



**Cargille Laboratories**  
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid                    **Series A**  
Refractive Index                            **1.57600**      at    589.3 nm    and            25            ° C

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Composition                                Hydrogenated Terphenyl and 1-Bromonaphthalene  
Appearance                                Light Yellow Liquid  
Odor    Slight: unpleasant  
Color Stability                              In Direct Sun: may slightly darken after 1 day, very dark after 4 months, dark with precipitate after 6 yrs  
Index Change Rate                        Low : -0.00003 to +0.00003  
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                                1.57812  
Pour Point                                    < 6 °C  
Boiling Point                                > 279 °C ( 760 mm Hg )  
Flash Point                                  > 113 °C ( COC )  
Brix Value (Per ICUMSA)                >100 at 20°C  
Density                                        1.028 g / cc at 25 °C  
Density Temp Coef                        -0.0007 g / cc / °C  
Coef of Thermal Expansion              0.0007 cc / cc / °C  
Thermal Conductivity                      n/a cal / sec / cm<sup>2</sup> / °C - 1 cm thickness  
  
Viscosity                                        74 cSt at 25 °C                                76 cP at 25 °C  
Surface Tension                              37 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                                  9 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Silicone ( Sylgard 184, 3140 RTV ) and Fluorosilicone ( Siliastic 730 RTV ) Rubbers ; Tygothane, Aluminum, Steel

Incompatible                                Polycarbonate, Polystyrene, Latex, Neoprene, Tygon ( all types except Tygothane ), ( Acrylic at 55 °C ), may tarnish Brass and Copper.

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Refractive Index Liquid **Series A**  
 Refractive Index **1.57600** at 589.3 nm and 25 °C

Cauchy Coefficients  
 A: 1.550449E+00  
 B: 7.9037E+03  
 C: 3.3673653E+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	1.629	96	66	1	0
406.0	1.6108	99	91	38	0
473.0	1.5925	100	99	89	31
532.0	1.5826	100	100	96	67
589.3	1.5760	100	100	98	82
632.8	1.5723	100	100	99	90
656.3	1.5706	100	100	99	94
790.0	1.5640	100	100	100	97
828.0	1.5627	100	100	100	98
981.0	1.559	100	100	98	78
1310.0	1.555	100	99	91	38
1550.0	1.554	100	98	85	21
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0193

Abbe  $v_D$  29.8

Temp. Coefficient -0.000424  $dn_D/dt$  (15 - 35 °C)

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