incompatible Polystyrene, Latex, Neoprene, Silicone (3140 RTV) Rubber, Tygon S-50-HL, R-3603, B-44-3



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Cauchy Coefficients
 A 1.501058E+00 B 6.0470E+03 C 1.8437931E+08

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 | 1.561 | 84 | 17 | 0 | 0 |
| 365.0 | 1.557 | 98 | 79 | 9 | 0 |
| 406.0 | 1.5445 | 99 | 95 | 58 | 0 |
| 473.0 | 1.5318 | 100 | 99 | 94 | 51 |
| 532.0 | 1.5247 | 100 | 100 | 98 | 78 |
| 589.3 | 1.5200 | 100 | 100 | 99 | 88 |
| 632.8 | 1.5173 | 100 | 100 | 99 | 93 |
| 656.3 | 1.5161 | 100 | 100 | 100 | 95 |
| 790.0 | 1.5112 | 100 | 100 | 100 | 98 |
| 828.0 | 1.5103 | 100 | 100 | 100 | 98 |
| 981.0 | 1.508 | 100 | 100 | 96 | 67 |
| 1310.0 | 1.505 | 100 | 99 | 89 | 32 |
| 1550.0 | 1.504 | 100 | 98 | 83 | 16 |
| 2500.0 | - | - | - | - | - |
| 3700.0 | - | - | - | - | - |

($n_F - n_C$) 0.0139

Abbe v_D 37.5

Temp. Coefficient -0.000407 dn_D/dt (15 - 35 °C)

Shelf Life: 5 Years from Date of Manufacture for Unopened Bottles, Half the Remaining Time after Opening