

CHAPTER 1

GENERAL DATA

	PAGE
1-0 Introduction	1-1
1A Fundamental Constants and Conversion Factors.....	1-2
1A1 Fundamental Constants	1-2
Table 1A1.1 Fundamental Constants	1-2
1A2 Conversion Factors	1-4
Table 1A2.1 Length Conversions	1-4
Table 1A2.2 Area Conversions	1-4
Table 1A2.3 Volume Conversions	1-5
Table 1A2.4 Liquid Volume Conversions	1-5
Table 1A2.5 Mass Conversions	1-6
Table 1A2.6 Density Conversions.....	1-6
Table 1A2.7 Pressure Conversions.....	1-7
Table 1A2.8 Flow Conversions	1-7
Table 1A2.9 Kinematic Viscosity Conversions.....	1-8
Table 1A2.10 Absolute Viscosity Conversions.....	1-8
Table 1A2.11 Energy Conversions	1-9
Table 1A2.12 Power Conversions	1-10
Table 1A2.13 Specific Energy Conversions.....	1-10
Table 1A2.14 Specific Energy per Degree Conversions....	1-11
Table 1A2.15 Heat Flux Conversions	1-11
Table 1A2.16 Heat Transfer Coefficient Conversions.....	1-12
Table 1A2.17 Thermal Conductivity Conversions	1-12
1B Letter Symbols Used in Chemical Engineering.....	1-13
1B1 Letter Symbols for the Principal Concepts Used in Chemical Engineering.....	1-13
Table 1B1.1 Letter Symbols for the Principal Concepts Used in Chemical Engineering.....	1-13
Table 1B1.2 Alphabetical Index of Symbols Used in Chemical Engineering	1-17
1C Property Definitions	1-19
Table 1C0.1 Index of Compounds	1-25
1C1 Hydrocarbons—Primary Properties	1-52
Table 1C1.1 Paraffins	1-52
Table 1C1.2 Cycloparaffins	1-58
Table 1C1.3 Monoolefins and Diolefins	1-66
Table 1C1.4 Cycloolefins and Acetylenes.....	1-74

	Table 1C1.5	Benzene Derivatives.....	1-76
	Table 1C1.6	Condensed Ring Aromatics and Derivatives..	1-82
1C2	Hydrocarbons—Secondary Properties.....		1-86
	Table 1C2.1	Paraffins.....	1-86
	Table 1C2.2	Cycloparaffins.....	1-92
	Table 1C2.3	Monoolefins and Diolefins.....	1-100
	Table 1C2.4	Cycloolefins and Acetylenes.....	1-108
	Table 1C2.5	Benzene Derivatives.....	1-110
	Table 1C2.6	Condensed Ring Aromatics and Derivatives..	1-116
1C3	Nonhydrocarbons—Primary Properties.....		1-120
	Table 1C3.1	Acids.....	1-120
	Table 1C3.2	Alcohols and Phenols.....	1-120
	Table 1C3.3	Aldehydes.....	1-120
	Table 1C3.4	Amines.....	1-122
	Table 1C3.5	Other Nitrogen-Containing Compounds....	1-122
	Table 1C3.6	Esters.....	1-122
	Table 1C3.7	Ethers.....	1-124
	Table 1C3.8	Gases.....	1-124
	Table 1C3.9	Halogenated Compounds.....	1-126
	Table 1C3.10	Ketones.....	1-126
	Table 1C3.11	Sulfur-Containing Compounds.....	1-128
	Table 1C3.12	Miscellaneous.....	1-128
1C4	Nonhydrocarbons—Secondary Properties.....		1-130
	Table 1C4.1	Acids.....	1-130
	Table 1C4.2	Alcohols and Phenols.....	1-130
	Table 1C4.3	Aldehydes.....	1-130
	Table 1C4.4	Amines.....	1-131
	Table 1C4.5	Other Nitrogen-Containing Compounds....	1-131
	Table 1C4.6	Esters.....	1-131
	Table 1C4.7	Ethers.....	1-132
	Table 1C4.8	Gases.....	1-132
	Table 1C4.9	Halogenated Compounds.....	1-133
	Table 1C4.10	Ketones.....	1-133
	Table 1C4.11	Sulfur-Containing Compounds.....	1-134
	Table 1C4.12	Miscellaneous.....	1-134
1C5	Key to References.....		1-136
	Table 1C5.1	Key to References—Hydrocarbons.....	1-136
	Table 1C5.2	Key to References—Nonhydrocarbons.....	1-164
Bibliography.....			1-175