



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

Catalog # 1806

Typical Characteristics

Refractive Index Liquid **Series AA**  
 Refractive Index **1.40800** at 589.3 nm and 25 °C

Composition Siloxane and Aliphatic / Alicyclic Hydrocarbons  
 Appearance Colorless Liquid  
 Odor None  
 Color Stability In Direct Sun: no visible change after 10 years  
 Index Change Rate Very Low : 0.00000 to +0.00001  
 by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm<sup>2</sup>/cc @ 25 °C

Index at 20°C 1.41004  
 Pour Point < -7 °C  
 Boiling Point > 200 °C ( 760 mm Hg )  
 Flash Point > 138 °C ( COC )  
**Brix Value (Per ICUMSA) 45.1 at 20°C**  
 Density 0.916 g / cc at 25 °C  
 Density Temp Coef -0.0009 g / cc / °C  
 Coef of Thermal Expansion 0.0010 cc / cc / °C  
 Thermal Conductivity 0.0003 cal / sec / cm<sup>2</sup> / °C - 1 cm thickness  
 Viscosity 11 cSt at 25 °C 10 cP at 25 °C  
 Surface Tension 19 dynes/cm at 25 °C

Soluble Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene  
 Partly Soluble Acetone  
 Insoluble Ethanol, Water

Compatible 1 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polystyrene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Neoprene and Fluorosilicone ( Silastic 730 RTV ) Rubbers ; Tygon F-4040-A, Tygothane, Aluminum, Brass, Copper, Steel  
 Incompatible Latex, Silicone ( Sylgard 184 and 3140 RTV ) Rubber, Tygon S-50-HL, R-3603, B-44-3



Refractive Index Liquid **Series AA**  
 Refractive Index **1.40800** at 589.3 nm and 25 °C

Cauchy Coefficients  
 A 1.395916E+00 B 4.2926E+03 C -3.3335856E+07

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	1.47	97	74	5	0
240.0	1.46	99	91	38	0
250.0	1.46	99	92	43	0
270.0	1.45	99	94	55	0
290.0	1.44	100	98	79	9
308.0	1.44	100	99	90	34
355.0	1.428	100	100	99	89
365.0	1.426	100	100	100	97
406.0	1.4207	100	100	100	97
473.0	1.4144	100	100	100	98
532.0	1.4107	100	100	100	98
589.3	1.4080	100	100	100	98
632.8	1.4064	100	100	100	98
656.3	1.4057	100	100	100	98
790.0	1.4027	100	100	100	99
828.0	1.4021	100	100	99	91
981.0	1.400	100	100	98	79
1310.0	1.398	100	99	95	58
1550.0	1.398	100	96	65	1
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0078

Abbe  $v_D$  52.4

Temp. Coefficient -0.000408  $dn_D/dt$  (15 - 35 °C)

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