



**Cargille Laboratories**  
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Catalog # 1812

Typical Characteristics

Refractive Index Liquid                    **Series B**  
Refractive Index                            **1.66000**        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                    1.66235  
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                                    1.509 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                            43 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 1.620594E+00 B 1.0963E+04 C 9.4503997E+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	1.756	98	84	17	0
406.0	1.7219	99	91	39	0
473.0	1.6885	100	98	79	9
532.0	1.6711	100	100	96	70
589.3	1.6600	100	100	98	78
632.8	1.6539	100	100	98	80
656.3	1.6511	100	100	98	81
790.0	1.6406	100	100	98	82
828.0	1.6386	100	100	99	86
981.0	1.633	100	100	99	90
1310.0	1.627	100	100	95	62
1550.0	1.625	100	99	93	49
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0328

Abbe  $v_D$  20.1

Temp. Coefficient -0.000470  $dn_D/dt$  (15 - 35 °C)

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