



Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
Refractive Index **1.77500** 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 1.77849
Pour Point ** °C
Boiling Point > 180 °C (760 mm Hg)
Flash Point > 110 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 3.080 g / cc at 25 °C
Density Temp Coef -0.0023 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 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 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 1.725186E+00 B 1.4260E+04 C 1.0555079E+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	1.8505	65	1	0	0
473.0	1.8100	100	99	91	40
532.0	1.7887	100	100	97	75
589.3	1.7750	100	100	98	84
632.8	1.7674	100	100	99	90
656.3	1.7640	100	100	99	90
790.0	1.7507	100	100	99	92
828.0	1.7482	100	100	99	92
981.0	1.741	100	99	94	55
1310.0	1.734	100	100	99	92
1550.0	1.731	100	99	95	57
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0405

Abbe v_D 19.2

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