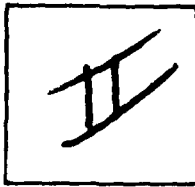


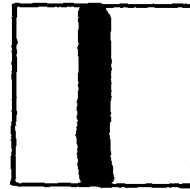
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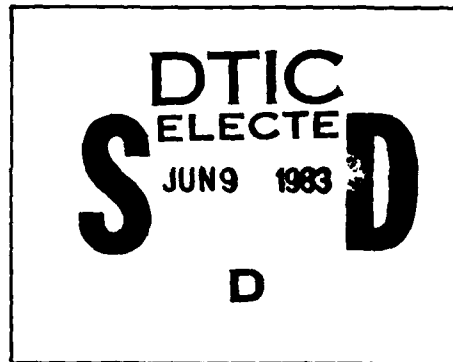
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Volume 6S. 'Specific Heat - Nonmetallic Liquids and Gases (Supplement),'
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Volume 6(supplement) in this 14 volume TPRC Data Series contains data on the constant-pressure specific heat of nonmetallic elements and compounds which exist in the liquid, gaseous, or vapor state at normal temperature and pressure or at saturated conditions. The tabulated data represent only a segment of the available information; therefore, whenever available, additional references on each substance are to be found in Section II (Supplemental References). In all cases data were extracted only from original papers or reports. Data reported in secondary sources are not included. It should be emphasized that unlike in Volume 6, the reported data have not been evaluated in any form and that the user should refer to the source document and perform his own critique.

The tabular data are arranged in alphabetical order by substance name. The Index to Substances lists the 307 substances by their primary names together with their synonyms, trade names, and their equivalents with appropriate cross-references. This represents a total listing of 840 names.

SPECIFIC HEAT

Nonmetallic Liquids and Gases

(SUPPLEMENT)

THERMOPHYSICAL PROPERTIES OF MATTER
The TPRC Data Series

A Comprehensive Compilation of Data by the
Thermophysical Properties Research Center (TPRC), Purdue University

Y. S. Touloukian, Series Editor
C. Y. Ho, Series Technical Editor

-
- Volume 1. Thermal Conductivity—Metallic Elements and Alloys
 - Volume 2. Thermal Conductivity—Nonmetallic Solids
 - Volume 3. Thermal Conductivity—Nonmetallic Liquids and Gases
 - Volume 4. Specific Heat—Metallic Elements and Alloys
 - Volume 5. Specific Heat—Nonmetallic Solids
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 - Volume 12. Thermal Expansion—Metallic Elements and Alloys
 - Volume 13. Thermal Expansion—Nonmetallic Solids

New data on thermophysical properties are being constantly accumulated at TPRC. Contact TPRC and use its interim updating services for the most current information

THERMOPHYSICAL PROPERTIES OF MATTER
SUPPLEMENT TO VOLUME 6

SPECIFIC HEAT

Nonmetallic Liquids and Gases

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"In this work, when it shall be found that much is omitted, let it not be forgotten that much likewise is performed..."

SAMUEL JOHNSON, A.M.

From last paragraph of Preface to his two-volume *Dictionary of the English Language*, Vol. I, page 5, 1755, London, Printed by Strahan.

Foreword

This work constitutes a by-product resulting from a program of systematic data collection and critical evaluation of the constant-pressure specific heat of seventy selected substances of technical importance which has resulted in Volume 6 of this data series.

In formulating the plans for the data extraction from the papers relating to the seventy substances of primary interest covered in Volume 6, it was decided that all data reported in the papers would be extracted and processed separately but not analyzed. As a result of this practice a large quantity of specific heat data was accumulated covering 307 substances. This extensive data collection is hereby presented as a supplement to Volume 6 with the thought that it will prove to be an extremely useful reference source. To the extent that the tabulated data were uncovered only incidentally from documents which were primarily studied from a different point of view, the reported data for each substance are by no means comprehensive or complete. Therefore, supplemental references on C_p are cited for each substance, located by an exhaustive search of the TPRC/CINDAS Bibliographic Data Bank. This added feature makes the coverage of the specific heat literature on the 307 reported substances

the most comprehensive compendium/bibliography system available. Naturally, in order to avoid duplication, this supplement does not cite the substances already reported in Volume 6.

It is hoped that this compendium will prove to be an added useful reference tool even though each user will have to make his own assessment concerning the validity of the reported raw data or those to be found in additional references cited.

I wish to take this opportunity to acknowledge the modest program support of CINDAS' Kobe Affiliate over the past twelve years by the Air Force Materials Laboratory, WPAFB, Ohio, the Defense Supply Agency, Cameron Station, Virginia, and more recently by the Office of Standard Reference Data, NBS. Their support of the critical evaluation of the specific heat of fluids, of which this work is a by-product, is greatly appreciated.

Purdue University
West Lafayette, Indiana
June 1976

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Director, CINDAS
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Introduction and Presentation of Data

This volume contains data on the constant-pressure specific heat of nonmetallic elements and compounds which exist in the liquid, gaseous, or vapor state at normal temperature and pressure or at saturated conditions. The tabulated data represent only a segment of the available information; therefore, whenever available, additional references on each substance are to be found in Section II (Supplemental References). In all cases data were extracted only from original papers or reports. Data reported in secondary sources are not included. It should be emphasized that unlike in Volume 6, the reported data have not been evaluated in any form and that the user should refer to the source document and perform his own critique.

ARRANGEMENT OF SUBSTANCES

The tabular data on "Specific Heat of Fluids" (Section I), the "Supplemental References" (Section II), and the "Index to Substances" (Section IV), are arranged in alphabetical order by substance name. The names of substances are those used by TPRC/CINDAS in its Bibliographic Series.* The Index to Substances lists the 307 substances by their primary names together with their synonyms, trade names, and their equivalents with appropriate cross-references. This represents a total listing of 840 names. The alphabetization rules ignore all numeric and alphabetic prefixes.

ABBREVIATIONS, SYMBOLS, NOTATIONS, AND UNITS

Most abbreviations and symbols used are those generally accepted in scientific and engineering practice.

1. *Physical State*: L = liquid, G = gas.
2. *Reference Number*: The references to the data and to supplemental sources cited in Section III (Bibliography) are designated by the TPRC/CINDAS serial number, and correspond to those given in the *Retrieval Guide*.^{*} Any reference may be se-

**Thermophysical Properties Research Literature Retrieval Guide*, Y. S. Touloukian (Ed.), Basic Edition, 1967, Supplement 1, 1973, Plenum Publishing Corporation, New York.

cured from CINDAS by simply citing the TPRC accession number.

3. *Purity* of the samples and estimated *Error* are given in percent and are shown only when they are cited in the original reference.

4. *Method of Determination* of the data is designated by the following abbreviations:

Exper Experimental method
Theor Theoretical calculation
Deriv Derived by empirical method
Corr Correlated values
Cited Simply cited values

5. *Units and Conversion Factors*: The physical quantities P , T , and C_p are given in SI units (International System of Units):

P pressure in bar (10^5 pascal)
 T temperature in K (kelvin)
 C_p specific heat at constant pressure (kilojoule/kilogram-kelvin)

Conversion factors that may be used to convert the various tabulated quantities to other indicated units are given in Table 1.

Table 1. Conversion Factors

Property	To obtain units indicated below	Multiply tabulated values by
Pressure	atmosphere	x 0.9869233
	kg cm ⁻²	x 1.0197162
	mm Hg, Torr	x 750.0617
	lb in ⁻²	x 14.503830
Temperature	C	[(T,K) - 273.15]
	R	x 1.8
	F	[1.8(T,K) - 459.67]
Specific heat	cal _{th} g ⁻¹ K ⁻¹	x 0.239006
	BTU _{IT} lb ⁻¹ F ⁻¹	x 0.238846
	cal _{th} mol ⁻¹ K ⁻¹	x 0.239006M [*]

*M = molecular weight.

PRESENTATION OF DATA

The data are presented in Section I in a uniform tabular format. On the first line of each set of data the total information reported by the author is entered whenever available. Supplemental references for each substance are given in Section II for both the liquid and gas phases separately. This feature renders the coverage most complete and comprehensive approximately as of 1974.

It should be stressed again that the data reported in this compendium consist of unevaluated original raw data from the original research literature. The units have been converted to SI units for convenience of presentation. The only liberty that has been taken in regard to the author's data values is the rounding off of the number of significant figures reported in a number of the original papers when in the judgment of the authors these were considered to be excessive and unwarranted.

SECTION I - SPECIFIC HEAT OF FLUIDS

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.					
ACETALDEHYDE	CH ₃ CHO	-	G	273	1.177	0	Theor	-	1514					
				291	1.222									
				298	1.240									
				300	1.245									
				400	1.494									
				500	1.735									
				600	1.950									
				700	2.137									
				800	2.299									
				900	2.439									
				1000	2.561									
ACETIC ACID	CH ₃ COOH	-	L	292.6	2.042	1	Exper	-	21788					
				294.7	2.054									
			L	295-369	2.326	1	Exper	0.4	17523					
				295-402	2.289									
ALLYL ALCOHOL	CH ₂ CHCH ₂ OH	-	L	298.15	2.403	1	Corr	-	9335					
				303.15	2.515									
				G	273.16					1.225	0	Theor	-	1288
					291.16					1.285				
					298.16					1.309				
			300		1.315									
			400		1.643									
			500		1.930									
			600		2.169									
			700		2.371									
			800		2.542									
			900		2.691									
			1000		2.814									
			1100		2.925									
			1200		3.023									
			1300		3.108									
			1400	3.181										
			1500	3.246										
			AMMONIA, TRIDEUTERATED	ND ₃	-	G	298.2	1.903	0	Theor	-	9770		
300	1.907													
400	2.122													
500	2.331													
600	2.525													
700	2.706													
800	2.871													
900	3.019													
1000	3.149													
ANILINE	C ₆ H ₅ NH ₂	-					L	291.60					2.070	1
			297.21	2.076										
			301.39	2.080										
			310.11	2.094										
			313.74	2.100										
			322.77	2.123										
			L	293.23	2.071	1		Exper	0.1	15949				
				299.60	2.079									
				303.20	2.084									
				308.78	2.092									
				313.22	2.100									
				319.97	2.115									
			L	313.15	2.105	Sat.	Exper	0.4	1500					
				323.15	2.121									
				333.15	2.138									
				343.15	2.155									
				353.15	2.176									
				363.15	2.192									
				373.15	2.209									
393.15	2.243													
413.15	2.276													

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ANILINE (continued)	C ₆ H ₅ NH ₂	99.8	L	433.15 453.15	2.310 2.347	Sat.	Exper.	0.4	1500
ARSINE	AsH ₃	-	G	298.2 300 400 500 600 700 800 900 1000	0.495 0.496 0.562 0.627 0.687 0.739 0.787 0.822 0.855	0	Theor	-	9770
ARSINE, TRIDEUTERATED	AsD ₃	-	G	298.2 300 400 500 600 700 800 900 1000	0.551 0.553 0.637 0.709 0.789 0.815 0.852 0.880 0.903	0	Theor	-	9770
BENZENE, HEXADEUTERATED	C ₆ D ₆	99.8	L	283.5 288.5 293.6 298.5 303.4 308.3 313.1 317.9 322.6	1.74 1.70 1.76 1.78 1.78 1.80 1.81 1.83 1.83	1	Exper	1-2	8668
BENZOIC ACID	C ₆ H ₅ COOH	-	L	394.95	2.17	1	Exper	-	21796
p-BENZOQUINONE	C ₆ H ₄ O ₂	-	L	386.05	1.738	1	Exper	-	21796
BENZYL ALCOHOL	C ₆ H ₅ CH ₂ OH	-	L	259.8 273.1 286.0 298.5	1.75 1.85 1.93 2.00	1	Exper	0.35-0.7	21841
BORON FLUORIDE OXIDE, TRIMERIC	(BOF) ₃	-	G	298 300 400 500	0.852 0.855 1.021 1.140	0	Theor	-	17031
BORON TRIBROMIDE	BBr ₃	-	G	298.16 300 350 400 450 500 600 700 800 900 1000	0.271 0.272 0.282 0.291 0.297 0.302 0.310 0.315 0.319 0.321 0.323	0	Theor	-	28297
BORON TRICHLORIDE	BCl ₃	-	G	100 200 298.15 300 400 500 600 700 800 900 1000 1100 1200	0.348 0.461 0.535 0.536 0.587 0.620 0.643 0.658 0.669 0.676 0.682 0.687 0.690	0	Theor	-	24959

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
BORON TRICHLORIDE (continued)	BCl ₃	-	G	1300	0.693	0	Theor	-	24959		
				1400	0.695						
				1500	0.697						
		-	G	-	G	298.16	0.534	0	Theor	-	28297
						300	0.536				
						350	0.564				
						400	0.587				
						450	0.605				
						500	0.620				
						600	0.642				
						700	0.658				
						800	0.668				
						900	0.676				
1000	0.682										
BROMINE, MONATOMIC	Br	-	G	55.55	0.263	0	Theor	-	6625		
				555.55	0.263						
				611.10	0.264						
				722.21	0.265						
				777.77	0.266						
				833.32	0.267						
				888.88	0.268						
				944.43	0.269						
				1000.00	0.270						
				1055.55	0.272						
				1111.10	0.273						
				1222.20	0.276						
		1333.30	0.278								
		1444.40	0.281								
		-	G	-	G	55.55	0.263	0	Theor	-	20987
						555.55	0.263				
						611.11	0.264				
						666.67	0.264				
						722.21	0.265				
						777.77	0.266				
						833.32	0.267				
						888.88	0.268				
						944.43	0.269				
						999.99	0.270				
1055.54	0.272										
1111.10	0.273										
1222.22	0.276										
1333.32	0.278										
1444.43	0.281										
-	G	-	G	250	0.260	0	Theor	-	401		
				500	0.260						
				600	0.261						
				700	0.262						
				800	0.263						
				900	0.265						
				1000	0.267						
				1100	0.279						
				1200	0.272						
				1300	0.275						
				1400	0.277						
				1500	0.279						
BROMINE CHLORIDE	BrCl	-	G	250	0.296	0	Theor	-	401		
				273.16	0.300						
				298.16	0.303						
				300	0.304						
				400	0.312						
				500	0.317						
				600	0.320						
				700	0.322						
				800	0.324						
				900	0.325						
				1000	0.326						
1100	0.326										

(continued)

4

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.							
BROMINE CHLORIDE (continued)	BrCl	-	G	1200	0.327	0	Theor	-	401							
				1300	0.328											
				1400	0.328											
				1500	0.329											
BROMINE FLUORIDE	BrF	-	G	250	0.323	0	Theor	-	401							
				273.16	0.328											
				298.16	0.333											
				300	0.333											
				400	0.349											
				500	0.359											
				600	0.366											
				700	0.370											
				800	0.373											
				900	0.376											
				1000	0.377											
				1100	0.379											
				1200	0.380											
				1300	0.382											
1500	0.384															
BROMINE PENTAFLUORIDE	BrF ₅	-	G	250	0.521	0	Theor	-	401							
				273.16	0.548											
				298.16	0.572											
				300	0.574											
				400	0.642											
				500	0.680											
				600	0.702											
				700	0.717											
				800	0.727											
				900	0.733											
				1000	0.738											
				1100	0.742											
				1200	0.745											
				1300	0.747											
1400	0.749															
1500	0.751															
BROMOBENZENE	C ₆ H ₅ Br	-	L	250	0.932	1	Exper	2	12139							
				260	0.957											
				270	0.974											
				280	0.983											
				290	0.986											
				300	0.990											
				310	0.997											
				320	1.012											
				-	-					L	293.15	0.964	1	Exper	-	21786
				-	-						313.15	0.975				
-	-	333.15	0.996													
-	-	353.15	1.025													
-	-	L	298.15	0.966	1	Cited	-	9335								
-	-		303.15	0.980												
1-BROMOBUTANE	CH ₃ (CH ₂) ₃ Br	-	L	286-330	1.2	1	Exper	-	731							
				290-373	1.3											
BROMODICHLORO- METHANE	CHBrCl ₂	-	L	300.15	0.669	1	Deriv	-	9340							
		-	G	300.15	0.414	1	Deriv	-	9340							
BROMOETHANE	CH ₃ CH ₂ Br	-	L	224-290	0.84	1	Exper	-	731							
				239-290	0.86											
				250-290	0.88											
				280-310	0.91											
				290-310	0.93											
		-	G	345.15	0.676	1	Theor	-	28272							
				413.15	0.768											

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
BROMOFORM	CHBr ₃	-	L	282-328	0.52	1	Exper	-	731
				290-372	0.53				
				290-401	0.54				
				294-420	0.55				
		-	G	100	0.202	0	Theor	-	23025
				298.16	0.289				
				1000	0.384				
				1500	0.403				
				298.1	2.827				
400	3.127								
600	3.493								
BROMOMETHANE	CH ₃ Br	-	L	206-282	1.14	1	Exper	-	731
				231-282	1.16				
				250-282	1.14				
		-	G	298.1	0.449	0	Theor	-	3771
				400	0.527				
				600	1.663				
				800	0.762				
				1000	0.840				
				1200	0.899				
		-	G	298.2	0.449	0	Theor	-	701
				400	0.527				
				500	0.599				
				600	0.661				
				700	0.714				
				800	0.761				
				900	0.802				
		1000	0.838						
		-	G	298.2	0.753	0	Theor	-	701
400	0.832								
500	0.889								
600	0.929								
700	0.961								
800	0.984								
900	1.004								
1000	1.020								
1-BROMO-3-METHYLBUTANE	(CH ₃) ₂ CH(CH ₂) ₂ Br	-	L	285-328	1.25	1	Exper	-	731
				287-373	1.32				
1-BROMOPROPANE	CH ₃ (CH ₂) ₂ Br	-	L	243-293	1.07	1	Exper	-	731
				284-320	1.15				
				285-340	1.17				
BROMOTRICHLORO-METHANE	CCl ₃ Br	-	G	100	0.257	0	Theor	-	23025
				298.16	0.430				
				1000	0.530				
				1500	0.538				
		-	G	298.16	0.430	0	Theor	-	11127
				300	0.421				
				400	0.469				
				500	0.492				
				600	0.506				
700	0.515								
800	0.522								
900	0.526								
1000	0.530								
1,3-BUTADIENE	(CH ₂ CH) ₂	-	G	273	1.358	0	Theor	-	1283
				291	1.439				
				298	1.470				
				300	1.478				
				400	1.879				
				500	2.206				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.										
1,3-BUTADIENE (continued)	(CH ₂ CH) ₂	-	G	600	2.463	0	Theor	-	1283										
				700	2.673														
				800	2.850														
				900	3.002														
				1000	3.134														
				1100	3.250														
				1200	3.351														
				1300	3.440														
				1400	3.517														
				1500	3.585														
				-	G					278.15	1.399	1	Exper	-	33590				
				298.15	1.465														
				318.15	1.547														
				338.15	1.636														
				358.15	1.699														
				378.15	1.772														
				-	G					278.15	1.368					0	Deriv	-	33590
				298.15	1.440														
				318.15	1.527														
				338.15	1.619														
				358.15	1.686														
378.15	1.761																		
-	G	298.16	1.470	0	Theor	-	20570												
300	1.478																		
400	1.879																		
500	2.206																		
600	2.463																		
700	2.673																		
800	2.850																		
900	3.002																		
1000	3.134																		
1100	3.250																		
1200	3.351																		
1300	3.440																		
1400	3.517																		
1500	3.585																		
-	G	300	1.385					1	Deriv	-	2500								
400	1.723																		
500	2.028																		
600	2.301																		
700	2.542																		
800	2.749																		
900	2.925																		
1000	3.069																		
1-BUTANOL	CH ₃ (CH ₂) ₃ OH	-	L	194.6	1.85	1	Exper					0.5	21783						
				197.5	1.86														
				198.3	1.86														
				224.5	1.94														
				254.9	2.07														
				274.8	2.19														
				275.1	2.20														
				275.6	2.20														
				276.6	2.20														
				290.4	2.34														
				294.0	2.36														
				-	L									293.15	2.34	1	Exper	-	21778
				303.15	2.44														
				-	L			298.15	2.369	1	Cited			-	9335				
				303.15	2.435														
-	L	298.15	2.473	1	Exper	-	11120												
-	G	394	2.116					1	Exper			0.1	525						
405	1.997																		

