



**Cargille Laboratories**  
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Catalog # 1812

Typical Characteristics

Refractive Index Liquid      **Series B**  
Refractive Index      **1.68200**      at      589.3 nm      and      25      ° C

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Compositition      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      1.68438  
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      1.630 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      42 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 1.639928E+00 B 1.1630E+04 C 1.0350715E+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	1.786	96	65	1	0
406.0	1.7486	97	74	5	0
473.0	1.7126	99	93	47	0
532.0	1.6939	100	99	94	52
589.3	1.6820	100	100	96	64
632.8	1.6754	100	100	97	72
656.3	1.6725	100	100	97	77
790.0	1.6612	100	100	98	84
828.0	1.6591	100	100	99	89
981.0	1.653	100	100	99	90
1310.0	1.647	100	100	97	72
1550.0	1.645	100	99	93	50
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0352

Abbe  $v_D$  19.4

Temp. Coefficient -0.000476  $dn_D/dt$  (15 - 35 °C)

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