



**Cargille Laboratories**  
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Catalog # 1812

Typical Characteristics

Refractive Index Liquid                    **Series B**  
Refractive Index                            **1.69000**        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                    1.69239  
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                                    1.674 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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Refractive Index Liquid **Series B**  
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Cauchy Coefficients A B C  
 1.646958E+00 1.1872E+04 1.0678102E+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	1.796	95	60	1	0
406.0	1.7583	96	69	3	0
473.0	1.7214	99	91	39	0
532.0	1.7022	100	99	93	47
589.3	1.6900	100	99	95	59
632.8	1.6833	100	100	96	70
656.3	1.6803	100	100	97	75
790.0	1.6687	100	100	98	85
828.0	1.6665	100	100	99	89
981.0	1.660	100	100	99	90
1310.0	1.654	100	100	97	76
1550.0	1.652	100	99	93	50
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0361

Abbe  $v_D$  19.1

Temp. Coefficient -0.000477  $dn_D/dt$  (15 - 35 °C)

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