



Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
 Refractive Index **1.78500** at 589.3 nm and 25 °C

Composition Diiodomethane, Sulfur and Tin Iodide
 Appearance Light Yellow to Dark Red Liquid
 Odor Slight: unpleasant
 Color Stability In Direct Sun: may darken after 1 day, quite dark after 1 month
 Index Change Rate High : +0.00098 to +0.00115
 by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.78849
 Pour Point ** °C
 Boiling Point > 180 °C (760 mm Hg)
 Flash Point > 110 °C (COC)
 Brix Value (Per ICUMSA) >100 at 20°C
 Density 3.076 g / cc at 25 °C
 Density Temp Coef -0.0023 g / cc / °C
 Coef of Thermal Expansion 0.0007 cc / cc / °C
 Thermal Conductivity n/a cal / sec / cm² / °C - 1 cm thickness
 Viscosity 2 cSt at 25 °C 7 cP at 25 °C
 Surface Tension 33 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 3 Week Immersion at 25 °C : Acrylic, Mylar, Polyester, Polyethylene, Polypropylene, Phenolic, Silicone (3140 RTV) and Fluorosilicone (Silastic 730 RTV) Rubbers

Incompatible Cellulose Acetate, Epoxy, Nylon, Polycarbonate, Polystyrene, Polyurethane, Polyvinyl Chloride, Latex, Neoprene, Silicone (Sylgard 184) Tygon, Aluminum, Brass, Copper, Steel

** : Crystals will form between 10 - 15 °C. Whole liquid will freeze below 6 °C



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Cauchy Coefficients
 A #VALUE! B #VALUE! C #VALUE!

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	-	-	-	-	-
473.0	-	-	-	-	-
532.0	1.7998	95	61	1	0
589.3	1.7850	99	93	50	0
632.8	1.7767	100	97	76	7
656.3	1.7729	100	98	81	12
790.0	1.7580	100	98	84	18
828.0	1.7551	100	99	93	50
981.0	1.747	100	99	94	54
1310.0	1.738	100	100	99	92
1550.0	1.735	100	100	95	62
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0434

Abbe v_D 18.1

Temp. Coefficient -0.000698 dn_D/dt (15 - 35 °C)

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