



**Cargille Laboratories**  
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Catalog # 1806

Typical Characteristics

Refractive Index Liquid                    **Series AA**  
Refractive Index                            **1.40400**      at    589.3 nm    and            25            ° C

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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

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Index at 20°C                                1.40605  
Pour Point                                    < -7 °C  
Boiling Point                                > 200 °C ( 760 mm Hg )  
Flash Point                                  > 138 °C ( COC )  
**Brix Value (Per ICUMSA)**                **43.1 at 20°C**  
Density                                        0.923 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                                      10 cSt at 25 °C                                10 cP at 25 °C  
Surface Tension                            19 dynes/cm at 25 °C

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

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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

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Refractive Index Liquid **Series AA**  
 Refractive Index **1.40400** at 589.3 nm and 25 °C

Cauchy Coefficients  
 A 1.391892E+00 B 4.3167E+03 C -3.8918915E+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	1.46	97	76	7	0
240.0	1.46	99	91	39	0
250.0	1.45	99	92	42	0
270.0	1.44	99	95	57	0
290.0	1.44	100	98	78	9
308.0	1.43	100	99	90	36
355.0	1.424	100	100	99	90
365.0	1.422	100	100	100	98
406.0	1.4166	100	100	100	98
473.0	1.4104	100	100	100	99
532.0	1.4067	100	100	100	99
589.3	1.4040	100	100	100	99
632.8	1.4024	100	100	100	99
656.3	1.4017	100	100	100	99
790.0	1.3987	100	100	100	99
828.0	1.3981	100	100	99	91
981.0	1.396	100	100	98	81
1310.0	1.394	100	100	95	62
1550.0	1.394	100	96	64	1
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0078

Abbe  $v_D$  52.1

Temp. Coefficient -0.000410  $dn_D/dt$  (15 - 35 °C)

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