

FOREWORD	v
FOREWORD TO THE ENGLISH TRANSLATION—SECOND EDITION	vii
FOREWORD TO THE SECOND EDITION	viii
FOREWORD TO THE FIRST EDITION	x
NOTATION	1
CONVERSION OF UNITS FROM SI TO OTHER SYMBOLS	1
USEFUL CONVERSION TABLES AND SYMBOLS	2

PART I. PURE SUBSTANCES

1 HYDROGEN AND HYDROGEN COMPOUNDS	7
Hydrogen	7
Hydrogen Isotopes	65
Water	71
Heavy water	130
Tritium oxide	153
Lithium hydride	160
2 METALS	183
Lithium	183
Sodium	203
Potassium	220
Rubidium	250
Cesium	281
Thermophysical Properties of Alkaline Earth Metals	309
Transport Properties of Alkali Earth Metals	
Vapor, Zinc and Cadmium	316
Some Liquid Metals	318
Mercury	321
3 CARBON COMPOUNDS	341
Carbon Monoxide	341
Carbon Dioxide	360
4 HYDROCARBONS AND SOME ORGANIC COMPOUNDS	425
Alkanes	425
Viscosity of alkanes in a dilute gas state	561
Surface tension of alkanes	566
Naphthenes	569
Alkenes	581
Viscosity of n-alkenes in a dilute gas state	615

Viscosity of isoalkenes In a dilute gas state	617
Cyclic Aliphatic Compounds	618
Dienes	621
Alkynes	627
Viscosity of n*alkynes In a dilute gas state	633
Aromatic Hydrocarbons	635
Hydrocarbons of Diphenylmethane series	
(high temperature heat transfer agents [coolants])	660
Alcohols	663
Ethers	741
Acetone	747
Carboxylic Acids	750
5 NITROGEN AND AMMONIA	756
Nitrogen	756
Ammonia	805
6 OXYGEN	855
7 SULFUR DIOXIDE	919
8 SULFUR HEXAFLUORIDE	922
9 HALOGENS	936
Fluorine	936
Chlorine	950
Iodine	957
10 MONOATOMIC GASES	959
Helium	959
Neon	997
Argon	1022
Krypton	1071
Xenon	1087

PART II. MIXTURES

11 AIR	1102
12 DIFFUSION IN GASES	1166
13 THERMODIFFUSION IN GASES	1208
14 THERMOPHYSICAL PROPERTIES OF GAS MIXTURES AND SOLUTIONS	1225
Viscosity of binary gas mixtures	1225
Thermal conductivity of binary gas mixtures	1243
Viscosity of aqueous solutions	
	1248
Thermal conductivity of aqueous solutions	1252

15 LIQUID FUELS	1260
16 HIGH-TEMPERATURE HEAT TRANSFER AGENTS	1268
Organosilicon compounds	1270
17 OILS	1277
REFERENCES	1281
INDEX	1296
Instructions for the use of the index	1296
Elements, Compounds and Mixtures and Their Properties	1297
Properties of Elements, Compounds and Mixtures	1333
Diffusion in Gases	1351
Aqueous Solutions, Gas Mixtures and Their Properties	1357
Thermoelectricity in Gases	1359