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
1-BUTANOL (continued)	CH ₃ (CH ₂) ₃ OH	-	G	417	2.010	1	Exper	0.1	525
				428	2.030				
				437	2.055				
		99.95	G	395.25	2.063	1	Exper	±0.3	57382
				404.15	1.983				
				409.15	1.989				
				419.55	1.998				
				431.05	2.031				
				441.15	2.067				
				459.55	2.109				
				488.25	2.204				
				520.05	2.296				
				545.95	2.380				
		568.45	2.458						
		603.35	2.556						
		-	G	410	1.86	1	Exper	±0.6	31764
		-	G	410	1.84	0	Exper	±0.6	31764
		-	G	410	1.85	1	Theor		28272
2-BUTANOL	CH ₃ CH ₂ CHOHCH ₃	-	G	375	2.164	1	Exper	0.1	525
				383	2.013				
				394	1.990				
				405	2.004				
				417	2.023				
				428	2.054				
				437	2.075				
		99.95	G	380.95	2.056	1	Exper	±0.3	57382
				386.25	2.007				
				393.75	1.991				
				405.15	1.990				
				406.15	1.996				
				417.25	2.015				
		440.75	2.074						
		470.85	2.178						
		515.95	2.326						
		560.35	2.457						
		582.85	2.549						
		-	G	407.15	1.767	1	Exper		28289
2-BUTANONE	CH ₃ CH ₂ COCH ₃	-	L	193.15	2.075	1	Corr	2~5	51360
				203.15	2.079				
				213.15	2.088				
				223.15	2.096				
				233.15	2.105				
				243.15	2.117				
				253.15	2.125				
				263.15	2.142				
				273.15	2.155				
				283.15	2.171				
				293.15	2.192				
				303.15	2.209				
				313.15	2.234				
				323.15	2.259				
				333.15	2.284				
				343.15	2.318				
				353.15	2.351				
		363.15	2.393						
		373.15	2.431						
		-	G	273.15	1.339	1	Corr	1	51360
				323.15	1.506				
				373.15	1.653				
				423.15	1.799				
				473.15	1.925				
				523.15	2.050				
				573.15	2.176				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
2-BUTANONE (continued)	CH ₃ CH ₂ COCH ₃	-	G	623.15	2.301	1	Corr	1	51360								
				673.15	2.406												
				723.15	2.510												
				773.15	2.594												
				823.15	2.699												
				873.15	2.782												
				923.15	2.866												
				973.15	2.929												
				1023.15	3.012												
				1073.15	3.054												
				1123.15	3.117												
				1173.15	3.180												
				1223.15	3.222												
				1273.15	2.284												
1-BUTENE	CH ₂ CHCH ₂ CH ₃	-	G	407.15	1.711	1	Exper	-	28289								
				410	1.67												
				410	1.70												
				410	1.72												
				410	1.73												
				273	1.482												
				291	1.562												
				298	1.592												
				300	1.600												
				400	2.009												
				500	2.368												
				600	2.671												
				700	2.932												
				800	3.157												
900	3.352																
1000	3.523																
1100	3.672																
1200	3.801																
1300	3.913																
1400	4.012																
1500	4.097																
1-BUTENE	CH ₂ CHCH ₂ CH ₃	-	G	298.16	1.592	0	Theor	-	198								
				300	1.600												
				400	2.009												
				500	2.368												
				600	2.671												
				700	2.932												
				800	3.157												
				900	3.352												
				1000	3.523												
				1100	3.672												
				1200	3.801												
				1300	3.913												
				1400	4.012												
				1500	4.097												
1-BUTENE	CH ₂ CHCH ₂ CH ₃	-	G	300	1.483	1	Deriv	-	2500								
				400	1.885												
				500	2.251												
				600	2.577												
				700	2.863												
				800	3.110												
				900	3.319												
				1000	3.487												
				1-BUTENE	CH ₂ CHCH ₂ CH ₃					99.5	G	313.55	1.809	0.5	Exper	0.1	5608
												313.55	1.623				
363.25	1.815																
1-BUTENE	CH ₂ CHCH ₂ CH ₃	99.5	G	313.55	1.623	1	Exper	0.1	5608								
				313.55	1.623												
				363.25	1.815												
1-BUTENE	CH ₂ CHCH ₂ CH ₃	99.5	G	363.25	1.815	1	Exper	0.1	5608								
				363.25	1.815												
				363.25	1.815												

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
2-BUTENE	(CH ₃ CH) ₂	-	G	300	1.439	1	Deriv	-	2500						
				400	1.854										
				500	2.228										
				600	2.561										
				700	2.853										
				800	3.103										
				900	3.313										
				1000	3.481										
				-	G					298.58	1.565	0	Cited	-	35191
										332.85	1.692				
371.24	1.829														
-	G	298.58	1.607	1	Cited	-	35191								
		332.85	1.720												
		371.24	1.848												
cis-2-BUTENE	(CH ₃ CH) ₂	99.8	L	133.15	2.040	Sat.	Exper	1	616						
				138.71	2.028										
				144.26	2.018										
				149.82	2.010										
				155.37	2.002										
				160.93	1.996										
				166.48	1.990										
				172.04	1.986										
				177.59	1.981										
				183.15	1.981										
				188.71	1.981										
				194.26	1.982										
				199.82	1.985										
				205.37	1.989										
				210.93	1.994										
				216.48	2.002										
				222.04	2.010										
				227.59	2.021										
				233.15	2.034										
				238.71	2.047										
				244.26	2.063										
				249.82	2.080										
				255.37	2.100										
				260.93	2.121										
				266.48	2.144										
				272.04	2.169										
				277.59	2.195										
				283.15	2.223										
				288.71	2.251										
				294.26	2.282										
				299.82	2.317										
				305.37	2.347										
				310.93	2.376										
				316.48	2.412										
				322.04	2.446										
				327.59	2.489										
				333.15	2.538										
				338.71	2.595										
				344.26	2.658										
				349.82	2.722										
				355.37	2.790										
				360.93	2.864										
				-	G					-	G	273	1.306	0	Theor
291	1.377														
298	1.407														
300	1.414														
400	1.815														
500	2.192														
600	2.521														
700	2.804														
800	3.048														
900	3.259														
1000	3.442														

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.	
cis-2-BUTENE (continued)	(CH ₃ CH) ₂	-	G	1100	3.601	0	Theor	-	28505	
				1200	3.739					
				1300	3.859					
				1400	3.962					
				1500	4.054					
		-	G	-	298.16	1.407	0	Theor	-	198
					300	1.414				
					400	1.815				
					500	2.192				
					600	2.521				
					700	2.804				
					800	3.048				
					900	3.259				
					1000	3.442				
					1100	3.601				
					1200	3.739				
					1300	3.859				
					1400	3.962				
					1500	4.054				
-	G	-	298.58	1.446-1.496	1	Cited	-	35191		
			332.85	1.573-1.606						
			371.24	1.716-1.738						
99.5	G	-	298.58	1.377-1.496	1	Exper	-	13243		
			332.85	1.519-1.606						
			371.24	1.875-1.738						
trans-2-BUTENE	(CH ₃ CH) ₂	-	G	273	1.472	0	Theor	-	28505	
				291	1.539					
				298	1.565					
				300	1.572					
				400	1.941					
				500	2.288					
				600	2.595					
				700	2.862					
				800	3.095					
				900	3.296					
				1000	3.474					
				1100	3.628					
				1200	3.762					
				1300	3.878					
				1400	3.980					
		1500	4.068							
		-	G	-	298.16	1.565	0	Theor	-	198
					300	1.572				
					400	1.941				
					500	2.288				
600	2.595									
99.5	G	-	298.60	1.494-1.607	1	Exper	-	13243		
			332.90	1.638-1.720						
			371.50	1.787-1.848						
BUTYL ACETATE	CH ₃ COO(CH ₂) ₃ CH ₃	-	L	298.15	1.940	1	Cited	-	9335	
				303.15	1.958					

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
BUTYLBENZENE	C ₆ H ₅ (CH ₂) ₃ CH ₃	-	L	191.9	1.544	1	Exper	0.05	33584
				195.8	1.552				
				210.6	1.577				
				224.8	1.602				
				255.0	1.674				
				275.5	1.720				
				287.9	1.757				
				298.2	1.791				
tert-BUTYLBENZENE	C ₆ H ₅ C(CH ₃) ₃	-	L	220.4	1.556	1	Exper	1	21826
				229.6	1.582				
				240.0	1.607				
				251.4	1.636				
				261.9	1.661				
				275.2	1.707				
				283.0	1.728				
				294.3	1.774				
BUTYL ETHER	[CH ₂ (CH ₂) ₃] ₂ O	-	L	193.15	1.966	1	Corr	-	52325
				213.15	1.987				
				233.15	2.008				
				253.15	2.050				
				273.15	2.092				
				293.15	2.134				
				313.15	2.176				
				333.15	2.218				
				353.15	2.260				
				373.15	2.343				
				393.15	2.427				
				413.15	2.510				
				433.15	2.594				
				G	273.15				
			323.15		1.653				
			373.15		1.820				
			423.15		2.008				
			473.15		2.176				
			523.15		2.343				
			573.15		2.469				
			623.15		2.573				
			673.15		2.678				
			723.15		2.782				
			773.15		2.887				
			823.15		2.971				
			873.15	3.054					
923.15	3.117								
973.15	3.180								
1023.15	3.222								
1073.15	3.243								
1123.15	3.264								
1173.15	3.284								
1223.15	3.305								
1273.15	3.326								
1-BUTYNE	CHCCH ₂ CH ₃	-	G	298.18	1.505	0	Theor	-	4525
				300	1.511				
				400	1.846				
				500	2.137				
				600	2.385				
				700	2.597				
				800	2.781				
				900	2.941				
				1000	3.082				
				1100	3.204				
				1200	3.311				
				1300	3.404				
				1400	3.486				
1500	3.557								

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
2-BUTYNE	(CH ₃ C) ₂	-	G	273	1.364	0	Theor	-	1283								
				291	1.426												
				298	1.441												
				300	1.446												
				400	1.750												
				500	2.039												
				600	2.292												
				700	2.521												
				800	2.718												
				900	2.890												
				1000	3.039												
				1100	3.170												
				1200	3.283												
				1300	3.381												
				1400	3.467												
				1500	3.541												
				2-BUTYNE	(CH ₃ C) ₂					-	G	298.16	1.441	0	Theor	-	4525
												300	1.446				
												400	1.750				
												500	2.039				
600	2.296																
700	2.521																
800	2.718																
900	2.890																
1000	3.039																
1100	3.170																
1200	3.283																
1300	3.381																
1400	3.467																
1500	3.541																
2-BUTYNE	(CH ₃ C) ₂	-	G			300	1.464	1	Deriv			-	2500				
				400	1.801												
				500	2.102												
				600	2.368												
				700	2.598												
				800	2.793												
				900	2.949												
1000	3.074																
2-BUTYNE	(CH ₃ C) ₂	-	G	336.07	1.563	0	Cited	-	35191								
				369.46	1.658												
2-BUTYNE	(CH ₃ C) ₂	-	G	336.07	1.501	1	Exper	-	13243								
				369.46	1.606												
CARBON, ATOMIC	C	-	G	55.55	1.863	0	Theor	-	20987								
				61.10	1.841												
				66.66	1.824												
				72.21	1.810												
				77.77	1.799												
				83.32	1.791												
				88.88	1.783												
				94.43	1.777												
				99.99	1.772												
				105.55	1.768												
				111.10	1.765												
				116.66	1.762												
				122.21	1.759												
				127.77	1.757												
				133.32	1.755												
				144.43	1.751												
				155.55	1.748												
				166.66	1.746												
				177.77	1.745												
				188.88	1.743												
199.99	1.742																
211.10	1.741																
222.21	1.740																
233.32	1.739																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
CARBON, ATOMIC (continued)	C	-	G	244.43	1.739	0	Theor	-	20987								
				255.55	1.738												
				266.66	1.737												
				277.77	1.737												
				305.55	1.736												
				333.32	1.736												
				361.10	1.735												
				388.88	1.735												
				416.66	1.734												
				527.77	1.733												
				1444.43	1.734												
										-	G	298.16	1.735	0	Theor	-	1702
												400	1.733				
												600	1.732				
800	1.731																
1000	1.731																
1200	1.731																
1400	1.732																
CARBON DISULFIDE	CS ₂	-	L			161.11	1.047	1	Theor			-	49715				
						200	0.979										
						240	0.975										
				280	0.996												
				319.39	1.027												
				350	1.057												
				450	1.200												
				552	1.711												
						-	L			172.15	0.803			1	Exper	-	4306
										182.15	0.808						
										191.15	0.808						
										199.15	0.812						
										207.15	0.816						
										218.15	0.828						
229.15	0.837																
238.15	0.858																
248.15	0.879																
256.15	0.904																
268.15	0.929																
274.15	0.950																
279.15	0.967																
284.15	0.983																
289.15	1.00																
292.15	1.02																
		-	L	273.15	0.984	1	Cited	-	9337								
				283.15	0.991												
				293.15	0.998												
				303.15	1.005												
				313.15	1.011												
				323.15	1.018												
		-	L	286.01	1.032	1	Exper	1	567								
				292.60	1.035												
				297.85	1.037												
				303.27	1.041												
				308.51	1.042												
				312.95	1.045												
				316.83	1.048												
		-	L	290.7	1.21	1	Theor	-	9340								
				298.15	1.001												
		-	L	303.15	1.004	1	Cited	-	9335								
				319.4	0.910												
		-	G	100	0.407	0	Theor	-	27459								
				200	0.520												
				273.15	0.583												

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CARBON DISULFIDE (continued)	CS ₂	-	G	298.15	0.599	0	Theor	-	27459
				300	0.600				
				400	0.652				
				500	0.689				
				600	0.717				
				700	0.738				
				800	0.755				
				900	0.768				
				1000	0.779				
				1100	0.787				
				1200	0.794				
				1300	0.800				
				1400	0.805				
				1500	0.809				
200	0.519								
298.15	0.597								
300	0.598								
400	0.649								
500	0.686								
600	0.714								
700	0.734								
800	0.751								
900	0.763								
1000	0.773								
1100	0.781								
1200	0.787								
1300	0.793								
1400	0.797								
1500	0.801								
		-	G	273	0.583	0	Theor	-	1344
291	0.595								
298	0.600								
300	0.601								
400	0.651								
500	0.688								
600	0.714								
700	0.735								
800	0.750								
900	0.762								
1000	0.770								
1100	0.778								
1200	0.784								
1300	0.789								
1400	0.792								
1500	0.796								
		-	G	273.1	0.585	0	Theor	1	14546
600	0.714								
1000	0.770								
1400	0.792								
		-	G	298.1	0.600	0	Theor	±0.1	33500
400	0.651								
500	0.688								
600	0.714								
700	0.735								
800	0.750								
900	0.762								
1000	0.770								
1100	0.778								
1200	0.784								
1300	0.789								
1400	0.792								
1500	0.796								
		-	G	298.16	0.600	0	Theor	-	1702
300	0.601								
400	0.651								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
CARBON DISULFIDE (continued)	CS ₂	-	G	500	0.688	0	Theor	-	1702		
				600	0.714						
				700	0.735						
				800	0.750						
				900	0.762						
				1000	0.770						
				1100	0.778						
				1200	0.784						
				1300	0.789						
				1400	0.792						
				1500	0.796						
CARBON MONOSULFIDE	CS	-	G	100	0.666	0	Theor	-	24959		
				200	0.662						
				298.15	0.676						
				300	0.676						
				400	0.703						
				500	0.730						
				600	0.754						
				700	0.773						
				800	0.787						
				900	0.799						
				1000	0.808						
				1100	0.815						
				1200	0.821						
				1300	0.826						
1400	0.830										
1500	0.834										
CARBON SUBOXIDE	C ₃ O ₂	-	G	273.16	0.926	0	Theor	-	1288		
				291.16	0.954						
				298.16	0.965						
				300	0.967						
				400	1.090						
				500	1.250						
				600	1.250						
				700	1.309						
				800	1.357						
				900	1.398						
				1000	1.432						
				1100	1.460						
				1200	1.483						
				1300	1.503						
				1400	1.520						
1500	1.534										
CARBON TETRABROMIDE	CBr ₄	-	L	370-438	0.52	1	Exper	-	731		
				438-453	0.55						
				370-455	0.52						
		-	G	-	G	298.1	0.275	0	Theor	-	3771
						400	0.293				
						600	0.309				
		-	G	-	G	298.2	0.275	0	Theor	-	701
						400	0.293				
						500	0.303				
						600	0.309				
						700	0.313				
						800	0.316				
900	0.318										
1000	0.319										
-	G	-	G	473.15	0.296	1	Deriv	-	28272		
				673.15	0.310						
CARBONYL CHLORIDE FLUORIDE	COClF	-	G	100	0.417	0	Theor	-	24959		
				200	0.525						
				298.15	0.635						
				300	0.637						
				400	0.720						

