



Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
Refractive Index **1.71000** 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 1.71338
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 2.921 g / cc at 25 °C
Density Temp Coef -0.0024 g / cc / °C
Coef of Thermal Expansion 0.0008 cc / cc / °C
Thermal Conductivity n/a cal / sec / cm² / °C - 1 cm thickness
Viscosity 4 cSt at 25 °C 13 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 1.670230E+00 B 1.0753E+04 C 1.0618274E+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	1.7745	79	10	0	0
473.0	1.7395	100	100	95	62
532.0	1.7215	100	100	98	79
589.3	1.7100	100	100	98	84
632.8	1.7037	100	100	99	90
656.3	1.7009	100	100	99	91
790.0	1.6902	100	100	99	93
828.0	1.6882	100	100	99	93
981.0	1.683	100	100	96	68
1310.0	1.677	100	100	98	79
1550.0	1.675	100	99	93	48
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0338

Abbe v_D 21.0

Temp. Coefficient -0.000676 dn_D/dt (15 - 35 °C)

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