



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.63400** at 589.3 nm and 25 ° C

Composition Hydrogenated Terphenyl and 1-Bromonaphthalene
Appearance Light Yellow Liquid
Odor Slight: unpleasant
Color Stability In Direct Sun: may slightly darken after 1 day, very dark after 4 months, dark with precipitate after 6 yrs
Index Change Rate Low : -0.00003 to +0.00003
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.63628
Pour Point < 6 °C
Boiling Point > 279 °C (760 mm Hg)
Flash Point > 113 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 1.361 g / cc at 25 °C
Density Temp Coef -0.0009 g / cc / °C
Coef of Thermal Expansion 0.0006 cc / cc / °C
Thermal Conductivity n/a cal / sec / cm² / °C - 1 cm thickness

Viscosity 9 cSt at 25 °C 12 cP at 25 °C
Surface Tension 40 dynes/cm at 25 °C

Soluble Acetone, Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene

Partly Soluble Ethanol

Insoluble Water

Compatible 9 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Silicone (Sylgard 184, 3140 RTV) and Fluorosilicone (Siliastic 730 RTV) Rubbers ; Tygothane, Aluminum, Steel

Incompatible Polycarbonate, Polystyrene, Latex, Neoprene, Tygon (all types except Tygothane), (Acrylic at 55 °C), may tarnish Brass and Copper.



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Cauchy Coefficients
 A 1.598746E+00 B 1.0035E+04 C 7.6659530E+08

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	1.717	98	81	12	0
406.0	1.6878	99	94	52	0
473.0	1.6589	100	99	88	26
532.0	1.6438	100	100	97	72
589.3	1.6340	100	100	98	82
632.8	1.6286	100	100	98	84
656.3	1.6262	100	100	98	85
790.0	1.6168	100	100	98	86
828.0	1.6150	100	100	99	89
981.0	1.610	100	100	99	87
1310.0	1.605	100	99	94	53
1550.0	1.603	100	99	91	38
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0288

Abbe v_D 22.0

Temp. Coefficient -0.000457 dn_D/dt (15 - 35 °C)

Shelf Life: 5 Years from Date of Manufacture for Unopened Bottles, Half the Remaining Time after Opening