



**Cargille Laboratories**  
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**  
 Refractive Index **1.61600** 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 cm<sup>2</sup>/cc @ 25 ° C

Index at 20°C	1.61823	
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	1.257 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 / cm <sup>2</sup> / ° C - 1 cm thickness	
Viscosity	17 cSt at 25 ° C	21 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 1.583757E+00 B 9.3738E+03 C 6.3319085E+08

Cauchy Equation at 25°C  $A + B / \lambda^2 + C / \lambda^4$  ( $\lambda$  = 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	1.690	97	76	6	0
406.0	1.6639	99	93	47	0
473.0	1.6383	100	99	88	28
532.0	1.6248	100	100	97	70
589.3	1.6160	100	100	98	82
632.8	1.6111	100	100	98	86
656.3	1.6089	100	100	99	88
790.0	1.6004	100	100	99	89
828.0	1.5988	100	100	99	92
981.0	1.594	100	100	98	84
1310.0	1.589	100	99	93	48
1550.0	1.588	100	99	89	32
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0258

Abbe  $v_D$  23.8

Temp. Coefficient -0.000447  $dn_D/dt$  (15 - 35 °C)

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