



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 **1.36000** at 589.3 nm and 25 ° C

Composition 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 Moderate : -0.00030 to +0.00009
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.36170
Pour Point < -20 °C
Boiling Point > 215 °C (760 mm Hg)
Flash Point None °C (COC)
Brix Value (Per ICUMSA) **18.7 at 20°C**
Density 1.917 g / cc at 25 °C
Density Temp Coef -0.0018 g / cc / °C
Coef of Thermal Expansion 0.0010 cc / cc / °C
Thermal Conductivity 0.00032 cal / sec / cm² / °C - 1 cm thickness

Viscosity 16 cSt at 25 °C 30 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



Refractive Index Liquid **Series AAA**
 Refractive Index **1.36000** at 589.3 nm and 25 °C

Cauchy Coefficients
 A 1.351934E+00 B 3.0118E+03 C -7.3214925E+07

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	1.38	99	90	35	0
250.0	1.38	99	94	55	0
270.0	1.38	100	98	78	8
290.0	1.38	100	99	86	22
308.0	1.38	100	99	91	38
355.0	1.371	100	99	95	59
365.0	1.370	100	100	97	75
406.0	1.3675	100	100	98	80
473.0	1.3639	100	100	99	94
532.0	1.3617	100	100	99	94
589.3	1.3600	100	100	100	96
632.8	1.3590	100	100	100	97
656.3	1.3585	100	100	100	97
790.0	1.3566	100	100	100	98
828.0	1.3562	100	100	100	96
981.0	1.355	100	100	100	96
1310.0	1.354	100	100	100	96
1550.0	1.353	100	100	99	91
2500.0	1.35	100	99	92	43
3700.0	1.35	98	83	15	0

($n_F - n_C$) 0.0048

Abbe v_D 74.4

Temp. Coefficient -0.000341 dn_D/dt (15 - 35 °C)

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