



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.61400** 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 1.61623
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 1.246 g / cc at 25 °C
Density Temp Coef -0.0008 g / cc / °C
Coef of Thermal Expansion 0.0007 cc / cc / °C
Thermal Conductivity n/a cal / sec / cm² / °C - 1 cm thickness

Viscosity 18 cSt at 25 °C 23 cP at 25 °C
Surface Tension 39 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 1.582092E+00 B 9.3003E+03 C 6.1836814E+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	1.687	97	75	6	0
406.0	1.6613	99	93	46	0
473.0	1.6360	100	99	88	28
532.0	1.6227	100	100	96	70
589.3	1.6140	100	100	98	82
632.8	1.6092	100	100	98	86
656.3	1.6070	100	100	99	88
790.0	1.5986	100	100	99	89
828.0	1.5970	100	100	99	92
981.0	1.592	100	100	98	84
1310.0	1.588	100	99	93	47
1550.0	1.586	100	99	89	31
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0255

Abbe v_D 24.1

Temp. Coefficient -0.000446 dn_D/dt (15 - 35 °C)

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