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
CARBONYL CHLORIDE FLUORIDE (continued)	COClF	-	G	500	0.781	0	Theor	-	24959								
				600	0.826												
				700	0.859												
				800	0.885												
				900	0.906												
				1000	0.921												
				1100	0.934												
				1200	0.944												
				1300	0.953												
				1400	0.959												
				1500	0.965												
CARBONYL FLUORIDE	COF ₂	-	G	100	0.507	0	Theor	-	24959								
				200	0.589												
				298.15	0.716												
				300	0.718												
				400	0.830												
				500	0.917												
				600	0.983												
				700	1.034												
				800	1.073												
				900	1.103												
				1000	1.127												
				1100	1.146												
				1200	1.162												
				1300	1.175												
				1400	1.185												
1500	1.194																
CARBONYL SULFIDE	COS	-	L	134.31	1.289	1	Theor	-	49715								
				160.00	1.194												
				180.00	1.179												
				200.00	1.185												
				222.87	1.211												
				300.00	1.401												
				378.00	2.309												
				CARBONYL SULFIDE	COS					-	G	100	0.493	0	Theor	-	27459
												200	0.590				
												273.15	0.668				
298.15	0.690																
300	0.692																
400	0.763																
500	0.814																
600	0.853																
700	0.884																
800	0.910																
900	0.931																
1000	0.948																
1100	0.963																
1200	0.975																
1300	0.985																
1400	0.994																
1500	1.002																
CARBONYL SULFIDE	COS	-	G			100	0.493	0	Theor			-	24959				
						200	0.590										
				298.15	0.691												
				300	0.692												
				400	0.763												
				500	0.814												
				600	0.853												
				700	0.884												
				800	0.910												
				900	0.931												
				1000	0.948												
				1100	0.963												
				1200	0.975												
				1300	0.985												
				1400	0.994												
				1500	1.002												

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
CARBONYL SULFIDE (continued)	COS	-	G	273	0.668	0	Theor	-	1344								
				291	0.685												
				298	0.691												
				300	0.692												
				400	0.763												
				500	0.811												
				600	0.850												
				700	0.880												
				800	0.904												
				900	0.924												
				1000	0.940												
				1100	0.953												
				1200	0.964												
				1300	0.973												
				1400	0.981												
				1500	0.987												
										-	G	298.1	0.691	0	Theor	±0.1	33580
												400	0.763				
												500	0.812				
600	0.850																
700	0.880																
800	0.904																
900	0.924																
1000	0.940																
1100	0.953																
1200	0.964																
1300	0.973																
1400	0.981																
1500	0.987																
		-	G			298.16	0.691	0	Theor			-	1702				
						300	0.692										
						400	0.763										
						500	0.812										
						600	0.850										
						700	0.880										
				800	0.904												
				900	0.924												
				1000	0.940												
				1100	0.953												
				1200	0.964												
				1300	0.973												
				1400	0.981												
				1500	0.987												
				CHLORINE, MONATOMIC	Cl	-	G			55.55	0.594			0	Theor	-	6625
										122.22	0.594						
										133.32	0.595						
										144.43	0.595						
										155.55	0.596						
166.66	0.597																
177.77	0.599																
188.88	0.600																
199.99	0.602																
211.10	0.604																
222.21	0.607																
233.32	0.609																
244.43	0.616																
255.55	0.614																
266.66	0.617																
277.77	0.619																
305.55	0.625																
333.32	0.631																
361.11	0.636																
388.88	0.640																
416.67	0.644																
444.43	0.646																
472.21	0.648																
499.99	0.650																
527.77	0.651																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc. %	TPRC No.
CHLORINE, MONATOMIC (continued)	Cl	-	G	555.55	0.651	0	Theor	-	6625
				611.10	0.651				
				666.66	0.649				
				722.21	0.647				
				777.77	0.645				
				833.32	0.643				
				888.88	0.640				
				944.43	0.638				
				999.99	0.635				
				1055.55	0.633				
				1111.09	0.630				
				1166.65	0.626				
				1333.31	0.623				
				1444.42	0.620				
127.77	0.594								
133.32	0.595								
144.43	0.595								
155.55	0.596								
166.66	0.597								
177.77	0.599								
188.88	0.600								
199.99	0.602								
211.10	0.604								
222.21	0.607								
233.32	0.609								
244.43	0.612								
255.55	0.614								
266.66	0.617								
277.77	0.619								
305.55	0.626								
333.32	0.631								
361.10	0.636								
388.88	0.640								
416.66	0.644								
444.43	0.647								
472.21	0.648								
499.99	0.658								
527.77	0.651								
611.10	0.651								
666.67	0.649								
722.21	0.647								
777.77	0.645								
833.32	0.643								
888.88	0.640								
944.43	0.638								
999.99	0.635								
1055.54	0.633								
1111.10	0.630								
1222.22	0.626								
1333.32	0.623								
1444.43	0.620								
		-	G	100	0.586	0	Theor	-	24959
				200	0.594				
				298.15	0.616				
				300	0.616				
				400	0.634				
				500	0.641				
				600	0.642				
				700	0.640				
				800	0.636				
				900	0.631				
				1000	0.627				
				1100	0.623				
				1200	0.619				
				1300	0.616				
				1400	0.613				
1500	0.611								
(continued)									

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CHLORINE, MONATOMIC (continued)	Cl	-	G	250	0.605	0	Theor	-	401
				273.16	0.613				
				298.16	0.616				
				300	0.616				
				400	0.634				
				500	0.641				
				600	0.642				
				700	0.640				
				800	0.636				
				900	0.631				
				1000	0.627				
				1100	0.623				
				1200	0.619				
				1300	0.616				
				1400	0.613				
1500	0.611								
		-	G	298.16	0.616	0	Theor	-	1702
				400	0.634				
				600	0.643				
				800	0.636				
				1000	0.627				
				1200	0.619				
1400	0.613								
CHLORINE DIOXIDE	ClO ₂	-	G	100	0.501	0	Theor	-	24959
				200	0.557				
				298.15	0.622				
				300	0.623				
				400	0.683				
				500	0.728				
				600	0.761				
				700	0.785				
				800	0.803				
				900	0.817				
				1000	0.827				
				1100	0.835				
				1200	0.842				
				1300	0.848				
				1400	0.853				
1500	0.857								
		-	G	250	0.589	0	Theor	-	401
				273.16	0.604				
				298.16	0.620				
				300	0.621				
				400	0.680				
				500	0.725				
				600	0.758				
				700	0.782				
				800	0.800				
				900	0.814				
				1000	0.824				
				1100	0.832				
				1200	0.839				
				1300	0.844				
				1400	0.848				
1500	0.852								
CHLORINE FLUORIDE	ClF	-	G	250	0.572	0	Theor	-	401
				273.16	0.580				
				298.16	0.589				
				300	0.590				
				400	0.620				
				500	0.640				
				600	0.654				
				700	0.664				
				800	0.671				
				900	0.678				
				1000	0.680				
1100	0.683								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CHLORINE FLUORIDE (continued)	ClF	-	G	1200	0.686	0	Theor	-	401
				1300	0.688				
				1400	0.690				
				1500	0.692				
CHLORINE MONOXIDE	Cl ₂ O	-	G	100	0.404	0	Theor	-	24959
				200	0.466				
				298.15	0.523				
				300	0.523				
				400	0.565				
				500	0.593				
				600	0.612				
				700	0.626				
				800	0.635				
				900	0.641				
				1000	0.646				
				1100	0.650				
				1200	0.653				
				1300	0.655				
				1400	0.657				
				1500	0.659				
				CHLORINE OXIDE	ClO				
273.16	0.657								
298.16	0.676								
300	0.676								
400	0.726								
500	0.763								
600	0.788								
700	0.806								
800	0.819								
900	0.825								
1000	0.831								
1100	0.837								
1200	0.843								
1300	0.843								
1400	0.850								
1500	0.850								
CHLORINE OXIDE	ClO	-	G			100	0.566	0	Theor
				200	0.579				
				298.15	0.613				
				300	0.614				
				400	0.646				
				500	0.670				
				600	0.686				
				700	0.698				
				800	0.706				
				900	0.713				
				1000	0.718				
				1100	0.722				
				1200	0.725				
				1300	0.728				
				1400	0.731				
				1500	0.733				
				CHLORINE TRIFLUORIDE	ClF ₃	-	G		
273.16	0.680								
298.16	0.704								
300	0.705								
400	0.772								
500	0.811								
600	0.835								
700	0.851								
800	0.861								
900	0.869								
1000	0.874								
1100	0.878								
1200	0.882								
1300	0.884								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
CHLORINE TRIFLUORIDE (continued)	ClF ₃	-	G	1400	0.887	0	Theor	-	401						
				1500	0.888										
CHLOROBENZENE	C ₆ H ₅ Cl	99.9	L	230	1.220	1	Exper	2	12139						
				240	1.264										
				250	1.292										
				260	1.309										
				270	1.318										
				280	1.324										
				290	1.329										
				300	1.334										
				310	1.345										
				320	1.367										
				-	L					293.15	1.32	1	Cited	-	9337
				-	L					303.15	1.35				
				-	L					313.15	1.37				
-	L	323.15	1.40												
-	L	293.15	1.294	1	Exper	-	21786								
-	L	313.15	1.319												
-	L	333.15	1.363												
-	L	353.15	1.425												
-	L	298.15	1.300	1	Deriv	-	9335								
-	L	303.15	1.307												
m-CHLOROBENZOIC ACID	C ₆ H ₄ COOH	-	L	427.40	1.73	1	Exper	-	21796						
o-CHLOROBENZOIC ACID	C ₆ H ₄ COOH	-	L	413.35	1.85	1	Exper	-	21796						
p-CHLOROBENZOIC ACID	C ₆ H ₄ COOH	-	L	512.85	2.29	1	Exper	-	21796						
CHLORODIFLUORO- METHANE, MONODEUTERATED	CDClF ₂	-	G	100	0.398	0	Theor	-	32482						
				200	0.526										
				273.16	0.629										
				298.16	0.663										
				300	0.665										
				400	0.781										
				500	0.871										
				600	0.939										
				700	0.990										
				800	1.029										
				900	1.059										
1000	1.084														
CHLORODIPHENYL- METHANE	(C ₆ H ₅) ₂ CHCl	-	L	298.5	1.43	1	Exper	0.35~0.7	21841						
				310.7	1.46										
CHLOROETHANE	CH ₃ CH ₂ Cl	-	L	205-288	1.57	1	Exper	-	731						
				231-288	1.61										
				266-288	1.64										
				-	G					345.65	1.17	1	Deriv	-	28272
-	G	398.15	1.28												
CHLOROFUORO- METHANE	CH ₂ ClF	-	G	200	0.580	0	Theor	-	34113						
				250	0.633										
				300	0.693										
				350	0.755										
				400	0.817										
				450	0.874										
				500	0.927										
				550	0.976										
				600	1.019										
				650	1.059										
				700	1.095										
				750	1.128										
800	1.159														
850	1.186														
900	1.212														

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CHLOROFLUORO-METHANE (continued)	CH ₂ ClF	-	G	950	1.236	0	Theor	-	34113
				1000	1.257				
		-	G	298.1	0.703	1	Deriv	-	28292
				373.1	0.800				
1-CHLORO-3-METHYL-BUTANE	(CH ₃) ₂ CHCH ₂ CH ₂ Cl	-	L	287-327	1.67	1	Exper	-	731
				287-371	1.73				
CHLOROMETHYLIDYNE	CCl	-	G	298.16	0.682	0	Theor	-	32540
				300	0.683				
				400	0.710				
				500	0.730				
				600	0.745				
				700	0.755				
				800	0.763				
				900	0.768				
				1000	0.773				
				1100	0.776				
				1200	0.778				
				1300	0.781				
1400	0.782								
1500	0.784								
1-CHLORO-2-METHYL-PROPANE	(CH ₃) ₂ CHCH ₂ Cl	-	L	285-353	1.17	1	Exper	-	731
				285-328	1.14				
				287-332	1.75				
				288-295	1.48				
1-CHLOROPROPANE	CH ₃ (CH ₂) ₂ Cl	-	L	234-289	1.57	1	Exper	-	731
				285-316	1.69				
				290-373	1.02				
				290-403	1.04				
				290-428	1.07				
CHLOROSILANE	SiH ₃ Cl	-	G	100	0.504	0	Theor	-	12098
				200	0.602				
				298.16	0.757				
				300	0.760				
				400	0.899				
				500	1.013				
				600	1.105				
				700	1.182				
				800	1.246				
				900	1.299				
1000	1.343								
α-CHLOROTOLUENE	C ₆ H ₅ CH ₂ Cl	-	L	246.0	1.37	1	Exper	0.35-0.7	21841
				259.8	1.39				
				273.1	1.40				
				286.0	1.42				
				298.5	1.44				
CHLOROTRIBROMO-METHANE	CClBr ₃	-	G	100	0.206	0	Theor	-	23025
				298.16	0.311				
				1000	0.368				
				1500	0.372				
CUMENE	C ₆ H ₅ CH(CH ₃) ₂	-	L	283.15	1.920	1	Corr	±2.1	56305
				293.15	1.941				
				303.15	1.966				
				313.15	1.983				
				323.15	2.000				
				333.15	2.021				
				343.15	2.042				
				353.15	2.059				
				363.15	2.079				
				373.15	2.100				
				383.15	2.121				
				393.15	2.151				
403.15	2.176								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.	
CUMENE (continued)	C ₆ H ₅ CH(CH ₃) ₂	-	L	413.15	2.208	1	Corr	±2.1	56305	
				423.15	2.234					
				433.15	2.259					
				443.15	2.293					
				453.15	2.330					
				463.15	2.368					
				473.15	2.414					
		99.8	L	-	290-323	1.81	1	Exper	1	1562
					293-373	1.90				
					293-405	1.97				
					293-426	1.99				
		99.8	L	-	299.82	1.742	Sat.	Exper	1	616
					305.37	1.765				
					310.93	1.786				
					316.49	1.808				
					322.04	1.830				
					327.59	1.853				
					333.15	1.876				
					338.71	1.901				
					344.26	1.926				
					349.82	1.951				
					355.37	1.976				
					360.93	2.000				
					366.48	2.025				
					-	G				
		291	1.231							
		298	1.262							
		300	1.270							
		400	1.671							
		500	2.016							
		600	2.305							
		700	2.538							
		800	2.736							
		900	2.900							
		1000	3.039							
		1100	3.161							
		1200	3.265							
		1300	3.356							
		-	G	-			298.16	1.262	0	Theor
					300	1.270				
400	1.671									
500	2.016									
600	2.305									
700	2.538									
800	2.736									
900	2.900									
1000	3.039									
1100	3.161									
-	G	-	673.15	2.385	1	Corr	-	56305		
			723.15	2.510						
			773.15	2.594						
			823.15	2.720						
			873.15	2.887						
			923.15	2.887						
			973.15	2.971						
			1023.15	3.033						
			1073.15	3.096						
			1123.15	3.159						
			1173.15	3.222						
1223.15	3.264									
1273.15	3.305									

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
CYANOGEN	(CN) ₂	-	G	100	0.704	0	Theor	-	24959								
				200	0.942												
				298.15	1.092												
				300	1.094												
				400	1.188												
				500	1.256												
				600	1.311												
				700	1.359												
				800	1.400												
				900	1.436												
				1000	1.467												
				1100	1.493												
				1200	1.515												
				1300	1.534												
				1400	1.550												
			1500	1.563													
						G	291.16	1.085	0	Theor	-	8059					
							298.16	1.093									
							300	1.096									
							350	1.147									
							400	1.183									
							450	1.224									
							500	1.257									
							600	1.312									
							700	1.360									
							800	1.401									
							900	1.437									
							1000	1.467									
							G	298.16					1.093	0	Theor	-	1702
								300					1.095				
			400	1.190													
			500	1.257													
			600	1.312													
			700	1.360													
			800	1.401													
			900	1.437													
			1000	1.467													
CYANOGEN CHLORIDE	CNCl	-	G	100	0.508	0	Theor	-	27459								
				200	0.642												
				273.15	0.711												
				298.15	0.729												
				300	0.731												
				400	0.783												
				500	0.819												
				600	0.846												
				700	0.869												
				800	0.889												
				900	0.905												
				1000	0.919												
				1100	0.931												
				1200	0.941												
				1300	0.950												
			1400	0.957													
			1500	0.963													
						G	100	0.508	0	Theor	-	24959					
							200	0.642									
							298.15	0.730									
							300	0.731									
							400	0.783									
							500	0.819									
							600	0.846									
							700	0.869									
							800	0.889									
							900	0.905									
							1000	0.919									

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p $\text{kJ kg}^{-1} \text{K}^{-1}$	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
CYANOGEN CHLORIDE (continued)	CNCl	-	G	1100	0.931	0	Theor	-	24959						
				1200	0.941										
				1300	0.950										
				1400	0.957										
				1500	0.963										
CYCLOHEXANE	C_6H_{12}	99.9	L	279.99	1.774	1	Exper	1	9823						
				282.26	1.784										
				286.87	1.806										
				288.31	1.813										
				291.73	1.828										
				296.22	1.848										
				296.54	1.848										
				301.29	1.872										
				-	L					283.1	1.766	1	Exper	1	31769
				-	L					285.1	1.770				
		-	L	286.6	1.778										
		-	L	290.7	1.799										
		-	L	298.9	1.841	Sat.	Exper	± 3	1824						
		-	L	299.82	1.833										
		-	L	305.37	1.861										
		-	L	310.93	1.886										
		-	L	316.40	1.913										
		-	L	322.04	1.943										
		-	L	327.59	1.968										
		-	L	333.15	1.995										
		-	L	338.71	2.024										
		-	L	344.26	2.051										
		-	L	349.82	2.077										
		-	L	355.37	2.108										
		-	L	360.93	2.139										
		-	L	366.48	2.173										
		-	G	298.16	1.250	0	Theor	-	20570						
		-	G	300	1.260										
		-	G	400	1.783										
-	G	500	2.258												
-	G	600	2.657												
-	G	700	2.990												
-	G	800	3.270												
-	G	900	3.505												
-	G	1000	3.704												
-	G	1100	3.874												
-	G	1200	4.018												
-	G	1300	4.141												
-	G	1400	4.247												
-	G	1500	4.338												
-	G	370	1.661	1	Exper	± 0.3	33588								
-	G	390	1.759												
-	G	410	1.846												
-	G	370	1.730	0	Exper	± 0.3	33588								
-	G	390	1.814												
-	G	410	1.909												
-	G	370.15	1.98	1	Exper	-	14727								
-	G	373.15	1.73												
-	G	407.15	1.97												
-	G	410.15	1.86												
-	G	410	1.85	1	Exper	-	31764								
-	G	410	1.84												
CYCLOHEXENE	C_6H_{10}	-	G	370	1.595	1	Exper	0.3	33588						
				390	1.686										
				410	1.771										

