



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.62800** 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 by Evaporation	Low : -0.00003 to +0.00003 expected after 32 days with exposed surface area to volume ratio of 0.2 cm ² /cc @ 25 °C

Index at 20°C	1.63027	
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	1.326 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 / cm ² / °C - 1 cm thickness	
Viscosity	11 cSt at 25 °C	15 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 1.593750E+00 B 9.8148E+03 C 7.2212715E+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	1.708	98	79	10	0
406.0	1.6799	99	93	50	0
473.0	1.6520	100	99	88	27
532.0	1.6374	100	100	97	71
589.3	1.6280	100	100	98	82
632.8	1.6228	100	100	98	85
656.3	1.6204	100	100	98	86
790.0	1.6113	100	100	99	87
828.0	1.6096	100	100	99	90
981.0	1.605	100	100	98	86
1310.0	1.600	100	99	93	51
1550.0	1.598	100	99	90	36
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0278

Abbe v_D 22.6

Temp. Coefficient -0.000453 dn_D/dt (15 - 35 °C)

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