



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

Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
Refractive Index **1.74500** at 589.3 nm and 25 ° C

Composition 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 1.74861
Pour Point ** °C
Boiling Point > 180 °C (760 mm Hg)
Flash Point > 110 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 3.259 g / cc at 25 °C
Density Temp Coef -0.0027 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 36 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 1.700853E+00 B 1.1930E+04 C 1.1812026E+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	1.8167	73	5	0	0
473.0	1.7778	100	100	96	64
532.0	1.7578	100	100	98	80
589.3	1.7450	100	100	98	84
632.8	1.7380	100	100	99	90
656.3	1.7349	100	100	99	90
790.0	1.7230	100	100	99	92
828.0	1.7208	100	100	99	92
981.0	1.715	100	100	96	64
1310.0	1.708	100	100	99	92
1550.0	1.706	100	99	95	57
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0376

Abbe v_D 19.8

Temp. Coefficient -0.000721 dn_D/dt (15 - 35 °C)

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