



Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
Refractive Index **1.70500** at 589.3 nm and 25 ° C

Composition Hydrogenated Terphenyl and Diiodomethane
Appearance Light Yellow Liquid
Odor Slight: unpleasant
Color Stability In Direct Sun: may slightly darken after 1 day, quite dark after 1 month
Index Change Rate High : -0.00028 to -0.00043
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.70833
Pour Point < 6 °C
Boiling Point > 180 °C (760 mm Hg)
Flash Point > 110 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 2.851 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 5 cSt at 25 °C 14 cP at 25 °C
Surface Tension 37 dynes/cm at 25 °C

Soluble Acetone, Carbon Tetrachloride, Ethyl Ether, Methylene Chloride, Toluene, Xylene

Partly Soluble Ethanol, Heptane, Naphtha, Turpentine

Insoluble Water

Compatible 9 Month Immersion at 25 °C : Mylar, Nylon, Polyester, Polyethylene, Polypropylene, Phenolic, Teflon, Neoprene, Silicone and Fluorosilicone Rubbers, Tygon F-4040-A

Incompatible Acrylic, Cellulose Acetate, Epoxy, Polycarbonate, Polystyrene, Polyurethane, Polyvinyl Chloride, Latex; Tygon except F-4040-A; Aluminum (scratched in liquid), Steel, Copper and Brass



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Cauchy Coefficients
 A 1.665769E+00 B 1.0645E+04 C 1.0344959E+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	1.7684	80	11	0	0
473.0	1.7340	100	100	95	61
532.0	1.7163	100	100	98	78
589.3	1.7050	100	100	98	84
632.8	1.6988	100	100	99	90
656.3	1.6961	100	100	99	91
790.0	1.6855	100	100	99	93
828.0	1.6835	100	100	99	94
981.0	1.678	100	100	96	69
1310.0	1.672	100	100	97	77
1550.0	1.670	100	99	93	46
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0333

Abbe v_D 21.2

Temp. Coefficient -0.000667 dn_D/dt (15 - 35 °C)

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