CARGILLE
ACRYLIC MATCHING LIQUID CODE 5032
n (5893 Å) 25 °C = 1.4917
TYPICAL CHARACTERISTICS

COMPOSITION	Polybutenes and natural hydrocarbons
APPEARANCE	Colorless liquid
INDEX CHANGE RATE BY EVAPORATION surface area to volume ratio of 0.2 cm^2 / cc @ 25 °C for 37 days.	Very Low : 0.00000 expected, exposed
ODOR	Slight, characteristic
COLOR STABILITY	No visible change after 9 years, slight precipitation after 18 years
POUR POINT °C	< 4
BOILING POINT °C @ 760mm Hg	> 174
FLASH POINT °C COC	174
DENSITY g / cc @ 25 °C	0.888
DENSITY TEMP. COEFFICIENT g / cc / °C	-0.0006
COEF. OF THERM. EXP. cc / cc / °C	0.0007
VISCOSITY centistokes @ 25 °C	10,000 , similar to honey (ca. 23,000 @ 15 °C, 5,200 @ 35 °C)

SOLUBLE : Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene

INSOLUBLE : Acetone, Ethanol, Water

COMPATIBLE 10 month immersion @ 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon ; Neoprene, Fluorosilicone (Silastic 730 RTV), Silicone (Sylgard 184) Rubbers ; Tygon F-4040-A, Tygothane; Aluminum, Copper, Brass, Steel; (tests done on one example of each).

INCOMPATIBLE: Polystyrene and Tygon (types : S-50-HL, R-3603, B-44-3)

TOXICITY ..... Low (request MSDS)

CAUCHY EQUATION: refractive index as a function of wavelength at 25 °C

W = wavelength in angstroms (Å)

$n(W) = 1.478419 + (463182.1) / W^2 + (-8.637338E+10) / W^4$

SOURCE OR SPECTRAL LINE	WAVELENGTH (angstroms)	REFRACTIVE INDEX @ 25 °C Liquid	Acrylic	% TRANSMITTANCE 0.1 mm	1 mm	1 cm
near UV cut off	3100	1.526	1.526	98	86	21
i (Hg)	3650	1.513	1.513	100	98	81
h (Hg)	4047	1.5064	1.5063	100	99	93
F' (Cd)	4800	1.4984	1.4983	100	100	99
F (H)	4861	1.4979	1.4978	100	100	99
e (Hg)	5461	1.4939	1.4938	100	100	100
D (Na: D1, D2 mean)	5893	1.4917	1.4917	100	100	100
HeNe laser	6328	1.4899	1.4900	100	100	100
C' (Cd)	6439	1.4895	1.4896	100	100	100
C (H)	6563	1.4891	1.4892	100	100	100
Ruby laser	6943	1.4880	1.4881	100	100	100
GaAs laser	8400	1.4850	1.4851	100	100	99
Nd: YAG laser	10648	1.483	1.483	100	100	96
Diode	13000	1.481	1.481	100	99	90
Diode	15500	1.480	1.481	100	98	80

$n_F - n_C$	=	0.0087
Abbe ν_D : $(n_D-1) / (n_F-n_C)$	=	56.3
Temp. Coef.: dn_D / dt 15-35 °C	=	-0.000338

CARGILLE LABORATORIES
55 Commerce Road, Cedar Grove, NJ 07009-1289 U.S.A.
Phone: 973-239-6633 / Fax: 973-239-6096