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
CYCLOHEXENE (continued)	C ₆ H ₁₀	-	G	370	1,516	0	Exper	0.3	33588								
				390	1,596												
				410	1,675												
CYCLOPROPANE	C ₃ H ₆	-	G	100	0,791	0	Cited	-	35191								
				150	0,820												
				200	0,925												
				250	1,108												
				300	1,336												
				350	1,579												
				400	1,823												
				500	2,251												
				600	2,599												
				700	2,887												
				800	3,127												
				900	3,338												
				1000	3,517												
				p-CYMENE	CH ₃ C ₆ H ₄ CH(CH ₃) ₂					-	G	157.6	0,831	0	Corr	-	3771
220.2	0,990																
223.4	1,002																
258.4	1,143																
291.1	1,296																
295.4	1,312																
313.9	1,405																
325.3	1,461																
332.9	1,498																
338.9	1,525																
p-CYMENE	CH ₃ C ₆ H ₄ CH(CH ₃) ₂	99.75	G			272.15	1,203	1	Exper			0.4	13244				
						300.48	1,342										
						333.70	1,501										
						368.46	1,667										
p-CYMENE	CH ₃ C ₆ H ₄ CH(CH ₃) ₂	-	L	210.8	1,536	1	Exper	0.05	33584								
				215.9	1,548												
				228.2	1,573												
				243.3	1,607												
				259.6	1,644												
				280.7	1,711												
				291.0	1,745												
297.1	1,761																
p-CYMENE	CH ₃ C ₆ H ₄ CH(CH ₃) ₂	-	L	283-328	1,83	1	Exper	-	1562								
				288-373	1,91												
				288-405	1,97												
				288-429	2,01												
DEUTERIUM, MONATOMIC	D	-	G	55-2775	10,39	0	Theor	-	20987								
				55-1500	10,32					0	Theor	-	6625				
1,2-DIBROMOETHANE	(CH ₂ Br) ₂	-	L	290-329	0,73	1	Exper	-	731								
				290-373	0,76												
				291-400	0,78												
DIBROMOMETHANE	CH ₂ Br ₂	-	L	240,0	0,603	1	Exper	±0.5	1353								
				244,9	0,603												
				250,0	0,604												
				253,9	0,604												
				260,0	0,599												
				265,0	0,602												
				270,0	0,596												
				274,3	0,598												
				280,0	0,596												
				284,1	0,594												
				290,0	0,599												
				294,2	0,602												
				300,0	0,606												
303,2	0,607																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
DIBROMOMETHANE (continued)	CH ₂ Br ₂	-	L	293-295	0.71	1	Exper	-	731		
				283-308	0.73						
				288-315	0.74						
				288-371	0.76						
		-	G	-	-	298.1	0.316-0.343	0	Cited	-	3771
						400	0.364-0.390				
						500	0.402				
						600	0.450-0.456				
		-	G	-	-	298.2	0.315	0	Theor	-	701
						400	0.363				
						500	0.401				
						600	0.431				
700	0.455										
800	0.475										
900	0.492										
1000	0.507										
-	G	-	-	473.15	0.426	1	Deriv	-	28272		
				673.15	0.469						
1,2-DIBROMOPROPANE	BrCH ₂ CHBrCH ₃	-	L	284-327	0.80	1	Exper	-	731		
				292-373	0.84						
				287-406	0.87						
1,3-DIBROMOPROPANE	Br(CH ₂) ₃ Br	-	L	293-371	0.83	1	Exper	-	731		
				294-397	0.84						
				289-427	0.87						
1,1-DICHLOROETHANE	CH ₃ CHCl ₂	-	L	222-262	1.20	1	Exper	-	731		
				291-318	1.29						
				291-328	1.26						
				289-328	1.31						
1,2-DICHLOROETHANE	(CH ₂ Cl) ₂	-	L	248-293	1.17	1	Exper	-	731		
				290-327	1.27						
				292-344	1.29						
				289-355	1.30						
				280.77	1.297						
		280.87	1.290								
		280.85	1.285								
		293.65	1.300								
		293.56	1.300								
		293.73	1.297								
		293.48	1.306								
		293.60	1.299								
		308.71	1.324								
308.76	1.330										
308.92	1.326										
308.74	1.323										
308.89	1.321										
323.70	1.369										
323.76	1.327										
323.70	1.326										
323.76	1.321										
-	L	-	-	284.15	1.312	1	Exper	±1	567		
				287.85	1.318						
				292.17	1.329						
				293.15	1.331						
				296.87	1.339						
				302.63	1.344						
				303.15	1.345						
				308.32	1.350						
				313.15	1.356						
				313.61	1.355						
				318.75	1.363						
				323.15	1.367						
				323.75	1.370						

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p $\text{kJ kg}^{-1} \text{K}^{-1}$	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.			
1,2-DICHLOROETHANE (continued)	$(\text{CH}_2\text{Cl})_2$	-	L	328.67	1.375	1	Exper	±1	567			
				333.53	1.384							
				338.26	1.394							
				343.15	1.382							
				343.17	1.406							
				348.03	1.416							
				353.15	1.406							
1,2-DICHLOROETHYLENE	$(\text{CHCl})_2$	-	L	293.15	1.255	1	Exper	-	1831			
				284-311	1.14							
				286-327	1.07							
1,1-DICHLORO-1-FLUOROETHANE	CH_2CFCl_2	-	G	288-242	1.07	0	Theor	-	32178			
				305.15	0.768							
				400	0.890							
DICHLOROFLUORO-METHANE, MONODEUTERATED	CDCl_2F	-	G	600	1.068	0	Theor	-	32482			
				100	0.358							
				200	0.491							
				273.16	0.581							
				298.16	0.609							
				300	0.611							
				400	0.704							
				500	0.772							
				600	0.822							
				700	0.839							
				800	0.888							
900	0.910											
DICHLOROMETHANE	CH_2Cl_2	-	L	1000	0.928	1	Exper	±0.15	56674			
				193.15	0.879							
				203.15	0.891							
				213.15	0.905							
				223.15	0.920							
				233.15	0.938							
				243.15	0.958							
				253.15	0.980							
				263.15	1.004							
			273.15	1.029								
			283.15	1.055								
			293.15	1.081								
			-	-	-	L	219-261	1.35	1	Exper	-	731
							197-285	1.31				
							252-285	1.40				
							285-314	1.50				
			-	-	-	G	173.15	0.484	0	Theor	-	1578
							198.15	0.507				
							223.15	0.533				
248.15	0.559											
273.15	0.587											
298.15	0.615											
323.15	0.642											
348.15	0.669											
373.15	0.695											
398.15	0.762											
423.15	0.784											
-	-	-	G	273	0.583	0	Theor	-	1360			
				291	0.603							
				298	0.610							
				300	0.613							
				400	0.717							
				500	0.801							
				600	0.867							
				700	0.920							
				800	0.963							
				900	1.000							
1000	1.031											

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
DICHLOROMETHANE (continued)	CH ₂ Cl ₂	-	G	1100	1.058	0	Theor	-	1360		
				1200	1.081						
				1300	1.001						
				1400	1.119						
				1500	1.133						
		-	G	-	G	273.15	0.584	0	Theor	<3	15361
						283.15	0.596				
						293.15	0.607				
						298.15	0.613				
						303.15	0.618				
						313.15	0.629				
						323.15	0.640				
						333.15	0.651				
						353.15	0.672				
						373.15	0.693				
		-	G	-	G	473.15	0.783	0	Cited	-	3771
						573.15	0.853				
						673.15	0.908				
						773.15	0.954				
						273.15	0.584				
298.15	0.613										
313.15	0.629										
333.15	0.651										
353.15	0.672										
373.15	0.693										
473.15	0.783										
573.15	0.853										
673.15	0.908										
773.15	0.954										
-	G	-	G	298.1	0.611	1	Deriv	-	28292		
				373.1	0.695						
				473.1	0.783						
-	G	-	G	370.15	0.680	1	Exper	-	28289		
				407.15	0.729						
-	G	-	G	473.15	0.503	0	Theor	-	34113		
				523.15	0.555						
				573.15	0.609						
				623.15	0.662						
				673.15	0.712						
				723.15	0.756						
				773.15	0.796						
				823.15	0.832						
				873.15	0.864						
				923.15	0.893						
				973.15	0.919						
				1023.15	0.943						
				1073.15	0.965						
				1123.15	0.985						
				1173.15	1.004						
				1223.15	1.021						
				1273.15	1.037						
1,2-DICHLOROPROPANE	CH ₃ CHClCH ₂ Cl	-	L	284-327	1.37	1	Exper	-	731		
				290-372	1.46						
				289-429	1.54						
1,1-DICHLOROTETRAFLUOROETHANE	CCl ₂ FCF ₃	-	G	276.9	0.641	0	Theor	-	32178		
				298	0.667						
				400	0.760						
				600	0.897						
2,2-DICHLORO-1,1,1-TRIFLUOROETHANE	F ₃ CCHCl ₂	-	G	200	0.531	0	Theor	-	3933		
				298.16	0.667						
				400	0.782						
				500	0.867						
				600	0.984						

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
2,2-DICHLORO-1,1,1-TRIFLUOROETHANE (continued)	F ₃ CCHCl ₂	-	G	700	0.984	0	Theor	-	3933								
				800	1.022												
DIETHYL OXALATE	(COOCH ₂ CH ₃) ₂	-	L	273.15	1.814	1	Exper	0.25	1790								
1,1-DIFLUOROETHYLENE	CH ₂ CF ₂	-	L	153.15	0.966	1	Corr	-	49049								
				163.15	0.979												
				173.15	0.992												
				183.15	1.004												
				193.15	1.017												
				203.15	1.209												
				213.15	1.046												
				223.15	1.059												
				233.15	1.079												
				243.15	1.100												
				253.15	1.125												
				263.15	1.151												
				273.15	1.184												
				-	-					-	G	173.15	0.628	1	Corr	<1	49090
												223.15	0.732				
												273.15	0.837				
												323.15	0.941				
												373.15	1.046				
												423.15	1.130				
												473.15	1.213				
												523.15	1.276				
												573.15	1.339				
												623.15	1.402				
673.15	1.464																
723.15	1.506																
773.15	1.548																
823.15	1.590																
873.15	1.632																
923.15	1.653																
973.15	1.674																
1023.15	1.694																
1073.15	1.715																
1123.15	1.736																
1173.15	1.757																
DIFLUOROMETHANE	CH ₂ F ₂	-	G	200	0.707	0	Theor	-	34113								
				250	0.763												
				300	0.833												
				350	0.911												
				400	0.992												
				450	1.070												
				500	1.145												
				550	1.213												
				600	1.276												
				650	1.333												
				700	1.386												
				750	1.434												
				800	1.478												
				850	1.518												
900	1.555																
950	1.589																
1000	1.621																
-	-	-	G	298.1	0.837	1	Deriv	-	28292								
				373.1	0.957												
				473.1	1.110												
DIODOMETHANE	CH ₂ I ₂	-	L	285-329	0.50	1	Exper	-	731								
				288-373	0.52												
				288-437	0.54												
DIMETHYLAMINE	(CH ₃) ₂ NH	-	G	273.15	1.437	0	Theor	-	1231								
				291.15	1.504												
				298.15	1.531												

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
DIMETHYLAMINE (continued)	(CH ₃) ₂ NH	-	G	373.15	1.832	0	Theor	-	1231						
				473.15	2.219										
				573.15	2.555										
				673.15	2.846										
				773.15	3.094										
				873.15	3.310										
				973.15	3.498										
				1073.15	3.661										
				1173.15	3.803										
				1273.15	3.927										
				1373.15	4.034										
				1473.15	4.126										
2,2-DIMETHYLBUTANE	CH ₃ CH ₂ C(CH ₃) ₂	99.985	L	180	1.753	1	Exper	0.2	8669						
				190	1.783										
				200	1.815										
				210	1.848										
				220	1.881										
				230	1.915										
				240	1.950										
				250	1.990										
				260	2.030										
				270	2.072										
				280	2.114										
				290	2.156										
		300	2.198												
				99.95	L	180	1.703	1	Exper	2	12139				
		190	1.731												
		200	1.761												
		210	1.789												
		220	1.819												
		230	1.850												
		240	1.882												
		250	1.913												
		260	1.945												
		270	1.982												
		280	2.022												
290	2.074														
300	2.138														
310	2.221														
320	2.336														
		-	L	299.82	2.224	Sat.	Exper	±3	1824						
305.37	2.250														
310.93	2.273														
316.48	2.296														
322.04	2.321														
327.59	2.345														
333.15	2.371														
338.71	2.396														
344.26	2.420														
349.82	2.443														
355.55	2.470														
360.93	2.495														
366.48	2.531														
		-	G	298.16	1.663	0	Theor	-	20085						
300	1.672														
400	2.146														
500	2.573														
600	2.933														
700	3.229														
800	3.481														
900	3.685														
1000	3.880														
				99.7	G					341.55	1.8644	0.4	Exper	0.2	1815
376.05	2.0230														
412.40	2.1435														
449.40	2.3506														

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
2,2-DIMETHYLBUTANE (continued)	CH ₃ CH ₂ C(CH ₃) ₂	99.7	G	341.55	1.8870	1	Exper	0.2	1815								
				353.20	1.9364												
				376.05	1.7517												
				412.40	2.1983												
				449.40	2.3564												
		99.7	G	99.7	G	341.55	1.8501	0	Deriv	0.2	1815						
						353.20	1.9058										
						376.05	2.0150										
						412.40	2.1824										
						449.40	2.3757										
		99	G	99	G	361	2.336	1	Exper	0.3-1.0	2542						
						391	2.488										
						448	2.784										
		99	G	99	G	361	2.343	0	Deriv	0.3-1.0	2542						
						391	2.470										
				448	2.772												
2,3-DIMETHYLBUTANE	[(CH ₃) ₂ CH] ₂	86	G	451	2.364	1	Exper	0.8-1	1384								
				99.985	L					99.985	L	140	1.740	1	Exper	2	12139
												150	1.776				
												160	1.810				
												170	1.845				
		180	1.876														
		190	1.906														
		200	1.939														
		210	1.966														
		220	1.990														
		230	2.005														
		240	2.017														
		250	2.031														
		150	1.691														
		160	1.717														
170	1.743																
180	1.770																
190	1.799																
200	1.828																
210	1.857																
220	1.888																
230	1.921																
240	1.956																
250	1.792																
260	2.030																
270	2.070																
280	2.112																
290	2.154																
300	2.199																
99.7	L	99.7	L	260	2.048	1	Exper	0.2	12139								
				270	2.066												
				280	2.088												
				290	2.108												
				300	2.147												
				310	2.204												
				320	2.297												
-	G	-	G	298.16	1.682	0	Theor	-	20085								
				300	1.692												
				400	2.151												
				500	2.564												
				600	2.913												
				700	3.200												
				800	3.452												
				900	3.666												
1000	3.855																

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
1, 2-DIMETHYLCYCLOPENTANE	$C_7H_{14}(CH_3)_2$	-	L	161.5	1.523	1	Exper	0.05	33584
				175.2	1.552				
				195.0	1.611				
				210.0	1.644				
				244.6	1.732				
				275.4	1.837				
				284.1	1.866				
294.2	1.908								
2, 3-DIMETHYLHEXANE	$(CH_3)_2CHCH(CH_3)(CH_2)_3CH_3$	99	G	397.4	2.145	1	Exper	1	990
				463.7	2.414				
				522.2	2.629				
2, 5-DIMETHYLHEXANE	$[(CH_3)_2CHCH_2]_2$	-	L	278.15	2.096	Sat.	Exper	0.1	1781
				283.15	2.117				
				288.15	2.138				
				293.15	2.159				
				298.15	2.181				
				303.15	2.203				
				308.15	2.226				
				313.15	2.248				
				318.15	2.271				
3, 3-DIMETHYLHEXANE	$CH_3CH_2C(CH_3)_2(CH_2)_2CH_3$	-	L	278.15	2.068	Sat.	Exper	0.1	1781
				283.15	2.090				
				288.15	2.113				
				293.15	2.135				
				298.15	2.158				
				303.15	2.182				
				308.15	2.206				
				313.15	2.230				
				318.15	2.255				
3, 4-DIMETHYLHEXANE	$[CH(CH_3)CH_2CH_3]_2$	98	G	406.7	2.183	1	Exper	1	980
				462.3	2.368				
				522.6	2.632				
2, 7-DIMETHYLOCTANE	$[(CH_3)_2CH(CH_2)_2]_2$	-	L	223.2	1.895	1	Exper	<1	31769
				227.5	1.904				
				244.5	1.954				
				275.0	2.059				
				278.2	2.063				
				283.3	2.084				
				289.4	2.096				
				295.0	2.121				
				DIMETHYLPROPANE	$C(CH_3)_4$				
300	1.694								
400	2.178								
500	2.610								
600	2.970								
700	3.271								
800	3.625								
900	3.743								
1000	3.932								
1100	4.095								
1200	4.236								
1300	4.358								
1400	4.465								
1500	4.558								
2, 5-DIMETHYLTHIOPHENE	$C_6H_8S(CH_3)_2$	-	L	220	1.471	1	Exper	-	20068
				230	1.482				
				240	1.494				
				250	1.509				
				260	1.524				
				270	1.540				
				280	1.557				
				290	1.575				
				300	1.593				
				273.15	1.545				
				298.15	1.589				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
m-DINITROBENZENE	C ₆ H ₄ (NO ₂) ₂	-	L	363.23	1.697	1	Exper	-	21796
o-DINITROBENZENE	C ₆ H ₄ (NO ₂) ₂	-	L	390.08	1.623	1	Exper	-	21796
p-DINITROBENZENE	C ₆ H ₄ (NO ₂) ₂	-	L	446.65	1.648	1	Exper	-	21796
1,1-DIPHENYLETHANE	(C ₆ H ₅) ₂ CHCH ₃	-	L	259.8 273.1 286.0 298.5	1.49 1.54 1.58 1.62	1	Exper	0.35-0.7	21841
DIPHENYLMETHANE	(C ₆ H ₅) ₂ CH ₂	-	L	310.7 322.6	1.63 1.64	1	Exper	0.35-0.7	21841
DIPROPYLENE GLYCOL	(CH ₃ CHOHCH ₂) ₂ O	-	L	283.15 293.15 303.15 313.15 323.15 333.15 343.15 353.15 363.15 373.15 383.15 393.15 403.15 413.15 423.15 433.15 443.15 453.15	2.364 2.406 2.448 2.489 2.552 2.594 2.636 2.678 2.741 2.782 2.824 2.866 2.908 2.971 3.012 3.054 3.096 3.138	1	Corr	-	52070
		-	G	273.15 298.15 323.15 348.15 373.15 398.15 423.15 448.15 473.15 498.15 523.15 548.15 573.15 598.15 623.15 648.15 673.15 698.15 723.15 748.15 773.15	1.276 1.339 1.402 1.464 1.527 1.590 1.640 1.695 1.749 1.799 1.841 1.883 1.925 1.958 1.987 2.017 2.050 2.084 2.113 2.134 2.155	1	Corr	-	52070
DODECANE	CH ₃ (CH ₂) ₁₀ CH ₃	99.93	L	266.69 270 272.39 272.82 290 281.20 283.06 290 290.28 293.61 298.16 299.25 300 304.03 308.13 310	2.137 2.141 2.143 2.146 2.160 2.183 2.166 2.184 2.185 2.194 2.207 2.211 2.213 2.225 2.237 2.243	1	Exper	±0.1	550

