**SPECIFIC REFRACTIVE INDEX INCREMENTS**

**Values taken from LDC Milton Roy Technical Note**

All measurements performed at 23°C unless otherwise specified. Wavelength=633nm

**SAMPLE dn/dc (ml/gm)**

Cellulose tricarbanilate

Tetrahydrofuran, W = 1.39x106 0.163

α-Chymotrypsinogen

Aq. 0.15M NaCl, 0.1M phosphate buffer, pH 7.2

W = 2.59x104 0.1708

Deoxyribonucleic acid (calf thymus)

Aq. 0.1M tris buffer, pH 8.4, W = 26.4x106 0.166

Dextran

Water, W = 6.82x104 0.147

Dodecylammonium chloride

Aq. 1N NaCl 0.127

Gelatin

Aq. 0.1N NaCl, W = 1.98x105 0.163

Heparin

Aq. 0.3N NaCl 0.1290

Hydroxyethyl starch

Aq. 0.05N NaCl, W = 5.6x104 - 5.6x105 0.1354

Mucopolysaccharides

Aq. 0.1% NaCl, W = 7.2x103 - 3.2x104 0.1100

Polyacrylamide

Water, W = 5.5x106 0.142

Poly (acrylamide/sodium acrylate) (70/30 mole)

Aq. 1N NaNO3, W ~ 106 0.165

Polyacrylate, sodium salt

Aq. 0.1N NaCl, W = 6.12x106 - 9.29x106 0.175

Polyacrylic acid

Tetrahydrofuran, W = 5.57x103 0.0738

Tetrahydrofuran, W = 7.2x103 0.0994

Poly (acrylonitrile/styrene) (28.5/71.5 wt)

Tetrahydrofuran, W = 3.83x104 0.1546

Polyamides:

Unspecified composition, tetrahydrofuran

W = 2.49x103 - 6.76x105 0.106

Unspecified composition, N, N'- dimethylformamide

W = 52.8x103 - 59.4x103 0.1747

Unspecified composition, formic acid

W = 2x104 - 1x105 0.1350

“Nylon”, hexafluoroisopropanol

W = 2300 - 1800 0.253

Polyamines (quarternary ammonium salt)

Aq. 0.4N NaCl 0.149

Aq. 1N NaCl 0.133

Aq. 2N NaCl 0.080

Polycarbonates:

Unspecified composition, methylene chloride W = 3.0x104 0.1582

Unspecified composition, tetrahydrofuran W = 3.38x104 0.177

Polyesters:

Unspecified composition, chloroform, W = 1.72x104 0.1133

Unspecified composition, chloroform, W = 4.4x103 0.1250

Phthalic acid/propylene oxide/maleic acid (1/2/1 mole),

Tetrahydrofuran, W = 104 0.117

Polyethylene

Trichlorobenzene, W = 5.46x104 - 2.21x105, 135°C -0.097

o-dichlorobenzene, W = 5.46x104, 135°C -0.056

α-chloronapthalene, 145°C -0.177

Polyglycol, unspecified composition

Tetrahydrofuran, W = 500 - 3x103 0.055

Polyisobutylene

Tetrahydrofuran, W = 3300 0.0974

Tetrahydrofuran, W = 6100 0.1026

Polymethyl methacrylate

Tetrahydrofuran, W = 6.06x104 0.083

Poly(methyl methacrylate/butyl methacrylate)

(60/40 mole), tetrahydrofuran, W = 6.29x104 0.082

Polyolefin sulfones:

Unspecified composition, tetrahydrofuran, W = 9.18x105 0.1132

Unspecified composition, chloroform, W = 1.95x105 0.101

Unspecified composition, chloroform, W = 5.64x105 0.082

Poly(phenol/formaldehyde), unspecified composition

Tetrahydrofuran , W = 4.3x104 0.1211

Polyphenolic acid, unspecified composition

Aq. base, W = 4.2x106 0.0854

Polypropylene

1,2,4 trichlorobenzene, W = 3.66x105, 145°C -0.091

Polystyrene

N,N' - dimethylformamide, W = 1.76x105 0.159

Tetrahydrofuran, W = 960 0.1680

Tetrahydrofuran, W = 2.4x103 0.1768

Tetrahydrofuran, W = 4.3x103 0.1828

Tetrahydrofuran, W = 2.59x105 0.1845

Toluene, W = 1.78x105 - 2.59x105 0.110

Poly(styrene/allyl alcohol) (50/50 mole)

