



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
 Refractive Index **1.61800** at 589.3 nm and 25 °C

Compositition 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 1.62024
 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 1.269 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 16 cSt at 25 °C 20 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 1.585423E+00 B 9.4473E+03 C 6.4801357E+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	1.693	97	76	7	0
406.0	1.6666	99	93	47	0
473.0	1.6406	100	99	88	28
532.0	1.6269	100	100	97	70
589.3	1.6180	100	100	98	82
632.8	1.6131	100	100	98	86
656.3	1.6108	100	100	99	88
790.0	1.6022	100	100	99	89
828.0	1.6006	100	100	99	92
981.0	1.596	100	100	98	84
1310.0	1.591	100	99	93	48
1550.0	1.589	100	99	89	32
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0262

Abbe v_D 23.6

Temp. Coefficient -0.000448 dn_D/dt (15 - 35 °C)

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