Cargille Laboratories
55 Commerce Rd - Cedar Grove, NJ 07009-1289
Phone : 973-239-6633 - Fax : 973-239-6096 - Web : www.cargille.com
Catalog # 1809

Typical Characteristics

Refractive Index Liquid

| Series A | 1.47400 | 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 cm²/cc @ 25 °C

Index at 20°C
1.47596

Pour Point
< -7 °C

Boiling Point
> 262 °C ( 760 mm Hg )

Flash Point
> 138 °C ( COC )

Brix Value (Per ICUMSA)
74.2 at 20°C

Density
0.854 g / cc at 25 °C

Density Temp Coef
-0.0007 g / cc / °C

Coef of Thermal Expansion
0.0008 cc / cc / °C

Thermal Conductivity
n/a cal / sec / cm² / °C - 1 cm thickness

Viscosity
21 cSt at 25 °C, 18 cP at 25 °C

Surface Tension
30 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

The above values are typical for this liquid and are calculated from values typical of its components
Refractive Index Liquid  
**Series A**  
Refractive Index  
1.47400 at 589.3 nm and 25 °C

Cauchy Coefficients  
A  
1.460323E+00  
B  
4.5339E+03  
C  
7.4943492E+07  

Cauchy Equation at 25°C  
\[ A + \frac{B}{\lambda^2} + \frac{C}{\lambda^4} \]  
( \( \lambda = \) Wavelength in nm)

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\( (n_f - n_C) \)  
0.0096

Abbe vD  
49.4

Temp. Coefficient  
-0.000393 \(dn/dt\) (15 - 35 °C)

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

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9/12/2018