



Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
 Refractive Index **1.75000** at 589.3 nm and 25 °C

Compositition 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 1.75359
 Pour Point ** °C
 Boiling Point > 180 °C (760 mm Hg)
 Flash Point > 110 °C (COC)
 Brix Value (Per ICUMSA) >100 at 20°C
 Density 3.229 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 1.704909E+00 B 1.2318E+04 C 1.1602535E+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	1.8223	72	4	0	0
473.0	1.7831	100	99	95	59
532.0	1.7629	100	100	98	79
589.3	1.7500	100	100	98	84
632.8	1.7429	100	100	99	90
656.3	1.7398	100	100	99	90
790.0	1.7276	100	100	99	92
828.0	1.7253	100	100	99	92
981.0	1.719	100	100	95	63
1310.0	1.712	100	100	99	92
1550.0	1.710	100	99	95	57
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0381

Abbe v_D 19.7

Temp. Coefficient -0.000717 dn_D/dt (15 - 35 °C)

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