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ETHYLBENZENE (continued)	C ₈ H ₈ C ₂ H ₅	-	L	230.5	1.556	1	Exper	<1	21826
				239.1	1.577				
				254.9	1.611				
				275.3	1.657				
				278.4	1.665				
				283.0	1.682				
				287.9	1.690				
				293.0	1.703				
				297.4	1.711				
				301.2	1.724				
304.9	1.732								
		-	L	273.15	1.674	1	Corr	±2.1	56305
283.15	1.690								
293.15	1.711								
303.15	1.724								
313.15	1.741								
323.15	1.757								
333.15	1.774								
343.15	1.791								
353.15	1.816								
363.15	1.833								
373.15	1.858								
383.15	1.887								
393.15	1.916								
403.15	1.941								
413.15	1.971								
423.15	1.996								
433.15	2.025								
444.15	2.050								
453.15	2.083								
463.15	2.117								
473.15	2.151								
		-	L	288-329	1.80	1	Exper	-	1562
288-373	1.90								
288-404	1.97								
289-451	2.10								
		-	L	291.15	1.548	1	Exper	-	21776
293.15	1.602								
295.15	1.648								
297.15	1.695								
299.15	1.728								
301.15	1.728								
303.15	1.715								
305.15	1.711								
307.15	1.715								
309.15	1.724								
313.15	1.736								
323.15	1.774								
333.15	1.807								
343.15	1.841								
		-	L	293.15	1.675	1	Exper	-	21778
303.15	1.710								
408.95	2.300								
		-	G	273	1.111	0	Theor	-	28506
291	1.180								
298	1.210								
300	1.217								
400	1.608								
500	1.945								
600	2.224								
700	2.455								
800	2.647								
900	2.809								
1000	2.947								
1100	3.065								
1200	3.167								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ETHYLBENZENE (continued)	C ₈ H ₈ C ₂ H ₅	-	G	1300	3.254	0	Theor	-	28506
				1400	3.330				
				1500	3.396				
			G	273.15	1.109	1	Corr	-	56305
				323.15	1.297				
				373.15	1.485				
				423.15	1.674				
				473.15	1.820				
				523.15	1.987				
				573.15	2.134				
				623.15	2.259				
				673.15	2.305				
				723.15	2.469				
				773.15	2.552				
				823.15	2.657				
				873.15	2.741				
				923.15	2.824				
				973.15	2.908				
				1023.15	2.971				
				1073.15	3.054				
		1123.15	3.096						
		1173.15	3.159						
		1223.15	3.201						
		1273.15	3.264						
		-	G	298.16	1.210	0	Theor	-	5162
				300	1.217				
				400	1.606				
				500	1.945				
				600	2.224				
				700	2.455				
				800	2.647				
				900	2.809				
				1000	2.947				
				1100	3.065				
				1200	3.167				
				1300	3.254				
				1400	3.330				
				1500	3.396				
		-	G	300	1.230	1	Corr	-	2500
				400	1.599				
				500	1.925				
				600	2.209				
				700	2.451				
				800	2.652				
				900	2.811				
				1000	2.928				
ETHYL BUTYRATE	CH ₃ (CH ₂) ₂ COOCH ₂ CH ₃	-	L	298.15	1.940	1	Cited	-	9335
				303.15	1.958				
				298-303	1.951				
ETHYLENEDIAMINE	(CH ₂ NH ₂) ₂	99.8	L	303.15	2.95	Sat.	Exper	0.4	1500
				313.15	2.97				
				323.15	3.00				
				333.15	3.03				
				343.15	3.05				
ETHYLENE OXIDE	(CH ₂) ₂ O	-	G	273	1.020	0	Corr	-	1514
				291	1.070				
				298	1.096				
				300	1.102				
				400	1.401				
				500	1.713				
				600	1.959				
				700	2.164				
				800	2.337				
				900	2.484				
				1000	2.609				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p $\text{kJ kg}^{-1} \text{K}^{-1}$	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.				
ETHYLENE OXIDE (continued)	$(\text{CH}_2)_2\text{O}$	-	G	307.18	1.121	0	Cited	-	35191				
				337.04	1.215								
				371.23	1.326								
		99.9	G	307.18	1.099	1	Exper	-	13243				
				337.04	1.194								
				371.23	1.307								
ETHYL FORMATE	$\text{HCOOCH}_2\text{CH}_3$	-	G	410	1.58	1	Exper	± 0.6	31764				
		-	G	410	1.56	0	Exper	± 0.6	31764				
		-	G	410	1.542	1	Deriv	-	28272				
3-ETHYLHEXANE	$(\text{CH}_3\text{CH}_2)_2\text{CH}(\text{CH}_2)_2\text{CH}_3$	99	G	297.1	2.151	1	Exper	1	980				
				462.7	2.384								
				522.7	2.618								
ETHYL ISOVALERATE	$(\text{CH}_3)_2\text{CHCH}_2\text{COOCH}_2\text{CH}_3$	99.5	L	273.15	1.899	1	Exper	0.25	1790				
3-ETHYL-2-METHYL-PENTANE	$(\text{CH}_3)_2\text{CHCH}(\text{C}_2\text{H}_5)_2$	99.0	G	399.7	2.164	1	Exper	1	980				
				461.9	2.411								
				522.2	2.627								
3-ETHYL-3-METHYL-PENTANE	$(\text{CH}_3\text{CH}_2)_3\text{CCH}_3$	99.7	G	403.3	2.205	1	Exper	1	980				
				462.6	2.436								
				521.7	2.664								
ETHYL PROPIONATE	$\text{CH}_3\text{CH}_2\text{COOCH}_2\text{CH}_3$	-	L	298.15	1.940	1	Cited	-	9335				
				303.15	1.958								
				298-303	1.95								
		-	G	410	1.61	1	Exper	± 0.6	31764				
				410	1.60					0	Exper	± 0.6	31764
				410	1.61					1	Deriv	-	28272
410	1.62												
				410	1.63								
FLUORINE, MONATOMIC F	F	-	G	55.55	1.095	0	Theor	-	6625				
				61.11	1.095								
				66.67	1.097								
				72.21	1.098								
				77.78	1.101								
				83.32	1.104								
				88.88	1.107								
				94.43	1.111								
				99.99	1.116								
				105.55	1.121								
				111.10	1.126								
				116.66	1.131								
				122.21	1.136								
				127.77	1.141								
				133.32	1.146								
				144.43	1.156								
				155.55	1.165								
				166.66	1.173								
				177.77	1.180								
				188.88	1.185								
199.99	1.190												
211.10	1.193												
222.21	1.196												
233.32	1.198												
244.43	1.199												
255.55	1.200												
(continued)													

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
FLUORINE, MONATOMIC (continued)	F	-	G	266.66	1.199	0	Theor	-	6625
				277.77	1.198				
				305.55	1.196				
				333.32	1.192				
				361.10	1.188				
				388.88	1.183				
				416.66	1.177				
				444.43	1.172				
				472.21	1.168				
				499.99	1.163				
				527.77	1.159				
				555.55	1.155				
				611.10	1.148				
				666.66	1.141				
				722.21	1.136				
				777.77	1.132				
				833.32	1.128				
				888.88	1.124				
				944.43	1.122				
				999.99	1.119				
1055.55	1.117								
1111.09	1.115								
1166.65	1.112								
1333.31	1.109								
1444.42	1.107								
		-	G	55.55	1.095	0	Theor	-	20987
				61.10	1.095				
				66.66	1.097				
				72.21	1.098				
				77.77	1.101				
				83.32	1.104				
				88.88	1.107				
				94.43	1.111				
				99.99	1.116				
				105.55	1.121				
				111.10	1.126				
				116.66	1.131				
				122.21	1.136				
				127.77	1.141				
				133.32	1.146				
				144.43	1.156				
				155.55	1.165				
				166.66	1.173				
				177.77	1.180				
				188.88	1.185				
199.99	1.190								
211.10	1.193								
222.21	1.196								
233.32	1.198								
244.43	1.199								
255.55	1.199								
266.66	1.199								
277.77	1.199								
305.55	1.196								
333.32	1.192								
361.10	1.188								
388.88	1.183								
416.66	1.177								
444.43	1.172								
472.21	1.168								
499.99	1.163								
527.77	1.159								
555.55	1.155								
611.10	1.148								
666.67	1.141								
722.21	1.136								
777.77	1.132								
833.32	1.128								
888.88	1.125								
944.43	1.122								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
FLUORINE, MONATOMIC (continued)	F	-	G	999.99	1.119	0	Theor	-	20987
				1055.54	1.117				
				1111.10	1.115				
				1222.22	1.112				
				1333.32	1.109				
				1444.43	1.107				
				1555.54	1.106				
			G	100	1.116	0	Theor	-	33867
				200	1.190				
				298.16	1.197				
				300	1.197				
				400	1.181				
				500	1.163				
				600	1.150				
				700	1.139				
				800	1.131				
				900	1.125				
				1000	1.120				
				1100	1.116				
				1200	1.113				
				1300	1.110				
				1400	1.108				
				1500	1.107				
G	100	1.116	0	Theor	-	24959			
	200	1.190							
	298.15	1.197							
	300	1.197							
	400	1.181							
	500	1.163							
	600	1.149							
	700	1.138							
	800	1.130							
	900	1.124							
	1000	1.119							
	1100	1.115							
	1200	1.112							
	1300	1.110							
	1400	1.108							
	1500	1.106							
G	250	1.199	0	Theor	-	401			
	273.16	1.199							
	298.16	1.197							
	300	1.197							
	400	1.181							
	500	1.163							
	600	1.149							
	700	1.138							
	800	1.130							
	900	1.124							
	1000	1.119							
	1100	1.116							
	1200	1.113							
	1300	1.110							
	1400	1.108							
	1500	1.106							
G	298.16	1.197	1	Theor	-	11051			
	300	1.197							
	400	1.181							
	500	1.163							
	600	1.149							
	700	1.138							
	800	1.130							
	900	1.124							
	1000	1.119							
	1100	1.116							
1200	1.112								
1300	1.110								
(continued)									

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.																																																																																																																																																																																																								
FLUORINE, MONATOMIC (continued)	F	-	G	1400	1.108	1	Theor	-	11051																																																																																																																																																																																																								
				1500	1.106					FLUOROBENZENE	C ₆ H ₅ F	99.9	L	240	1.422	1	Exper	2	12139	250	1.454	260	1.477	270	1.496	280	1.509	290	1.519	300	1.527	310	1.537	320	1.560	-	G	370	1.262	1	Exper	±0.3	33588	-	G	390	1.317	-	G	410	1.369	-	G	370	1.245	0	Deriv		33588	-	G	390	1.302	-	G	410	1.358	-	G	370	1.167	0	Theor	-	33588	-	G	390	1.223	-	G	410	1.280	FLUOROETHANE	CH ₃ CH ₂ F	-	G	100	0.811	0	Theor	-	47854	200	1.017	298.15	1.281	300	1.287	400	1.595	500	1.881	600	2.128	700	2.340	800	2.678	900	2.678	1000	2.813	1100	2.930	1200	3.033	1300	3.121	1400	3.199	1500	3.265	-	G	235.5	1.047	0	Theor	-	32178	-	G	298	1.222	-	G	400	1.537	-	G	600	2.058	FLUOROETHYLENE	CH ₂ CHF	-	L	153.15	1.071	1	Corr	1.8	49090	163.15	1.079	173.15	1.092	183.15	1.100	193.15	1.113	203.15	1.125	213.15	1.138	223.15	1.151	233.15	1.167	243.15	1.188	253.15	1.209	263.15	1.230	273.15	1.251	283.15	1.280	293.15	1.310	-	G	173.15	0.690	1	Corr	<1	49090	-	G	223.15	0.816	-	G	273.15	0.941	-	G	323.15	1.067	-	G	373.15	1.192	-	G	423.15	1.318
FLUOROBENZENE	C ₆ H ₅ F	99.9	L	240	1.422	1	Exper	2	12139																																																																																																																																																																																																								
				250	1.454																																																																																																																																																																																																												
				260	1.477																																																																																																																																																																																																												
				270	1.496																																																																																																																																																																																																												
				280	1.509																																																																																																																																																																																																												
				290	1.519																																																																																																																																																																																																												
				300	1.527																																																																																																																																																																																																												
				310	1.537																																																																																																																																																																																																												
				320	1.560																																																																																																																																																																																																												
				-	G									370	1.262					1	Exper	±0.3	33588																																																																																																																																																																																										
				-	G									390	1.317																																																																																																																																																																																																		
				-	G									410	1.369																																																																																																																																																																																																		
				-	G					370	1.245	0	Deriv		33588																																																																																																																																																																																																		
-	G	390	1.302																																																																																																																																																																																																														
-	G	410	1.358																																																																																																																																																																																																														
-	G	370	1.167	0	Theor	-	33588																																																																																																																																																																																																										
-	G	390	1.223																																																																																																																																																																																																														
-	G	410	1.280																																																																																																																																																																																																														
FLUOROETHANE	CH ₃ CH ₂ F	-	G	100	0.811	0	Theor	-	47854																																																																																																																																																																																																								
				200	1.017																																																																																																																																																																																																												
				298.15	1.281																																																																																																																																																																																																												
				300	1.287																																																																																																																																																																																																												
				400	1.595																																																																																																																																																																																																												
				500	1.881																																																																																																																																																																																																												
				600	2.128																																																																																																																																																																																																												
				700	2.340																																																																																																																																																																																																												
				800	2.678																																																																																																																																																																																																												
				900	2.678																																																																																																																																																																																																												
				1000	2.813																																																																																																																																																																																																												
				1100	2.930																																																																																																																																																																																																												
				1200	3.033																																																																																																																																																																																																												
				1300	3.121																																																																																																																																																																																																												
				1400	3.199																																																																																																																																																																																																												
				1500	3.265																																																																																																																																																																																																												
				-	G					235.5	1.047	0	Theor	-	32178																																																																																																																																																																																																		
-	G	298	1.222																																																																																																																																																																																																														
-	G	400	1.537																																																																																																																																																																																																														
-	G	600	2.058																																																																																																																																																																																																														
FLUOROETHYLENE	CH ₂ CHF	-	L	153.15	1.071	1	Corr	1.8	49090																																																																																																																																																																																																								
				163.15	1.079																																																																																																																																																																																																												
				173.15	1.092																																																																																																																																																																																																												
				183.15	1.100																																																																																																																																																																																																												
				193.15	1.113																																																																																																																																																																																																												
				203.15	1.125																																																																																																																																																																																																												
				213.15	1.138																																																																																																																																																																																																												
				223.15	1.151																																																																																																																																																																																																												
				233.15	1.167																																																																																																																																																																																																												
				243.15	1.188																																																																																																																																																																																																												
				253.15	1.209																																																																																																																																																																																																												
				263.15	1.230																																																																																																																																																																																																												
				273.15	1.251																																																																																																																																																																																																												
				283.15	1.280																																																																																																																																																																																																												
				293.15	1.310																																																																																																																																																																																																												
				-	G					173.15	0.690	1	Corr	<1	49090																																																																																																																																																																																																		
				-	G					223.15	0.816																																																																																																																																																																																																						
-	G	273.15	0.941																																																																																																																																																																																																														
-	G	323.15	1.067																																																																																																																																																																																																														
-	G	373.15	1.192																																																																																																																																																																																																														
-	G	423.15	1.318																																																																																																																																																																																																														
-	G	473.15	1.423																																																																																																																																																																																																														
-	G	523.15	1.506																																																																																																																																																																																																														

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.			
FLUOROETHYLENE (continued)	CH ₂ CHF	-	G	573.15	1.611	1	Corr	<1	49090			
				623.15	1.676							
				673.15	1.682							
				723.15	1.820							
				773.15	1.883							
				823.15	1.966							
				873.15	2.008							
				923.15	2.071							
				973.15	2.113							
				1023.15	2.992							
				1073.15	3.054							
				1123.15	3.096							
				1173.15	3.138							
FLUOROFORM, MONODEUTERATED	CF ₃ D	-	G	100	0.478	0	Theor	-	492			
				200	0.594							
				298.16	0.754							
				300	0.757							
				400	0.910							
				500	1.031							
				600	1.125							
				700	1.196							
				800	1.251							
				900	1.295							
				1000	1.329							
FLUOROMETHANE	CH ₃ F	-	G	200	0.994	0	Theor	-	34113			
				250	1.035							
				300	1.105							
				350	1.196							
				400	1.299							
				450	1.404							
				500	1.511							
				550	1.611							
				600	1.707							
				650	1.797							
				700	1.882							
				750	1.961							
				800	2.035							
			850	2.104								
			900	2.169								
			950	2.229								
			1000	2.285								
					-	G	298.1	1.100	0	Cited	±3	3771
							350	1.195				
							400	1.297				
							500	1.506				
					-	G	298.1	1.09	1	Deriv	-	28292
							373.1	1.20				
		473.1	1.39									
		-	G	298.2	1.097	0	Theor	-	701			
				400	1.288							
				500	1.494							
				600	1.689							
				700	1.861							
				800	2.011							
				900	2.142							
				1000	2.257							
FORMALDEHYDE	HCHO	-	G	273	1.154	0	Theor	-	1514			
				291	1.148							
				298	1.176							
				300	1.179							
				400	1.303							
				500	1.452							
				600	1.600							
				700	1.735							

