



**Cargille Laboratories**  
**55 Commerce Rd - Cedar Grove, NJ 07009-1289**  
**Phone : 973-239-6633 - Fax : 973-239-6096 - Web : www.cargille.com**

Catalog # 1812

Typical Characteristics

Refractive Index Liquid                    **Series B**  
Refractive Index                            **1.67600**        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                    1.67837  
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                                    1.597 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                                    6 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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Refractive Index Liquid **Series B**  
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Cauchy Coefficients  
 A 1.634655E+00 B 1.1448E+04 C 1.0105174E+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	1.778	96	70	3	0
406.0	1.7413	98	79	9	0
473.0	1.7060	99	94	54	0
532.0	1.6877	100	99	94	56
589.3	1.6760	100	100	96	68
632.8	1.6695	100	100	97	74
656.3	1.6667	100	100	98	78
790.0	1.6556	100	100	98	84
828.0	1.6535	100	100	99	88
981.0	1.648	100	100	99	90
1310.0	1.642	100	100	96	69
1550.0	1.640	100	99	93	50
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0345

Abbe  $v_D$  19.6

Temp. Coefficient -0.000474  $dn_D/dt$  (15 - 35 °C)

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