



**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                            **1.44600**      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                                1.44796  
Pour Point                                    < -7 °C  
Boiling Point                                > 200 °C ( 760 mm Hg )  
Flash Point                                  > 138 °C ( COC )  
**Brix Value (Per ICUMSA)**                **62.6 at 20°C**  
Density                                        0.849 g / cc at 25 °C  
Density Temp Coef                        -0.0007 g / cc / °C  
Coef of Thermal Expansion              0.0009 cc / cc / °C  
Thermal Conductivity                      0.0003 cal / sec / cm<sup>2</sup> / °C - 1 cm thickness  
  
Viscosity                                      15 cSt at 25 °C                                13 cP at 25 °C  
Surface Tension                              22 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 **1.44600** at 589.3 nm and 25 °C

Cauchy Coefficients  
 A 1.434136E+00 B 4.0632E+03 C 1.9703207E+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	1.52	94	56	0	0
240.0	1.51	99	89	30	0
250.0	1.50	99	93	49	0
270.0	1.49	99	91	37	0
290.0	1.49	100	98	83	15
308.0	1.48	100	98	85	20
355.0	1.468	100	100	98	83
365.0	1.466	100	100	99	88
406.0	1.4595	100	100	99	88
473.0	1.4527	100	100	99	94
532.0	1.4487	100	100	100	96
589.3	1.4460	100	100	100	96
632.8	1.4444	100	100	100	96
656.3	1.4437	100	100	100	96
790.0	1.4407	100	100	100	99
828.0	1.4401	100	100	99	95
981.0	1.438	100	100	95	61
1310.0	1.437	100	99	90	33
1550.0	1.436	100	97	77	7
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0080

Abbe  $v_D$  55.7

Temp. Coefficient -0.000393  $dn_D/dt$  (15 - 35 °C)

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