



Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
Refractive Index **1.71500** at 589.3 nm and 25 ° C

Composition Hydrogenated Terphenyl and Diiodomethane
Appearance Light Yellow Liquid
Odor Slight: unpleasant
Color Stability In Direct Sun: may slightly darken after 1 day, quite dark after 1 month
Index Change Rate High : -0.00028 to -0.00043
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.71843
Pour Point < 6 °C
Boiling Point > 180 °C (760 mm Hg)
Flash Point > 110 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 2.990 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 4 cSt at 25 °C 12 cP at 25 °C
Surface Tension 37 dynes/cm at 25 °C

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

Partly Soluble Ethanol, Heptane, Naphtha, Turpentine

Insoluble Water

Compatible 9 Month Immersion at 25 °C : Mylar, Nylon, Polyester, Polyethylene, Polypropylene, Phenolic, Teflon, Neoprene, Silicone and Fluorosilicone Rubbers, Tygon F-4040-A

Incompatible Acrylic, Cellulose Acetate, Epoxy, Polycarbonate, Polystyrene, Polyurethane, Polyvinyl Chloride, Latex; Tygon except F-4040-A; Aluminum (scratched in liquid), Steel, Copper and Brass



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Cauchy Coefficients
 A 1.674691E+00 B 1.0862E+04 C 1.0891590E+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	1.7807	79	9	0	0
473.0	1.7450	100	100	96	64
532.0	1.7267	100	100	98	79
589.3	1.7150	100	100	98	84
632.8	1.7086	100	100	99	90
656.3	1.7058	100	100	99	91
790.0	1.6949	100	100	99	93
828.0	1.6929	100	100	99	93
981.0	1.687	100	100	96	68
1310.0	1.681	100	100	98	81
1550.0	1.679	100	99	93	49
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0344

Abbe v_D 20.8

Temp. Coefficient -0.000685 dn_D/dt (15 - 35 °C)

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