



Cargille Laboratories
55 Commerce Rd - Cedar Grove, NJ 07009-1289
Phone : 973-239-6633 - Fax : 973-239-6096 - Web : www.cargille.com

Catalog # 1806

Typical Characteristics

Refractive Index Liquid **Series AA**
Refractive Index **1.41400** at 589.3 nm and 25 ° C

Composition Siloxane and Aliphatic / Alicyclic Hydrocarbons
Appearance Colorless Liquid
Odor None
Color Stability In Direct Sun: no visible change after 10 years
Index Change Rate Very Low : 0.00000 to +0.00001
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.41603
Pour Point < -7 °C
Boiling Point > 200 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 48.1 at 20°C
Density 0.906 g / cc at 25 °C
Density Temp Coef -0.0009 g / cc / °C
Coef of Thermal Expansion 0.0010 cc / cc / °C
Thermal Conductivity 0.0003 cal / sec / cm² / °C - 1 cm thickness

Viscosity 11 cSt at 25 °C 10 cP at 25 °C
Surface Tension 20 dynes/cm at 25 °C

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

Partly Soluble Acetone

Insoluble Ethanol, Water

Compatible 1 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polystyrene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Neoprene and Fluorosilicone (Silastic 730 RTV) Rubbers ; Tygon F-4040-A, Tygothane, Aluminum, Brass, Copper, Steel

Incompatible Latex, Silicone (Sylgard 184 and 3140 RTV) Rubber, Tygon S-50-HL, R-3603, B-44-3



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Cauchy Coefficients
 A 1.401950E+00 B 4.2564E+03 C -2.4961267E+07

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 | 1.48 | 97 | 71 | 3 | 0 |
| 240.0 | 1.47 | 99 | 90 | 37 | 0 |
| 250.0 | 1.46 | 99 | 92 | 44 | 0 |
| 270.0 | 1.46 | 99 | 94 | 52 | 0 |
| 290.0 | 1.45 | 100 | 98 | 79 | 10 |
| 308.0 | 1.44 | 100 | 99 | 89 | 32 |
| 355.0 | 1.434 | 100 | 100 | 99 | 88 |
| 365.0 | 1.432 | 100 | 100 | 100 | 96 |
| 406.0 | 1.4269 | 100 | 100 | 100 | 96 |
| 473.0 | 1.4205 | 100 | 100 | 100 | 97 |
| 532.0 | 1.4167 | 100 | 100 | 100 | 98 |
| 589.3 | 1.4140 | 100 | 100 | 100 | 98 |
| 632.8 | 1.4124 | 100 | 100 | 100 | 98 |
| 656.3 | 1.4117 | 100 | 100 | 100 | 98 |
| 790.0 | 1.4087 | 100 | 100 | 100 | 99 |
| 828.0 | 1.4081 | 100 | 100 | 99 | 92 |
| 981.0 | 1.406 | 100 | 100 | 97 | 76 |
| 1310.0 | 1.404 | 100 | 99 | 94 | 53 |
| 1550.0 | 1.404 | 100 | 96 | 67 | 2 |
| 2500.0 | - | - | - | - | - |
| 3700.0 | - | - | - | - | - |

($n_F - n_C$) 0.0078

Abbe v_D 52.9

Temp. Coefficient -0.000406 dn_D/dt (15 - 35 °C)

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