



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid	Series A					
Refractive Index	1.53400	at	589.3 nm	and	25	° C

Composition	Aliphatic / Alicyclic Hydrocarbons and Hydrogenated Terphenyl
Appearance	Colorless to light yellow liquid
Odor	Slight
Color Stability	In Direct Sun: may slightly darken after 1 day, more after 4 months, dark after 6 years
Index Change Rate by Evaporation	Low : -0.00002 to +0.00005 expected after 32 days with exposed surface area to volume ratio of 0.2 cm ² /cc @ 25 °C

Index at 20°C	1.53605	
Pour Point	< -7 °C	
Boiling Point	> 262 °C (760 mm Hg)	
Flash Point	> 138 °C (COC)	
Brix Value (Per ICUMSA)	96.5 at 20°C	
Density	0.947 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 ² / °C - 1 cm thickness	
Viscosity	50 cSt at 25 °C	47 cP at 25 °C
Surface Tension	33 dynes/cm at 25 °C	

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

Compatible	10 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Silicone (Sylgard 184) and Fluorosilicone (730 RTV) Rubbers, Tygon F-4040-A, Tygothane; Aluminum, Brass, Copper, Steel
Incompatible	Polystyrene, Latex, Neoprene, Silicone (3140 RTV) Rubber, Tygon S-50-HL, R-3603, B-44-3



Refractive Index Liquid **Series A**
 Refractive Index **1.53400** at 589.3 nm and 25 ° C

Cauchy Coefficients A B C
 1.513456E+00 6.5075E+03 2.1768586E+08

Cauchy Equation at 25°C $A + B / \lambda^2 + C / \lambda^4$ (λ = 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	1.579	81	12	0	0
365.0	1.575	97	75	5	0
406.0	1.5609	99	94	51	0
473.0	1.5469	100	99	92	45
532.0	1.5392	100	100	97	75
589.3	1.5340	100	100	98	86
632.8	1.5311	100	100	99	92
656.3	1.5297	100	100	100	95
790.0	1.5244	100	100	100	98
828.0	1.5234	100	100	100	98
981.0	1.520	100	100	96	70
1310.0	1.517	100	99	90	34
1550.0	1.516	100	98	84	17
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0152

Abbe v_D 35.2

Temp. Coefficient -0.000411 dn_D/dt (15 - 35 °C)

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