

# CARGILLE LABORATORIES

55 Commerce Road • Cedar Grove • New Jersey • 07009 – 1289 USA  
 Ph: 973-239-6633 • Fax: 973-239-6096 • [CargilleLabs@cargille.com](mailto:CargilleLabs@cargille.com) • [www.cargille.com](http://www.cargille.com)

FUSED SILICA MATCHING LIQUID CODE 06350

30-NOV-17

n (589.3nm) 25°C = 1.4587

## TYPICAL CHARACTERISTICS

**COMPOSITION** ..... Aliphatic and Alicyclic Hydrocarbons  
**APPEARANCE** ..... Colorless Liquid  
**COLOR STABILITY IN DIRECT SUN** ..... No visible change after 10 years  
**INDEX CHANGE RATE BY EVAPORATION** ..... Very Low: 0.00002 expected  
 exposed surface area to volume ratio of 0.2 cm<sup>2</sup>/cc @ 25°C for 32 days  
**ODOR** ..... None  
**FREEZING POINT** °C ..... < -18  
**BOILING POINT** °C @ 760mm Hg ..... > 343  
**FLASH POINT** °C C.O.C. .... > 216  
**DENSITY** g/cc @ 25°C ..... 0.824  
**DENSITY TEMP. COEFFICIENT** g/cc/°C ..... -0.0006  
**COEF. OF THERM. EXP.** cc/cc/°C ..... 0.0008  
**VISCOSITY @ 25°C** ..... 80 cSt  
**SURFACE TENSION** dynes/cm @ 25°C..... 29  
**SOLUBLE:** Carbon Tetrachloride, Diethyl Ether, Freon TF, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene  
**PARTLY SOLUBLE:** Acetone  
**INSOLUBLE:** Ethanol, Water  
**COMPATIBLE** 6-month immersion at 25°C: Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polystyrene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Neoprene, Fluorosilicone (Silastic 730 RTV), Silicone (Sylgard 184, 3140 RTV) Rubbers, Tygon F-4040-A, Tygothane, Aluminum, Copper, Brass, Steel; (tests done on one example of each).  
**INCOMPATIBLE:** Latex Rubber, Tygon except F-4040-A

CAUCHY EQUATION: Refractive index as a function of wavelength at 25.0°C

W = wavelength (nm)

$$n(W) = 1.44719 + (3.83343E+03) / W^2 + (5.66134E+07) / W^4$$

SOURCE OR SPECTRAL LINE	WAVELENGTH (nm)	REFRACTIVE INDEX 25°C	% TRANSMITTANCE 25°C		
			1 mm	1 cm	10 cm
near UV cut off	225	1.55	1	0	0
excimer	248	1.52	1	0	0
local dip	270	1.51	84	18	0
Excimer	308	1.494	99	92	42
N Laser	337	1.485	99	95	60
i ( Hg )	365	1.4792	100	98	78
F ( H )	486.1	1.4644	100	100	95
e (Hg)	546.1	1.4607	100	100	99
D (Na:D1,D2 mean)	589.3	1.4587	100	100	99
HeNe Laser	632.8	1.4571	100	100	99
C (H)	656.3	1.4564	100	100	100
GaAs laser	840	1.4527	100	99	91
Nd: YAG laser	1064.8	1.451	99	95	60
Diode	1300	1.449	99	88	27
Diode	1550	1.449	98	79	9
n <sub>F</sub> - n <sub>C</sub>	=	0.0080			
Abbe v <sub>D</sub> : (n <sub>D</sub> - 1)/(n <sub>F</sub> - n <sub>C</sub> )	=	57.1			
Temp. coef: dn <sub>D</sub> /dt 15 - 35°C	=	-0.000365			