Cargille Laboratories
55 Commerce Rd - Cedar Grove, NJ 07009-1289
Phone : 973-239-6633 - Fax : 973-239-6096 - Web : www.cargille.com

Catalog # 1803

Typical Characteristics

Refractive Index Liquid	**Series AAA**					
Refractive Index	**1.37000**	at	589.3 nm	and	25	° C

Compostition	Perfluorocarbon and Chlorofluorocarbon (not the types thought to affect the ozone)
Appearance	Colorless Liquid
Odor	None
Color Stability	In Direct Sun: no visible change after 10 years
Index Change Rate by Evaporation	Moderate : -0.00030 to +0.00009 expected after 32 days with exposed surface area to volume ratio of 0.2 cm^2/cc @ 25 °C

Index at 20°C	1.37171		
Pour Point	< -20	°C	
Boiling Point	> 215	°C	(760 mm Hg)
Flash Point	None	°C	(COC)
Brix Value (Per ICUMSA)	24.6	at 20°C	
Density	1.913	g / cc at 25 °C	
Density Temp Coef	-0.0018	g / cc / °C	
Coef of Thermal Expansion	0.0009	cc / cc / °C	
Thermal Conductivity	0.00034	cal / sec / cm^2 / °C	- 1 cm thickness
Viscosity	16	cSt at 25 °C	31 cP at 25 °C
Surface Tension	19	dynes/cm at 25 °C	

Soluble	Other Chlorofluorocarbons, Galden PFS2, Fluoroclean HE
Partly Soluble	Most organic solvents
Insoluble	Water

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

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

9/12/2018

Refractive Index Liquid **Series AAA**
Refractive Index **1.37000** at 589.3 nm and 25 ° C

Cauchy Coefficients

A	B	C
1.361665E+00	3.0776E+03	-6.3539347E+07

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	1.40	99	89	32	0
250.0	1.39	99	94	54	0
270.0	1.39	100	97	76	6
290.0	1.39	100	98	85	19
308.0	1.39	100	99	90	33
355.0	1.382	100	99	94	55
365.0	1.381	100	100	97	72
406.0	1.3780	100	100	97	77
473.0	1.3742	100	100	99	93
532.0	1.3717	100	100	99	93
589.3	1.3700	100	100	99	95
632.8	1.3690	100	100	100	96
656.3	1.3685	100	100	100	96
790.0	1.3664	100	100	100	98
828.0	1.3660	100	100	100	96
981.0	1.365	100	100	100	96
1310.0	1.363	100	100	100	96
1550.0	1.363	100	100	99	92
2500.0	1.36	100	99	93	47
3700.0	1.36	98	85	20	0

($n_F - n_C$) 0.0051
Abbe v_D 72.8
Temp. Coefficient -0.000342 dn_D/dt (15 - 35 °C)

Shelf Life: 5 Years 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