



**Cargille Laboratories**  
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Catalog # 1812

Typical Characteristics

Refractive Index Liquid **Series B**  
Refractive Index **1.69600** at 589.3 nm and 25 ° C

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Composition 1-Bromonaphthalene and 1-Iodonaphthalene  
Appearance Light yellow brown liquid  
Odor Slight: unpleasant  
Color Stability In Direct Sun: may become very dark after 1 day  
Index Change Rate Low : +0.00001 to +0.00005  
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm<sup>2</sup>/cc @ 25 ° C

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Index at 20°C 1.69839  
Pour Point < 6 ° C  
Boiling Point > 279 ° C ( 760 mm Hg )  
Flash Point > 93 ° C ( COC )  
Brix Value (Per ICUMSA) >100 at 20°C  
Density 1.707 g / cc at 25 ° C  
Density Temp Coef -0.0010 g / cc / ° C  
Coef of Thermal Expansion 0.0006 cc / cc / ° C  
Thermal Conductivity n/a cal / sec / cm<sup>2</sup> / ° C - 1 cm thickness  
Viscosity 4 cSt at 25 ° C 7 cP at 25 ° C  
Surface Tension 41 dynes/cm at 25 ° C

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Soluble Acetone, Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene  
Partly Soluble Ethanol  
Insoluble Water

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Compatible 1 Month Immersion at 25 ° C : Acrylic, Mylar, Nylon, Polyester, Polyethylene, Polypropylene, Polyurethane, Phenolic, Teflon, Silicone ( Sylgard 184, 3140 RTV ) and Fluorosilicone ( 730 RTV ) Rubbers, Aluminum  
Incompatible Cellulose Acetate, Epoxy, Polycarbonate, Polystyrene, Polyvinyl Chloride, Latex, Neoprene, Tygon ( all types ), may corrode Brass and Steel, may tarnish Copper.

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Cauchy Coefficients  
 A 1.652231E+00 B 1.2054E+04 C 1.0923643E+09

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	1.804	94	56	0	0
406.0	1.7656	96	66	1	0
473.0	1.7279	99	90	34	0
532.0	1.7085	100	99	92	43
589.3	1.6960	100	99	94	56
632.8	1.6891	100	100	96	68
656.3	1.6861	100	100	97	74
790.0	1.6744	100	100	98	86
828.0	1.6721	100	100	99	90
981.0	1.666	100	100	99	90
1310.0	1.660	100	100	98	79
1550.0	1.657	100	99	93	51
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0367

Abbe  $v_D$  19.0

Temp. Coefficient -0.000479  $dn_D/dt$  (15 - 35 °C)

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