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
FORMALDEHYDE (continued)	HCHO	-	G	800	1.858	0	Theor	-	1514								
				900	1.967												
				1000	2.059												
				1100	2.139												
				1200	2.209												
				1300	2.269												
				1400	2.321												
				1500	2.366												
				298.15	1.240												
				400	1.393												
				600	1.684												
				800	1.919												
				1000	2.102												
				1200	2.243												
1400	2.346																
1500	2.388																
FORMYL	HCO	-	G	298.16	1.166	0	Theor	-	1702								
				1000	1.607												
				FURAN	C ₄ H ₄ O					-	G	44.33	1.183	1	Exper	1	15376
												67.71	1.144				
												98.99	1.248				
FURFURYL ALCOHOL	C ₄ H ₃ OCH ₂ OH	99.8	L	293.15	2.02	Sat.	Exper	±0.4	1500								
				303.15	2.05												
				313.15	2.10												
				323.15	2.13												
				333.15	2.17												
				343.15	2.21												
HEXADECANE	CH ₃ (CH ₂) ₁₄ CH ₃	-	L	207.89	1.373	1	Exper	-	6539								
				214.19	1.336												
				217.85	1.432												
				223.15	1.478												
				224.85	1.482												
				231.80	1.524												
				232.30	1.524												
				239.75	1.583												
				246.15	1.654												
				249.27	1.641												
				253.80	1.754												
				256.90	1.763												
				258.72	1.842												
				262.85	1.905												
				264.10	1.918												
				267.65	1.964												
				268.75	2.089												
				271.65	2.194												
		275.05	2.529														
		278.45	3.065														
		292.15	2.366														
		293.10	2.32														
		293.65	2.32														
		294.65	2.34														
				99.88	L	295.41	2.210	1	Exper	±0.1	550						
						298.93	2.216										
						301.73	2.222										
						302.50	2.224										
						305.88	2.233										
						308.13	2.240										
						308.70	2.239										
						312.77	2.252										
320.28	2.274																
298.16	2.215																
300	2.219																
310	2.244																
320	2.274																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
HEXADECANE (continued)	CH ₃ (CH ₂) ₁₄ CH ₃	99.88	L	298.16	1.712	0	Theor	-	1702						
				300	1.726										
				400	2.132										
				500	2.527										
				600	2.846										
				700	3.123										
				800	3.361										
				900	3.587										
				1000	3.744										
				1100	3.897										
				1200	4.032										
				1300	4.150										
				1400	4.250										
1500	4.334														
HEXAFLUOROETHANE	(CF ₃) ₂	-	L	183.15	0.916	0	Corr	1.8	49090						
				193.15	0.933										
				203.15	0.954										
				213.15	0.975										
				223.15	0.996										
				233.15	1.017										
				243.15	1.038										
				253.15	1.067										
				263.15	1.096										
				273.15	1.138										
				-	G					173.15	0.586	1	Corr	<1	49090
										223.15	0.648				
		273.15	0.732												
		323.15	0.795												
		373.15	0.879												
		423.15	0.941												
		473.15	1.004												
		523.15	1.046												
		573.15	1.088												
		623.15	1.109												
		673.15	1.151												
723.15	1.171														
773.15	1.192														
823.15	1.213														
873.15	1.222														
923.15	1.234														
973.15	1.243														
1023.15	1.255														
1073.15	1.264														
1123.15	1.276														
1173.15	1.284														
HEXAMETHYLBENZENE	C ₆ (CH ₃) ₆	-	L	457-484 457-528	2.34 2.38	1	Exper	-	1562						
1-HEXANOL	CH ₃ (CH ₂) ₅ OH	-	L	229.64 240.19 250.73 260.70 270.57 280.56 290.01	1.914 1.968 1.999 2.048 2.120 2.243 2.275	1	Exper	1	21812						
HYDRAZINE	N ₂ H ₄	-	G	273.15 291.15 298.15 373.15 473.15 573.15 673.15 773.15 873.15 973.15 1073.15	1.57 1.63 1.66 1.89 2.15 2.35 2.51 2.65 2.78 2.89 2.99	0	Theor		1231						

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
HYDRAZINE (continued)	N ₂ H ₄	-	G	1173.15	3.09	0	Theor	-	1231								
				1273.15	3.19												
				1373.15	3.19												
				1473.15	3.32												
HYDROBROMIC ACID	HBr	-	L	190.7	0.743	Sat.	Theor	3	35181								
				293.4	0.755												
				157.4	0.755												
				198.3	0.748												
				210	0.750												
				-	G					-	G	200	0.360	0	Theor	-	12399
												350	0.360				
												400	0.361				
												450	0.362				
												500	0.364				
												550	0.366				
												600	0.369				
												650	0.372				
												700	0.376				
												750	0.380				
800	0.384																
850	0.388																
900	0.392																
950	0.396																
1000	0.400																
1050	0.403																
1100	0.407																
1150	0.410																
1200	0.413																
1250	0.416																
1300	0.419																
1400	0.425																
1500	0.429																
-	G	-	G	273	0.360	0	Theor	-	1370								
				291	0.360												
				298	0.360												
				300	0.360												
				400	0.361												
				500	0.364												
				600	0.369												
				700	0.376												
				800	0.384												
				900	0.392												
				1000	0.400												
				1100	0.407												
				1200	0.413												
				1300	0.419												
				1400	0.425												
1500	0.430																
-	G	-	G	600	0.369	0	Theor	-	21855								
				800	0.385												
				1000	0.399												
				1200	0.411												
				1400	0.420												
HYDROCYANIC ACID	HCN	-	G	100	1.079	0	Theor	-	27459								
				200	1.173												
				273.15	1.290												
				298.15	1.327												
				300	1.329												
				400	1.452												
500	1.545																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
HYDROCYANIC ACID (continued)	HCN	-	G	600	1.622	0	Theor	-	27459								
				700	1.690												
				800	1.752												
				900	1.809												
				1000	1.861												
				1100	1.908												
				1200	1.950												
				1300	1.988												
				1400	2.023												
				1500	2.053												
										-	G	100	1.079	0	Theor	-	24959
												200	1.174				
												298.15	1.327				
												300	1.329				
												400	1.451				
500	1.544																
600	1.621																
700	1.689																
800	1.751																
900	1.807																
1000	1.858																
1100	1.905																
1200	1.946																
1300	1.984																
1400	2.017																
1500	2.047																
		-	G	282.84	1.500	1	Exper	-	22292								
				283.37	1.582												
		-	G	298.16	1.357	0	Theor	-	1702								
				300	1.359												
				400	1.424												
				500	1.480												
				600	1.534												
				700	1.585												
				800	1.636												
				900	1.683												
				1000	1.766												
				1100	1.803												
				1200	1.803												
				1300	1.836												
				1400	1.865												
				1500	1.892												
										-	G	303.15	2.184	1	Exper	1	12675
343.15	1.579																
383.15	1.427																
403.15	1.423																
420.15	1.421																
HYDROFLUORIC ACID	HF	-	G	100	1.456	0	Theor	-	33867								
				200	1.455												
				298.16	1.455												
				300	1.455												
				400	1.456												
				500	1.458												
				600	1.461												
				700	1.467												
				800	1.477												
				900	1.491												
				1000	1.508												
1100	1.527																
(continued)																	

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.							
HYDROFLUORIC ACID (continued)	HF	-	G	1200	1.547	0	Theor	-	33887							
				1300	1.569											
				1400	1.590											
				1500	1.611											
				-	G					-	100	1.456	0	Theor	-	24959
											200	1.456				
											298.15	1.456				
											300	1.456				
											400	1.457				
											500	1.458				
											600	1.461				
											700	1.467				
											800	1.477				
											900	1.491				
											1000	1.508				
1100	1.528															
1200	1.548															
1300	1.570															
1400	1.591															
1500	1.612															
-	G	-	273	1.456	0	Theor	-	1370								
			291	1.456												
			298	1.456												
			300	1.456												
			400	1.457												
			500	1.457												
			600	1.460												
			700	1.467												
			800	1.477												
			900	1.492												
			1000	1.509												
			1100	1.528												
			1200	1.549												
			1300	1.570												
			1400	1.592												
1500	1.613															
-	G	-	298.1	1.456	0	Theor	-	11656								
			300	1.456												
			400	1.457												
			500	1.457												
			600	1.461												
			800	1.477												
			1000	1.508												
			1200	1.549												
			1400	1.592												
			-	G					-	298.16	1.456	1	Theor	-	11051	
300	1.456															
400	1.457															
500	1.458															
600	1.461															
700	1.467															
800	1.477															
900	1.491															
1000	1.508															
1100	1.527															
1200	1.548															
1300	1.569															
1400	1.590															
1500	1.611															
HYDROFLUORIC ACID, MONODEUTERATED	DF	-			G	298.16	1.387	0		Theor	-					11051
			300	1.387												
			400	1.388												
			500	1.394												
			600	1.407												
			700	1.426												
			800	1.450												
			(continued)													

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
HYDROFLUORIC ACID, MONODEUTERATED (continued)	DF	-	G	900	1.476	0	Theor	-	11051								
				1000	1.503												
				1100	1.530												
				1200	1.555												
				1300	1.578												
				1400	1.599												
				1500	1.618												
HYDROGEN, MONATOMIC	H	-	G	55.55	20.769	0	Theor	-	6625								
				55-500	20.785												
				100-1500	20.622												
				298-1500	20.622												
				528-1445	20.785												
HYDROGEN, MONO-DEUTERATED	HD	-	L	16.60	6.092	Sat.	Corr	-	15661								
				17	6.272												
				18	6.756												
				19	7.199												
				20	7.601												
				21	8.016												
				22	8.432												
										-	G	0	9.65	0	Theor	-	15168
												100	9.66				
												200	9.69				
												300	9.73				
												400	9.79				
												500	9.87				
												600	9.98				
												700	10.12				
												800	10.27				
												900	10.43				
												1000	10.59				
												1100	10.74				
												1200	10.91				
												1300	11.05				
												1400	11.19				
1500	11.31																
		-	G	10	6.881	0	Theor	-	15400								
				15	6.996												
				20	7.438												
				25	8.130												
				30	8.828												
				40	9.686												
				50	9.898												
				60	9.863												
				70	9.797												
				80	9.741												
				90	9.708												
				100	9.689												
				120	9.669												
				140	9.663												
				160	9.658												
				190	9.656												
				220	9.657												
				260	9.658												
298.1	9.661																
300	9.661																
400	9.671																
500	9.689																
600	9.726																
700	9.791																
800	9.890																
1000	10.155																
1250	10.549																
1500	10.939																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p $\text{kJ kg}^{-1} \text{K}^{-1}$	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
HYDROGEN, MONO-DEUTERATED (continued)	HD	-	G	10	6.882	0	Theor	-	15661								
				20	7.428												
				22.13	7.703												
				30	7.431												
				40	9.679												
				50	9.898												
				60	9.866												
				70	9.797												
				80	9.743												
				90	9.710												
				100	9.690												
				120	9.671												
				150	9.661												
				200	9.657												
				250	9.660												
				298.16	9.663												
				300	9.663												
				400	9.672												
				500	9.690												
				600	9.726												
700	9.791																
1000	10.16																
1500	10.95																
		-	G	273.15	9.64	0	Theor	-	21010								
				373.15	9.66												
				473.15	9.69												
				573.15	9.73												
				673.15	9.78												
				773.15	9.87												
				873.15	9.98												
				973.15	10.11												
				1073.15	10.27												
				1173.15	10.42												
				1273.15	10.58												
				1373.15	10.74												
				1473.15	10.90												
				HYDROGEN PEROXIDE	H_2O_2					-	G	298.16	1.267	0	Theor	-	1702
												300	1.269				
400	1.392																
500	1.502																
600	1.601																
700	1.689																
800	1.765																
900	1.830																
1000	1.885																
1100	1.931																
1200	1.967																
1300	1.991																
1400	2.007																
1500	2.015																
HYDROGEN SELENIDE	H_2Se	-	L	210.43	0.838	Sat.	Exper	-	11482								
				212.80	0.840												
				215.09	0.844												
				217.60	0.838												
				219.67	0.835												
				219.60	0.835												
				224.12	0.834												
				224.58	0.837												
				229.56	0.836												
				229.69	0.831												
				HYDROGEN SELENIDE, DIDEUTERATED	D_2Se					-	L	210.86	0.855	Sat.	Exper	-	11482
213.06	0.858																
214.38	0.865																
217.78	0.856																
221.26	0.850																
221.43	0.859																
224.56	0.858																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.					
HYDROGEN SELENIDE, DIDEUTERATED (continued)	D ₂ Se	-	L	225.49	0.857	Sat.	Exper	-	11482					
				227.76	0.847									
				229.17	0.855									
				232.69	0.857									
HYDROGEN SULFIDE, DIDEUTERATED	D ₂ S	-	L	188.76	1.954	Sat.	Exper	-	11482					
				189.34	1.962									
				192.02	1.959									
				193.11	1.976									
				193.42	1.947									
				196.66	1.951									
				197.07	1.967									
				199.88	1.953									
				202.52	1.954									
										0	Theor	-	3973	
					50									0.922
					60									0.922
					70									0.922
					80									0.922
					90									0.922
					100									0.922
					110									0.923
					120									0.923
					130									0.924
					140									0.925
					150									0.927
					160									0.929
					170									0.931
					180									0.934
					190									0.937
					200									0.941
					210									0.945
					220									0.950
	230	0.954												
	240	0.959												
	250	0.964												
	260	0.970												
	270	0.975												
	280	0.981												
	290	0.987												
	300	0.993												
	310	0.999												
	320	1.005												
	330	1.011												
	340	1.017												
	350	1.024												
	360	1.030												
	370	1.037												
	380	1.043												
	390	1.050												
	400	1.057												
	450	1.091												
	500	1.127												
	550	1.162												
	600	1.197												
	650	1.230												
	700	1.261												
	750	1.291												
	800	1.319												
	850	1.345												
	900	1.369												
	950	1.391												
	1000	1.411												
	1050	1.430												
	1100	1.447												
	1150	1.463												
	1200	1.478												
	1300	1.505												
	1400	1.528												
	1500	1.548												

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROGEN SULFIDE, DITRITIATED	T ₂ S	-	G	50	0.873	0	Theor	-	3973
				60	0.873				
				70	0.873				
				80	0.874				
				90	0.874				
				100	0.874				
				110	0.875				
				120	0.877				
				130	0.879				
				140	0.881				
				150	0.885				
				160	0.888				
				170	0.893				
				180	0.896				
				190	0.903				
				200	0.908				
				210	0.914				
				220	0.920				
				230	0.927				
				240	0.933				
250	0.940								
HYDROGEN SULFIDE, MONODEUTERATED	HDS	-	G	50	0.948	0	Theor	-	3973
				80	0.948				
				90	0.949				
				130	0.949				
				140	0.950				
				150	0.950				
				160	0.951				
				170	0.952				
				180	0.953				
				190	0.955				
				200	0.957				
				210	0.959				
				220	0.961				
				230	0.964				
				240	0.967				
				250	0.971				
				260	0.974				
				270	0.978				
				280	0.982				
				290	0.986				
				300	0.991				
				310	0.996				
				320	1.000				
				330	1.005				
				340	1.010				
				350	1.015				
360	1.026								
370	1.027								
380	1.031								
390	1.037								
400	1.042								
450	1.071								
500	1.101								
550	1.130								
600	1.160								
650	1.189								
700	1.217								
750	1.244								
800	1.270								
850	1.295								
900	1.318								
950	1.339								
1000	1.360								
1050	1.379								
1100	1.396								
1150	1.413								
1200	1.428								
1300	1.456								
1400	1.479								
1500	1.500								

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROGEN SULFIDE, MONODEUTERATED MONOTRITIATED	DTS	-	G	50	0.897	0	Theor	-	3973
				60	0.897				
				70	0.897				
				80	0.897				
				90	0.897				
				100	0.898				
				110	0.898				
				120	0.899				
				130	0.900				
				140	0.902				
				150	0.904				
				160	0.907				
				170	0.910				
				180	0.913				
				190	0.917				
				200	0.922				
				210	0.927				
				220	0.932				
				230	0.937				
				240	0.943				
250	0.949								
HYDROGEN SULFIDE, MONOTRITIATED	HTS	-	G	50	0.922	0	Theor	-	3973
				60	0.922				
				70	0.922				
				80	0.922				
				90	0.922				
				100	0.922				
				110	0.922				
				120	0.923				
				130	0.923				
				140	0.924				
				150	0.924				
				160	0.925				
				170	0.927				
				180	0.928				
				190	0.930				
				200	0.933				
				210	0.935				
				220	0.939				
				230	0.942				
				240	0.946				
				250	0.950				
				260	0.955				
				270	0.968				
				280	0.965				
				290	0.970				
				300	0.976				
				310	0.981				
				320	0.987				
				330	0.993				
				340	0.999				
350	1.006								
360	1.012								
370	1.018								
380	1.025								
390	1.031								
400	1.038								
450	1.071								
500	1.104								
550	1.135								
600	1.166								
650	1.195								
700	1.222								
750	1.248								
800	1.272								
850	1.291								
900	1.316								
950	1.335								
1000	1.354								
1050	1.371								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
HYDROGEN SULFIDE, MONOTRITIATED (continued)	HTS	-	G	1100	1.386	0	Theor	-	3973								
				1150	1.401												
				1200	1.415												
				1300	1.439												
				1400	1.460												
				1500	1.478												
HYDROQUINONE	C ₆ H ₄ (OH) ₂	-	L	445.45	2.348	1	Exper	-	21796								
HYDROXYACETANILIDE	CH ₃ CONHC ₆ H ₄ OH	-	L	364.45	1.96	1	Exper	-	21796								
HYDROXYL	OH	-	G	0	1.76	0	Theor	-	15168								
				100	1.74												
				200	1.73												
				300	1.73												
				400	1.74												
				500	1.75												
				600	1.77												
				700	1.80												
				800	1.83												
				900	1.85												
				1000	1.88												
				1100	1.91												
				1200	1.93												
				1300	1.96												
				1400	1.98												
				1500	2.00												
										-	G	273.15	1.76	0	Theor	-	21010
												373.15	1.74				
												473.15	1.73				
												573.15	1.73				
673.15	1.74																
773.15	1.75																
873.15	1.77																
973.15	1.80																
1073.15	1.83																
1173.15	1.85																
1273.15	1.88																
1373.15	1.91																
1473.15	1.93																
		-	G			298.16	1.757	0	Theor			-	1702				
						400	1.740										
						600	1.735										
				800	1.759												
				1000	1.804												
				1200	1.858												
		-	G	300	1.756	0	Theor	-	15418								
				400	1.740												
				500	1.734												
				600	1.736												
				700	1.743												
				800	1.761												
				900	1.780												
				1000	1.805												
IODINE	I ₂	-	G	250	0.144	0	Theor	-	401								
				273.16	0.145												
				300	0.145												
				400	0.147												
				500	0.148												
				700	0.148												
				800	0.149												
				1000	0.149												
1100	0.150																
1500	0.151																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
IODINE (continued)	I ₂	-	G	273	0.145	0	Theor	-	1370
				300	0.145				
				400	0.147				
				500	0.147				
				600	0.148				
				700	0.148				
				800	0.149				
				1100	0.149				
				1200	0.150				
				1500	0.150				
				IODINE, MONATOMIC	I				
1333.32	0.164								
1444.43	0.165								
1555.54	0.165								
		-	G	250	0.164	0	Theor	-	401
				1300	0.164				
				1400	0.165				
				1500	0.165				
		-	G	555.55	0.164	0	Theor	-	6625
				1444.42	0.165				
IODINE BROMIDE	IBr	-	G	250	0.174	0	Theor	-	401
				273.16	0.176				
				300	0.178				
				400	0.179				
				500	0.180				
				600	0.181				
				700	0.181				
				800	0.182				
				900	0.182				
				1000	0.183				
				1300	0.183				
1400	0.184								
1500	0.184								
IODINE CHLORIDE	ICl	-	G	250	0.215	0	Theor	-	401
				273.16	0.217				
				298.16	0.219				
				300	0.219				
				400	0.224				
				500	0.227				
				600	0.229				
				700	0.230				
				800	0.231				
				900	0.231				
				1000	0.232				
				1100	0.232				
				1200	0.233				
1400	0.233								
1500	0.234								
IODINE FLUORIDE	IF	-	G	250	0.223	0	Theor	-	401
				273.16	0.226				
				298.16	0.229				
				300	0.230				
				400	0.239				
				500	0.245				
				600	0.249				
				700	0.252				
				800	0.254				
				900	0.255				
				1000	0.256				
				1100	0.257				
				1200	0.258				
1300	0.258								
1400	0.259								
1500	0.260								

