Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid	**Series M**					
Refractive Index	**1.77000**	at	589.3 nm	and	25	° C

Compostition	Diiodomethane and Sulfur
Appearance	Light Yellow Liquid
Odor	Slight: unpleasant
Color Stability	In Direct Sun: may darken after 1 day, quite dark after 1 month
Index Change Rate by Evaporation	High : +0.00031 to +0.00098 expected after 32 days with exposed surface area to volume ratio of 0.2 cm^2/cc @ 25 °C

Index at 20°C	1.77351		
Pour Point	**	°C	
Boiling Point	> 180	°C (760 mm Hg)	
Flash Point	> 110	°C (COC)	
Brix Value (Per ICUMSA)	>100	at 20°C	
Density	3.110	g / cc at 25 °C	
Density Temp Coef	-0.0024	g / cc / °C	
Coef of Thermal Expansion	0.0008	cc / cc / °C	
Thermal Conductivity	n/a	cal / sec / cm^2 / °C - 1 cm thickness	
Viscosity	2	cSt at 25 °C	7 cP at 25 °C
Surface Tension	34	dynes/cm at 25 °C	

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

Compatible	10 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Latex, Neoprene, Silicone and Fluorosilicone Rubbers, Aluminum
Incompatible	Epoxy, Polystyrene, Tygon, Brass, Copper, Steel

** : Crystals will form between 10 - 15 °C. Whole liquid will freeze below 6 °C

The above values are typical for this liquid and are calculated from values typical of its components

9/12/2018

Refractive Index Liquid **Series M**
Refractive Index **1.77000** at 589.3 nm and 25 ° C

Cauchy Coefficients	A	B	C
	1.721131E+00	1.3871E+04	1.0764571E+09

Cauchy Equation at 25°C $A + B / \lambda^2 + C / \lambda^4$ (λ = Wavelength in nm)

		Transmittance			
Wavelength (nm)	Refractive Index	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	-	-	-	-	-
406.0	1.8449	66	2	0	0
473.0	1.8046	100	99	92	43
532.0	1.7836	100	100	97	76
589.3	1.7700	100	100	98	84
632.8	1.7625	100	100	99	90
656.3	1.7591	100	100	99	90
790.0	1.7461	100	100	99	92
828.0	1.7437	100	100	99	92
981.0	1.737	100	99	94	57
1310.0	1.730	100	100	99	92
1550.0	1.727	100	99	95	57
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

$(n_F - n_C)$	0.0400	
Abbe v_D	19.3	
Temp. Coefficient	-0.000702	dn_D/dt (15 - 35 °C)

Shelf Life: 18 Months from Date of Manufacture for Unopened Bottles; Half the Remaining Time after Opening

The above values are typical for this liquid and are calculated from values typical of its components

9/12/2018