



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.58800** at 589.3 nm and 25 ° C

Composition Hydrogenated Terphenyl and 1-Bromonaphthalene
Appearance Light Yellow Liquid
Odor Slight: unpleasant
Color Stability In Direct Sun: may slightly darken after 1 day, very dark after 4 months, dark with precipitate after 6 yrs
Index Change Rate Low : -0.00003 to +0.00003
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.59015
Pour Point < 6 °C
Boiling Point > 279 °C (760 mm Hg)
Flash Point > 113 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 1.097 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 / cm² / °C - 1 cm thickness

Viscosity 47 cSt at 25 °C 52 cP at 25 °C
Surface Tension 38 dynes/cm at 25 °C

Soluble Acetone, Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene

Partly Soluble Ethanol

Insoluble Water

Compatible 9 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Silicone (Sylgard 184, 3140 RTV) and Fluorosilicone (Siliastic 730 RTV) Rubbers ; Tygothane, Aluminum, Steel

Incompatible Polycarbonate, Polystyrene, Latex, Neoprene, Tygon (all types except Tygothane), (Acrylic at 55 °C), may tarnish Brass and Copper.



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Cauchy Coefficients
 A 1.560441E+00 B 8.3447E+03 C 4.2567283E+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	-	-	-	-	-
365.0	1.647	96	69	2	0
406.0	1.6267	99	91	40	0
473.0	1.6062	100	99	89	30
532.0	1.5952	100	100	96	68
589.3	1.5880	100	100	98	82
632.8	1.5839	100	100	99	89
656.3	1.5821	100	100	99	92
790.0	1.5749	100	100	99	95
828.0	1.5735	100	100	100	96
981.0	1.570	100	100	98	80
1310.0	1.565	100	99	91	40
1550.0	1.564	100	99	86	23
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0213

Abbe v_D 27.6

Temp. Coefficient -0.000431 dn_D/dt (15 - 35 °C)

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