



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid	Series A					
Refractive Index	1.54200	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	1.54407	
Pour Point	< -7 °C	
Boiling Point	> 262 °C (760 mm Hg)	
Flash Point	> 138 °C (COC)	
Brix Value (Per ICUMSA)	99.2 at 20°C	
Density	0.959 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	55 cSt at 25 °C	53 cP at 25 °C
Surface Tension	34 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 **1.54200** at 589.3 nm and 25 ° C

Cauchy Coefficients A B C
 1.520541E+00 6.7706E+03 2.3671818E+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	1.589	79	9	0	0
365.0	1.585	97	73	4	0
406.0	1.5703	99	93	48	0
473.0	1.5555	100	99	92	42
532.0	1.5474	100	100	97	73
589.3	1.5420	100	100	98	85
632.8	1.5389	100	100	99	92
656.3	1.5375	100	100	100	95
790.0	1.5320	100	100	100	98
828.0	1.5309	100	100	100	98
981.0	1.528	100	100	97	71
1310.0	1.525	100	99	90	34
1550.0	1.523	100	98	84	17
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0159

Abbe v_D 34.1

Temp. Coefficient -0.000413 dn_D/dt (15 - 35 °C)

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