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
IODINE HEPTAFLUORIDE	IF ₇	-	G	250	0.488	0	Theor	-	401
				273.16	0.496				
				298.16	0.520				
				300	0.522				
				400	0.588				
				500	0.625				
				600	0.647				
				700	0.662				
				800	0.671				
				900	0.678				
1000	0.683								
IODINE PENTAFLUORIDE	IF ₅	-	G	250	0.408	0	Theor	-	401
				273.16	0.427				
				298.16	0.447				
				300	0.448				
				400	0.501				
				500	0.531				
				600	0.550				
				700	0.562				
				800	0.570				
				900	0.576				
				1000	0.580				
				1100	0.584				
				1200	0.586				
				1300	0.588				
				1400	0.590				
1500	0.591								
IODOBENZENE	C ₆ H ₅ I	99.9	L	250	0.759	1	Exper	2	12139
				260	0.765				
				270	0.770				
				280	0.772				
				290	0.776				
				300	0.778				
				310	0.779				
				320	0.788				
Iodomethane	CH ₃ I	-	L	240	0.578	1	Exper	0.5	1353
				243.4	0.575				
				245.2	0.576				
				250	0.574				
				254.2	0.575				
				260	0.572				
				260.4	0.573				
				270	0.572				
				274.5	0.567				
				280	0.574				
				284.3	0.572				
				290	0.577				
				294.3	0.579				
				300	0.582				
				303.2	0.588				
		-	L	253-287	0.87	1	Exper	-	731
				220-290	0.85				
				222-292	0.85				
				217-294	0.85				
				291-308	0.90				
		-	G	298.1	0.311	0	Theor	-	3771
				350	0.384				
				400	0.364				
				500	0.410				
				600	0.451				
1-iodo-3-methylbutane	(CH ₃) ₂ CH(CH ₂) ₂ I	-	L	286-327	0.94	1	Exper	-	731
				290-372	0.98				
				289-410	1.02				
isobutyl acetate	CH ₃ COOCH ₂ CH(CH ₃) ₂	-	G	410	1.875	1	Exper	0.6	31764
				410	1.861				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
ISOPENTYL ACETATE	CH ₃ COO(CH ₂) ₂ CH(CH ₃) ₂	-	L	298.15	1.940	1	Cited	-	9335								
				303.15	1.958												
				298-303	1.95												
ISOPRENE	CH ₂ C(CH ₃)CHCH ₂	-	L	243.15	2.059	1	Corr	1.8	45861								
				248.15	2.075												
				253.15	2.088												
				258.15	2.100												
				263.15	2.117												
				268.15	2.130												
				273.15	2.146												
				278.15	2.163												
				283.15	2.184												
				288.15	2.201												
				293.15	2.222												
				298.15	2.243												
				303.15	2.259												
				308.15	2.280												
				313.15	2.301												
				318.15	2.318												
				323.15	2.335												
				328.15	2.360												
				333.15	2.381												
				343.15	2.427												
										-	G	273	1.425	0	Theor	-	1283
				291	1.505												
				298	1.536												
				300	1.548												
				400	1.953												
				500	2.279												
				600	2.543												
				700	2.764												
				800	2.949												
				900	3.108												
				1000	3.250												
				1100	3.373												
				1200	3.477												
1300	3.575																
1400	3.655																
1500	3.723																
		-	G	273.15	1.381	1	Corr	0.5	45861								
323.15	1.569																
373.15	1.736																
423.15	1.925																
473.15	2.092																
523.15	2.259																
573.15	2.385																
623.15	2.510																
673.15	2.636																
723.15	2.741																
773.15	2.824																
823.15	2.929																
873.15	3.033																
923.15	3.096																
973.15	3.180																
1023.15	3.264																
1073.15	3.305																
1123.15	3.389																
1173.15	3.431																
1223.15	3.494																
1273.15	3.535																
		-	G	300	1.377	1	Corr	-	2500								
400	1.437																
500	2.075																
600	2.369																
700	2.626																
800	2.846																
900	3.031																
1000	3.178																

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
ISOPROPYLAMINE	(CH ₃) ₂ CHNH ₂	99.8	L	303.15	2.73	Sat.	Exper	0.4	1500								
				313.15	2.77												
				323.15	2.82												
				333.15	2.86												
				343.15	2.90												
				353.15	2.94												
KETENE	H ₂ CCO	-	G	250	1.031	0	Theor	-	1220								
				273.16	1.081												
				291.16	1.119												
				298.16	1.134												
				300	1.138												
				400	1.334												
				500	1.497												
				600	1.630												
				700	1.744												
				800	1.839												
			900	1.922													
			1000	1.994													
			1100	2.056													
			1200	2.111													
			1300	2.158													
			1400	2.199													
			1500	2.235													
			-	-	-					G	273	1.088	0	Theor	-	1514	
											291	1.124					
											298	1.138					
300	1.191																
400	1.336																
500	1.498																
600	1.631																
700	1.744																
800	1.839																
900	1.922																
1000	1.993																
1100	2.056																
1200	2.110																
1300	2.158																
1400	2.198																
1500	2.234																
MESITYLENE	C ₆ H ₃ (CH ₃) ₃	-	L	290-329	1.82	1	Exper	-	1562								
				287-365	1.86												
				290-365	1.88												
				291-395	1.95												
				290-428	1.99												
				294.26	1.650												
99.9978	-	99.9978	L	299.82	1.676	Sat.	Exper	1	1278								
				305.37	1.702												
				310.93	1.727												
				316.49	1.753												
				322.04	1.779												
				327.59	1.805												
				333.15	1.831												
				338.15	1.857												
				344.26	1.884												
				349.82	1.910												
				355.37	1.936												
				360.93	1.962												
				366.48	1.989												
				372.04	2.015												
				377.59	2.042												
				-	-					-	G	298.16	1.241	0	Theor	-	33589
												400	1.612				
												500	1.945				
600	2.231																
800	2.678																
1000	2.999																
1500	3.482																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
MESTYLENE (continued)	C ₆ H ₆ (CH ₂) ₂	-	G	300	1.248	1	Deriv	-	2500
				400	1.612				
				500	1.939				
				600	2.226				
				800	2.685				
				1000	2.990				
METHANE, DIDEUTERATED	CH ₂ D ₂	-	G	93.15	1.842	0	Theor	-	20459
				173.15	1.856				
				298.15	2.085				
				373.15	2.391				
				573.15	3.093				
				773.15	3.732				
1273.15	4.747								
METHANE, DIDEUTERATED DITRITIATED	CD ₂ T ₂	-	G	93.15	1.506	0	Theor	-	20459
				173.15	1.549				
				298.15	1.924				
				373.15	2.220				
				573.15	2.930				
				773.15	3.459				
1273.15	4.186								
METHANE, DITRITIATED	CH ₂ T ₂	-	G	93.15	1.657	0	Theor	-	20459
				173.15	1.682				
				298.15	1.951				
				373.15	2.213				
				573.15	2.930				
				773.15	3.506				
1273.15	4.373								
METHANE, MONODEUTERATED	CH ₃ D	-	G	93.15	1.951	0	Theor	-	20459
				173.15	1.958				
				298.15	2.145				
				373.15	2.380				
				573.15	3.124				
				773.15	3.784				
1273.15	4.893								
METHANE, MONODEUTERATED TRITITIATED	CDT ₃	-	G	93.15	1.440	0	Theor	-	20459
				173.15	1.494				
				298.15	1.889				
				373.15	2.186				
				573.15	2.880				
				773.15	3.385				
1273.15	4.054								
METHANE, MONOTRITIATED	CH ₃ T	-	G	93.15	1.842	0	Theor	-	20459
				173.15	1.851				
				298.15	2.053				
				373.15	2.294				
				573.15	3.021				
				773.15	3.649				
1273.15	4.671								
METHANE, TETRADEUTERATED	CD ₄	-	G	93.15	1.657	0	Theor	-	20459
				173.15	1.686				
				298.15	2.017				
				373.15	2.316				
				573.15	3.068				
				773.15	3.660				
1273.15	4.510								
METHANE, TETRATRITIATED	CT ₄	-	G	93.15	1.380	0	Theor	-	20459
				173.15	1.444				
				298.15	1.861				
				373.15	2.156				
				573.15	2.831				
				773.15	3.310				
1273.15	3.928								

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
2-METHYLBUTANE (continued)	(CH ₃) ₂ CHCH ₂ CH ₃	-	L	275.0	2.171	1	Exper	<1	31769								
				275.2	2.167												
				275.7	2.171												
				275.8	2.180												
-	L	-	L	199.82	1.820	1	Corr	-	19092								
				227.59	1.946												
				255.37	2.071												
				283.15	2.197												
				310.93	2.343												
				338.71	2.489												
				366.48	2.636												
				394.26	2.803												
				422.04	2.971												
				449.82	3.138												
				477.59	3.305												
				-	L					-	L	243.15	2.092	1	Corr	1.8	45861
												248.15	2.109				
												253.15	2.117				
258.15	2.134																
263.15	2.146																
268.15	2.163																
273.15	2.180																
278.15	2.201																
283.15	2.218																
288.15	2.234																
293.15	2.259																
298.15	2.276																
303.15	2.297																
308.15	2.322																
313.15	2.343																
318.15	2.360																
323.15	2.385																
328.15	2.406																
333.15	2.431																
343.15	2.485																
-	G	-	G	273.15	1.548	1	Corr	0.5	45861								
				323.15	1.778												
				373.15	2.008												
				423.15	2.238												
				473.15	2.427												
				523.15	2.615												
				573.15	2.803												
				623.15	2.971												
				673.15	3.138												
				723.15	3.284												
				773.15	3.410												
				823.15	3.556												
				873.15	3.682												
				923.15	3.807												
973.15	3.891																
1023.15	3.975																
1073.15	4.038																
1123.15	4.100																
1173.15	4.163																
-	G	-	G	298.16	1.672	0	Theor	-	20085								
				300	1.680												
				400	2.149												
				500	2.565												
				600	2.916												
				700	3.213												
				800	3.468												
				900	3.688												
				1000	3.880												
				1100	4.048												
				1200	4.192												
1300	4.319																
(continued)																	

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
2-METHYLBUTANE (continued)	(CH ₃) ₂ CHCH ₂ CH ₃	-	G	1400	4.429	0	Theor	-	20085						
				1500	4.524										
2-METHYL-2-BUTANOL	(CH ₃) ₂ COHCH ₂ CH ₃	81	G	454	2.348	1	Theor	2	1384						
				95	L					273.15	2.609	1	Exper	0.25	1790
2-METHYL-2-BUTANOL	(CH ₃) ₂ COHCH ₂ CH ₃	99.8	G	381.35	2.146	1	Exper	±0.3	57382						
				384.65	2.036										
				387.45	1.993										
				396.05	2.004										
				398.05	2.027										
				425.95	2.133										
				475.25	2.285										
				520.85	2.420										
				576.05	2.713										
				3-METHYL-1-BUTANOL	(CH ₃) ₂ CH(CH ₂) ₂ OH					-	L	273.15	2.208	1	Exper
-	L	293.15	2.29			1	Exper	-	21778						
-	L	303.15	2.38												
-	L	298.15	2.318			1	Deriv	-	9335						
-	L	298.15	2.379												
-	L	303.15	2.384												
-	L	303.15	2.436												
-	L	295-399	2.92			1	Exper	0.3	17524						
99.8	G	451.65	2.174			1	Exper	0.3	57382						
-	G	474.55	2.223												
-	G	488.35	2.281												
-	G	499.15	2.338												
2-METHYL-2-BUTENE	CH ₃ C(CH ₃)CHCH ₃	-	L	143.9	1.874	1	Exper	<1	31768						
				152.8	1.874										
				173.4	1.879										
				183.8	1.891										
				201.4	1.920										
				203.4	1.929										
				213.7	1.950										
				231.5	1.971										
				233.5	1.979										
				253.5	2.029										
				263.4	2.054										
				275.4	2.084										
				283.4	2.113										
				289.0	2.125										
293.9	2.142														
3-METHYL-1-BUTYNE	(CH ₃) ₂ CHCCH	-	G	298.16	1.537	0	Theor	-	4525						
				300	1.544										
				400	1.910										
				500	2.224										
				600	2.494										
				700	2.715										
				800	2.912										
				900	3.078										
				1000	3.219										
				1100	3.348										
				1200	3.458										
1300	3.551														
1400	3.637														
1500	3.710														
METHYL CYANIDE	CH ₃ CN	-	G	273.15	1.216	0	Theor	-	3771						
				298.15	1.272										
				373.15	1.439										
				473.15	1.650										
				573.15	1.827										
				673.15	2.000										

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.	
METHYL CYANIDE (continued)	CH ₃ CN	-	G	773.15	2.144	0	Theor	-	3771	
		-	G	291.16	1.259	0	Theor	-	8059	
				298.16	1.273					
				300	1.277					
				350	1.388					
				400	1.498					
				450	1.603					
				500	1.703					
				550	1.802					
				600	1.883					
				650	1.964					
				700	2.038					
				800	2.171					
				900	2.293					
		1000	2.405							
		1100	2.497							
		1200	2.568							
METHYLCYCLOHEXANE	C ₆ H ₁₁ CH ₃	-	L	151.4	1.418	1	Exper	<1	31768	
				157.1	1.435					
				170.3	1.469					
				182.6	1.502					
				199.4	1.540					
				214.3	1.582					
				229.4	1.628					
				244.9	1.674					
				260.0	1.724					
				275.4	1.782					
				285.2	1.824					
				294.2	1.854					
			G	390	1.862	1	Exper	0.3		33588
			G	410	1.945					
	G	390	1.841	0	Deriv	-	33588			
	G	410	1.926							
	G	390	1.807	0	Theor	-	33588			
	G	410	1.896							
	G	407.15	1.889	1	Exper	-	28289			
	G	410	1.896	1	Exper	0.6	31764			
	G	410	1.879	0	Exper	0.6	31764			
	G	410	1.913	1	Deriv	-	28272			
METHYLCYCLOPENTANE	C ₅ H ₉ CH ₃	-	L	139.0	1.473	1	Exper	0.05	33584	
				169.5	1.494					
				189.2	1.527					
				210.3	1.573					
				230.0	1.623					
				251.3	1.690					
				275.1	1.774					
				293.7	1.870					
			L	299.82	1.891	Sat.	Exper	-		974
				305.37	1.916					
				310.93	1.942					
				316.48	1.969					
				322.04	1.995					
				327.59	2.022					
		333.15	2.049							
		338.71	2.077							
		344.26	2.105							
		349.82	2.134							
		355.37	2.162							
		360.93	2.192							
		366.48	2.221							

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
METHYLENE	CH ₂	-	G	298.16 1000	2.355 3.030	0	Theor	-	1702
METHYL ETHER	(CH ₃) ₂ O	-	L	153.15	2.113	1	Corr	2	52325
				173.15	2.134				
				193.15	2.155				
				213.15	2.176				
				233.15	2.218				
				253.15	2.280				
				273.15	2.343				
		293.15	2.469						
		-	G	272.20	1.346	1	Cited	-	35191
				300.76	1.430				
				333.25	1.527				
		370.42	1.631						
		99.85	G	272.20	1.319	1	Exper	-	13243
				300.76	1.407				
				333.25	1.507				
				370.42	1.614				
		-	G	273.15	1.360	1	Corr	1	52325
323.15	1.506								
373.15	1.653								
423.15	1.799								
473.15	1.946								
523.15	2.092								
573.15	2.238								
623.15	2.343								
673.15	2.469								
723.15	2.573								
773.15	2.678								
823.15	2.782								
873.15	2.866								
923.15	2.971								
973.15	3.033								
1023.15	3.117								
1073.15	3.180								
1123.15	3.222								
1173.15	3.284								
1223.15	3.347								
1273.15	3.410								
-	G	298.15	1.38	1	Exper	-	14727		
		370.25	1.53						
2-METHYLFURAN	C ₄ H ₈ OCH ₃	-	L	190	1.571	1	Exper	-	20068
				200	1.576				
				210	1.583				
				220	1.594				
				230	1.607				
				240	1.622				
				250	1.640				
				260	1.660				
				270	1.681				
				273.15	1.688				
				290	1.705				
				290	1.729				
				298.15	1.751				
300	1.756								
2-METHYLHEPTANE	(CH ₃) ₂ CH(CH ₂) ₄ CH ₃	-	L	283.15	2.144	Sat.	Exper	0.1	1781
				288.15	2.163				
				293.15	2.183				
				298.15	2.202				
				303.15	2.221				
				308.15	2.241				
-	L	299.82	2.085	Sat.	Exper	±3	1834		
		305.37	2.108						

