



Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
Refractive Index **1.75500** 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 1.75857
Pour Point ** °C
Boiling Point > 180 °C (760 mm Hg)
Flash Point > 110 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 3.200 g / cc at 25 °C
Density Temp Coef -0.0026 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 35 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 1.708964E+00 B 1.2706E+04 C 1.1393044E+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	1.8280	70	3	0	0
473.0	1.7885	100	99	94	54
532.0	1.7681	100	100	98	78
589.3	1.7550	100	100	98	84
632.8	1.7478	100	100	99	90
656.3	1.7446	100	100	99	90
790.0	1.7322	100	100	99	92
828.0	1.7299	100	100	99	92
981.0	1.723	100	100	95	61
1310.0	1.717	100	100	99	92
1550.0	1.714	100	99	95	57
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0385

Abbe v_D 19.6

Temp. Coefficient -0.000713 dn_D/dt (15 - 35 °C)

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