Tetrahydrofuran, W = 4.2x103 0.172

Poly(styrene/maleic acid), unspecified composition

Aq. 0.1N NaCl 0.170

Polyvinyl acetate

Ethyl acetate, W = 3.73x105 0.077

Poly(vinyl acetate/ethylene) (85/15 mole or wt., uncertain)

Ethyl acetate 0.087

Polyvinyl chloride

Tetrahydrofuran, W = 8.35x104 - 1x105 0.101

Polyvinyl chloride

Cyclohexanone, W = 1.73x105 - 2.21x105 0.0650

Polyvinylpyrrolidone, unspecified composition

N, N' - dimethylformamide 0.095

All measurements performed at 26°C unless otherwise specified.

Dextran

Aq. 0.05M KH2PO4, pH 7.0

W = 62,500, 23°C 0.1368

Epoxy Resin

Unspecified composition, tetrahydrofuran

W = 12,600 0.1871

Unspecified composition, tetrahydrofuran

W = 42,700 0.1869

Unspecified composition, tetrahydrofuran

W = 51,700 0.1884

Unspecified composition, tetrahydrofuran

W = 63,600 0.1851

Ethylene oxide/Lignite (25/1 mole)

Water, W = 1.49x106, 25°C 0.1360

Lignin sulfonate, sodium salt

Aq. 0.1M NaNO3, pH 6.6

W = 49,600 0.1875

Aq. 0.5M NaNO3, pH ~ 5.5

W = 44,400 0.1839

Phenoxy Resin

Unspecified composition, tetrahydrofuran

W = 51,700, 23°C 0.1773

Polyacrylamide

Water, W = 3.69x106, 25°C 0.1829

Aq. 1M NaCl, W = 7.72x106, 25°C 0.1587

Aq. 1M NaCl, W = 8.00x106, 25°C 0.1556

Polyacrylate, cationic salt

Unspecified composition, water

W = 28,200, 25°C 0.1463

Polyacrylic acid

Aq. 0.05M sodium acetate, pH 7.0

W = 9430 0.1501

Polyamide

Unspecified composition, dimethyl sulfoxide

W ~ 30,000, 23°C 0.1054

Unspecified composition, dimethyl sulfoxide

W ~ 160,000, 23°C 0.0822

Polybutadiene

Tetrahydrofuran, W = 6160 0.1295

Polycarbonate

Unspecified composition, chloroform, 23°C 0.1445

Unspecified composition, tetrahydrofuran

W = 22,400, 23°C 0.1855

Polychloroprene

Tetrahydrofuran, W = 378,000, 23°C 0.1274

Polydimethylsiloxane

Toluene, W = 19,000 -0.0913

Toluene, W = 571,000 -0.0948

Poly ethylene/Propylene oxide

Unspecified composition, methanol

W = 4000, 23°C 0.1341

Unspecified composition, methanol

W = 4500, 23°C 0.1290

Unspecified composition, methanol

W = 4540, 23°C 0.1346

Poly (methyl methacrylate)

Tetrahydrofuran, W ~ 100,000, 23°C

Sample A 0.0800

Sample B 0.0816

Sample C 0.0909

Polypropylene oxide

Chloroform, 23°C 0.1545

Polystyrene

Methyl ethyl ketone, W = 3900, 23°C 0.2067

Methyl ethyl ketone, W = 259,000, 23°C 0.2120

Polyurethane

Unspecified composition, tetrahydrofuran

W = 35,500, 23°C 0.1417

Unspecified composition, tetrahydrofuran

W = 46,200, 23°C 0.1523

Unspecified composition, tetrahydrofuran

W = 63,100, 23°C 0.1477

Unspecified composition, tetrahydrofuran

W = 72,400, 23°C 0.1469

Polyvinylacetate

Tetrahydrofuran, W = 4.66x106 0.0471

Tetrahydrofuran, W = 107,000 0.0502

Polyvinyl alcohol

Aq. 0.1M KH2PO4, pH 7.0

W = 29,600 0.1534

Aq. 0.2M NaNO3

0.5% Carbowax (PEG 1500), W = 104,000 0.1645

Vinyl benzyl chloride/Dichlorobutadiene (97/3 wt)

o-xylene, W = 2.17x107, 35°C 0.0416

Vinyl chloride/Vinylidene chloride

Unspecified composition, tetrahydrofuran

W ~ 100,000 0.1187