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-METHYLHEPTANE (continued)	(CH ₃) ₂ CH(CH ₂) ₄ CH ₃	-	L	310.93	2.133	Sat.	Exper	±3	1824
				316.48	2.157				
				322.04	2.182				
				327.59	2.208				
				333.15	2.233				
				338.71	2.259				
				344.26	2.285				
				349.82	2.313				
				355.55	2.338				
				360.93	2.366				
				366.48	2.394				
3-METHYLHEPTANE	CH ₃ CH ₂ CH(CH ₃)(CH ₂) ₃ CH ₃	-	L	283.15	2.128	Sat.	Exper	0.1	1781
				288.15	2.147				
				293.15	2.166				
				298.15	2.185				
				303.15	2.205				
308.15	2.226								
4-METHYLHEPTANE	[CH ₃ (CH ₂) ₂] ₂ CH(CH ₃)	-	L	278.15	2.111	Sat.	Exper	0.1	1781
				283.15	2.133				
				288.15	2.154				
				293.15	2.176				
				298.15	2.198				
				303.15	2.219				
				308.15	2.241				
				313.15	2.264				
318.15	2.286								
2-METHYLHEXANE	(CH ₃) ₂ CH(CH ₂) ₃ CH ₃	-	L	160.2	1.787	Sat.	Exper	1	31769
				166.0	1.799				
				180.3	1.837				
				195.2	1.879				
				211.0	1.925				
				225.0	1.962				
				240.3	2.008				
				255.4	2.054				
				275.8	2.121				
				280.6	2.163				
				286.2	2.171				
				292.4	2.188				
				METHYLHYDRAZINE	CH ₃ NHNH ₂				
300	1.55								
400	1.91								
500	2.21								
600	2.46								
700	2.66								
800	2.84								
900	3.01								
1000	3.14								
1200	3.37								
1500	3.61								
METHYLIDYNE	CH	-	G	298.16	2.235	0	Theor	-	1702
				1000	2.419				
METHYL ISOCYANIDE	CH ₃ NC	-	G	273.15	1.252	0	Theor	-	3771
				298.15	1.301				
				373.15	1.453				
				473.15	1.651				
				573.15	1.840				
				673.15	2.001				
				773.15	2.144				
2-METHYLPENTANE	(CH ₃) ₂ CH(CH ₂) ₂ CH ₃	99.971	L	120	1.706	1	Exper	0.2	8669
				130	1.724				
				140	1.743				
				150	1.762				
				160	1.783				
				170	1.805				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
2-METHYLPENTANE (continued)	$(\text{CH}_3)_2\text{CH}(\text{CH}_2)_2\text{CH}_3$	99.971	L	180	1.829	1	Exper	0.2	8669						
				190	1.854										
				200	1.881										
				210	1.910										
				220	1.941										
				230	1.975										
				240	2.010										
				250	2.047										
				260	2.086										
				270	2.127										
				280	2.168										
				290	2.212										
				300	2.256										
				99.95	L					120	1.674	1	Exper	2	12139
										130	1.713				
		140	1.751												
		150	1.793												
		160	1.776												
		170	1.858												
		180	1.895												
		190	1.929												
		200	1.963												
		210	1.999												
		220	2.032												
		230	2.065												
		240	2.101												
		250	2.136												
		260	2.171												
		270	2.205												
		280	2.243												
290	2.276														
300	2.309														
310	2.349														
320	2.423														
-	G	-	298.16	1.673	0	Theor	-	20085							
			300	1.681											
			400	2.136											
			500	2.549											
			600	2.894											
			700	3.190											
			800	3.438											
			900	3.656											
			1000	3.846											
			3-METHYLPENTANE	$(\text{CH}_3\text{CH}_2)_2\text{CH}(\text{CH}_3)$					-	L	100	1.667	1	Exper	0.2
110	1.678														
120	1.694														
130	1.712														
140	1.731														
150	1.751														
160	1.771														
170	1.792														
180	1.815														
190	1.839														
200	1.865														
210	1.892														
220	1.921														
230	1.952														
240	1.986														
250	2.021														
260	2.057														
270	2.096														
280	2.136														
290	2.179														
300	2.222														
99.95	L	-	120	1.729	1	Exper	2	12139							
			130	1.769											
			140	1.805											
(continued)															

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
3-METHYLPENTANE (continued)	$(CH_2CH_2)_2CH(CH_3)$	99.95	L	150	1.837	1	Exper	2	12139								
				160	1.865												
				170	1.894												
				180	1.917												
				190	1.942												
				200	1.964												
				210	1.985												
				220	2.005												
				230	2.024												
				240	2.043												
				250	2.060												
				260	2.079												
				270	2.103												
				280	2.119												
				290	2.142												
				300	2.182												
				310	2.243												
				320	2.348												
										-	G	298.16	1.706	0	Theor	-	20085
												300	1.714				
400	2.166																
500	2.569																
600	2.908																
700	3.200																
800	3.447																
900	3.661																
1000	3.850																
4-METHYL-2-PENTANONE	$CH_3COCH_2CH(CH_3)_2$	-	L			193.15	1.757	1	Corr			2-5	51360				
				203.15	1.766												
				213.15	1.774												
				223.15	1.782												
				233.15	1.795												
				243.15	1.807												
				253.15	1.824												
				263.15	1.841												
				273.15	1.862												
				283.15	1.879												
				293.15	1.900												
				303.15	1.920												
				313.15	1.941												
				323.15	1.966												
				333.15	1.996												
				343.15	2.025												
				353.15	2.054												
				363.15	2.084												
				373.15	2.117												
				383.15	2.151												
393.15	2.188																
		-	G	273.15	1.423	1	Corr	1	51360								
				323.15	1.590												
				373.15	1.757												
				423.15	1.925												
				473.15	2.071												
				523.15	2.218												
				573.15	2.343												
				623.15	2.469												
				673.15	2.594												
				723.15	2.699												
				773.15	2.803												
				823.15	2.887												
				873.15	2.992												
				923.15	3.054												
				973.15	3.138												
1023.15	3.201																
1073.15	3.284																
1123.15	3.326																
1173.15	3.368																
1223.15	3.421																
1273.15	3.473																

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.					
2-METHYL-1-PROPANOL	(CH ₃) ₂ CHCH ₂ OH	-	L	278.34	2.227	1	Exper	0.5	4671					
				296.35	2.475									
				319.01	2.761									
		-	L	293.15	2.43	1	Exper	-	21778					
				303.15	2.52									
		-	L	295-372	2.90	1	Exper	0.3	17524					
				295-379	2.95									
		-	L	298.15	2.438	1	Deriv	-	9335					
				303.15	2.494									
		-	G	-	383	2.115	1	Exper	0.1	525				
					394	1.995								
					405	1.994								
					417	2.017								
					428	2.041								
					437	2.067								
99.8	G				390.55	1.988					1	Exper	±0.3	57382
397.65	1.968													
406.95	1.975													
416.95	1.982													
424.05	2.003													
441.85	2.053													
451.25	2.093													
474.35	2.171													
-	G	-	410	1.88	1	Exper	0.6	31764						
			410	1.87										
-	G	-	410	1.812	1	Deriv	-	28272						
			410	1.846										
2-METHYL-2-PROPANOL	(CH ₃) ₃ COH	-	G	359	2.321	1	Exper	0.1	525					
				363	2.161									
				373	2.045									
				383	2.012									
				394	2.014									
				405	2.028									
				417	2.059									
				428	2.091									
		437	2.115											
		99.8	G	360.55	2.118	1	Exper	±0.3	57382					
		372.85	2.028											
		385.65	2.002											
410.85	2.031													
-	G	-	439.85	2.121	1	Deriv	-	14170						
			441.45	2.125										
			470.75	2.225										
			499.25	2.298										
-	L	-	407.15	0.886	1	Deriv	-	14170						
			243.15	2.100					1	Corr	1.8	45861		
248.15	2.117													
253.15	2.138													
258.15	2.155													
263.15	2.176													

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
2-METHYLPROPENE (continued)	(CH ₃) ₂ CCH ₂	-	L	268.15	2.192	1	Corr	1.8	45861		
				273.15	2.213						
				278.15	2.238						
				283.15	2.259						
				288.15	2.280						
				293.15	2.305						
				298.15	2.326						
				303.15	2.351						
				308.15	2.377						
				313.15	2.406						
				318.15	2.435						
				323.15	2.473						
				328.15	2.506						
				333.15	2.540						
				343.15	2.611						
				-	G	273	1.486	0	Theor	-	28505
		291	1.560								
		298	1.589								
		300	1.595								
		400	1.982								
		500	2.330								
		600	2.633								
		700	2.894								
		800	3.122								
		900	3.321								
		1000	3.494								
		1100	3.646								
		1200	3.776								
		1300	3.891								
		1400	3.991								
		1500	4.078								
				-	G	273.15	1.485	1	Corr	0.5	45861
		323.15	1.569								
		373.15	1.883								
		423.15	2.071								
		473.15	2.259								
523.15	2.448										
573.15	2.615										
623.15	2.741										
673.15	2.866										
723.15	2.992										
773.15	3.096										
823.15	3.201										
873.15	3.305										
923.15	3.410										
973.15	3.494										
1023.15	3.598										
1073.15	3.661										
1123.15	3.724										
1173.15	3.807										
1223.15	3.870										
1273.15	3.933										
		-	G	298.16	1.589	0	Theor	-	198		
300	1.595										
400	1.982										
500	2.330										
600	2.633										
700	2.894										
800	3.122										
900	3.321										
1000	3.494										
1100	3.646										
1200	3.776										
1300	3.891										
1400	3.991										
1500	4.078										

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
METHYL SULFIDE	(CH ₃) ₂ S	-	G	298.16	1.155	0	Theor	-	948						
				400	1.371										
				500	1.570										
				600	1.758										
				700	1.925										
				800	2.071										
				900	2.199										
				1000	2.315										
NAPHTHALENE	C ₁₀ H ₈	-	L	353.13	1.714	1	Exper	-	21796						
1-NAPHTHOL	C ₁₀ H ₇ OH	-	L	368.15	1.93	1	Exper	-	21796						
2-NAPHTHOL	C ₁₀ H ₇ OH	-	L	393.75	2.00	1	Exper	-	21796						
m-NITROANILINE	O ₂ NC ₆ H ₄ NH ₂	-	L	384.95	1.91	1	Exper	-	21796						
o-NITROANILINE	O ₂ NC ₆ H ₄ NH ₂	-	L	342.45	1.80	1	Exper	-	21796						
p-NITROANILINE	O ₂ NC ₆ H ₄ NH ₂	-	L	420.65	2.00	1	Exper	-	21796						
NITROBENZENE	C ₆ H ₅ NO ₂	-	L	278.97	1.427	1	Exper	-	4306						
				280.50	1.431										
				281.76	1.435										
				283.54	1.439										
				285.56	1.443										
				287.49	1.448										
				289.47	1.452										
				290.75	1.456										
				291.39	1.460										
				293.42	1.464										
				-	293.15					1.421	1	Cited	-	9335	
				-	293.15					1.423					
				-	293.15					1.477					
				-	298.15					1.431					
-	298.15	1.445													
-	298.15	1.485													
-	L	293.15	1.43	1	Exper	-	21778								
-	L	303.15	1.44												
-	L	293.15	1.42	1	Exper	-	21776								
-	L	303.15	1.44												
-	L	313.15	1.46												
-	L	323.15	1.48												
m-NITROBENZOIC ACID	C ₆ H ₄ (NO ₂)COOH	-	L	414.25	2.035	1	Exper	-	21796						
o-NITROBENZOIC ACID	C ₆ H ₄ (NO ₂)COOH	-	L	418.95	1.677	1	Exper	-	21796						
p-NITROBENZOIC ACID	C ₆ H ₄ (NO ₂)COOH	-	L	512.35	1.878	1	Exper	-	21796						
NITROGEN, MONATOMIC	N	-	G	55.55	1.484	0	Theor	-	6625						
				1444.42	1.484										
				-	55.55					1.485	0	Theor	-	20987	
				-	1444.43					1.485					
-	G	100	1.484	0	Theor	-	24959								
-	G	1500	1.484												
-	G	298.16	1.484	0	Theor	-	1702								
-	G	1400	1.484												
NITROMETHANE	CH ₃ NO ₂	-	L	298.15	1.649	1	Cited	-	9335						
				303.15	1.651										
				99.8	L					303.15	1.766	Sat.	Exper	0.4	1500
				313.15	1.782										
-	L	323.15	1.795												

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
NITROMETHANE (continued)	CH ₃ NO ₂	99.8	L	333.15	1.807	Sat.	Exper	0.4	1500
				343.15	1.824				
				353.15	1.841				
				363.15	1.858				
				373.15	1.874				
2-OCTYL ACETATE	CH ₃ COOCHCH ₂ (CH ₂) ₇ CH ₃	-	L	298.15	1.940	1	Cited	-	9335
				303.15	1.958				
OXYGEN, MONATOMIC	O	-	G	55.55	1.394	0	Theor	-	6625
				61.11	1.414				
				66.67	1.431				
				72.21	1.462				
				77.78	1.458				
				83.32	1.468				
				88.88	1.474				
				94.43	1.479				
				99.99	1.481				
				105.55	1.482				
				111.10	1.482				
				116.66	1.481				
				122.21	1.478				
				127.77	1.475				
				133.32	1.472				
				144.43	1.464				
				155.55	1.455				
				166.66	1.446				
				177.77	1.438				
				188.88	1.429				
				199.99	1.421				
				211.10	1.413				
				222.21	1.406				
				233.32	1.399				
				244.43	1.393				
				255.55	1.387				
				266.66	1.382				
				277.77	1.377				
				305.55	1.367				
				333.32	1.358				
				361.10	1.351				
				388.88	1.345				
				416.66	1.340				
444.43	1.335								
472.21	1.332								
499.99	1.328								
527.77	1.326								
555.55	1.323								
611.10	1.319								
666.66	1.316								
722.21	1.314								
777.77	1.312								
833.32	1.310								
888.88	1.309								
944.43	1.308								
999.99	1.307								
1055.55	1.306								
1111.09	1.306								
1166.65	1.304								
1333.31	1.304								
1444.42	1.303								
1555.54	1.302								
		-	G	55.55	1.394	0	Theor	-	20987
				61.10	1.414				
				66.66	1.431				
				72.21	1.446				
				83.32	1.468				
				88.88	1.474				
				94.43	1.479				
				99.99	1.481				
105.55	1.482								
(continued)									

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p $\text{kJ kg}^{-1} \text{K}^{-1}$	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
OXYGEN, MONATOMIC (continued)	O	-	G	111.10	1.482	0	Theor	-	20987
				116.66	1.481				
				122.21	1.478				
				127.77	1.475				
				133.32	1.472				
				144.43	1.464				
				155.55	1.455				
				166.66	1.446				
				177.77	1.438				
				188.88	1.429				
				199.99	1.429				
				211.10	1.413				
				222.21	1.396				
				233.32	1.399				
				244.43	1.393				
				255.55	1.388				
				266.66	1.382				
				277.77	1.377				
				305.55	1.367				
				333.32	1.358				
				361.10	1.351				
				388.88	1.345				
				416.66	1.339				
				444.43	1.335				
				472.21	1.332				
				499.99	1.328				
				527.77	1.326				
				555.55	1.323				
				611.10	1.319				
				666.67	1.316				
				722.21	1.314				
				777.77	1.312				
				833.32	1.310				
				888.88	1.309				
944.43	1.308								
999.99	1.307								
1055.54	1.306								
1111.10	1.306								
1222.22	1.305								
1333.32	1.304								
1444.43	1.303								
		-	G	100	1.482	0	Theor	-	24959
				200	1.421				
				298.1 ^F	1.369				
				300	1.369				
				400	1.343				
				500	1.329				
				600	1.320				
				700	1.315				
				800	1.311				
				900	1.309				
				1000	1.307				
				1100	1.306				
				1200	1.305				
				1300	1.304				
1400	1.303								
1500	1.303								
		-	G	298.16	1.369	0	Theor	-	1702
				400	1.343				
				600	1.320				
				800	1.311				
				1000	1.307				
				1200	1.305				
1400	1.303								
OXYGEN FLUORIDE	OF ₂	-	G	250	0.755	0	Theor	-	401
				273.16	0.779				
				298.16	0.802				
				300	0.804				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
OXYGEN FLUORIDE (continued)	OF ₂	-	G	400	0.882	0	Theor	-	401						
				500	0.934										
				600	0.971										
				700	0.995										
				800	1.013										
				900	1.025										
				1000	1.034										
				1100	1.041										
				1200	1.047										
				1300	1.051										
				1400	1.054										
1500	1.058														
PENTADECANE	CH ₃ (CH ₂) ₁₃ CH ₃	99.95	L	280	2.931	1	Exper	0.1	550						
				285.51	2.190										
				289.76	2.196										
				290	2.196										
				291.62	2.200										
				296.09	2.208										
				298.16	2.212										
				298.47	2.213										
				300	2.217										
				304.48	2.227										
				310	2.242										
312.78	2.250														
1-PENTANOL	CH ₃ (CH ₂) ₄ OH	95	L	273.15	2.180	1	Exper	0.25	1790						
				-	G					417	2.123	1	Exper	0.1	525
										428	2.085				
		99.8	G	437	2.101	1	Exper	±0.3	57382						
				418.95	2.123										
				420.75	2.102										
				426.15	2.077										
				433.45	2.090										
				442.85	2.145										
				444.35	2.143										
				472.85	2.206										
482.25	2.218														
531.25	2.397														
554.15	2.436														
573.95	2.523														
3-PENTANOL	CH ₃ CH ₂ CHOHCH ₂ CH ₃	-	L	273.15	2.744	1	Exper	-	1790						
3-PENTANONE	(C ₂ H ₅) ₂ CO	-	L	233.15	2.017	1	Corr	2-5	51360						
				243.15	2.033										
				253.15	2.050										
				263.15	2.075										
				273.15	2.092										
				283.15	2.117										
				293.15	2.146										
				303.15	2.176										
				313.15	2.201										
				323.15	2.234										
				333.15	2.259										
				343.15	2.293										
				353.15	2.326										
				363.15	2.360										
				373.15	2.397										
				383.15	2.435										
				393.15	2.477										
-	G	273.15	1.402	1	Corr	1	51360								
		323.15	1.548												
		373.15	1.715												
		423.15	1.862												
		473.15	2.008												
		523.15	2.134												
		573.15	2.280												

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
3-PENTANONE (continued)	(C ₅ H ₁₀) ₂ CO	-	G	623.15	2.406	1	Corr	1	51360
				673.15	2.510				
				723.15	2.615				
				773.15	2.720				
				823.15	2.803				
				873.15	2.908				
				923.15	2.992				
				973.15	3.054				
				1023.15	3.117				
				1073.15	3.180				
				1123.15	3.243				
				1173.15	3.305				
				1223.15	3.347				
				1273.15	3.389				
1-PENTENE	CH ₂ CH(CH ₂) ₂ CH ₃	-	G	300	1.450	1	Corr	-	2500
				400	1.881				
				500	2.248				
				600	2.584				
				700	2.879				
				800	3.130				
				900	3.341				
				1000	3.509				
2-PENTENE	CH ₃ CHCHCH ₂ CH ₃	-	L	136.1	1.824	1	Exper	<1	31768
				152.8	1.837				
				169.0	1.854				
				201.2	1.916				
				230.8	1.983				
				260.5	2.059				
				275.1	2.109				
				289.1	2.155				
1-PENTYNE	HCCCH ₂ CH ₂ CH ₃	-	G	298.16	1.566	0	Theor	-	4525
				300	1.576				
				400	1.910				
				500	2.218				
				600	2.482				
				700	2.703				
				800	2.893				
				900	3.059				
				1000	3.207				
				1100	3.336				
				1200	3.446				
				1300	3.545				
				1400	3.630				
1500	3.698								
2-PENTYNE	CH ₃ CCCH ₂ CH ₃	-	G	298.16	1.407	0	Theor	-	4525
				300	1.413				
				400	1.742				
				500	2.046				
				600	2.309				
				700	2.542				
				800	2.738				
				900	2.917				
				1000	3.067				
				1100	3.198				
				1200	3.317				
				1300	3.413				
				1400	3.502				
1500	3.574								
PHENYL ETHER	(C ₆ H ₅) ₂ O	99.999	L	300.03	1.577	Sat.	Exper	0.1-0.2	1699
				310	1.602				
				320	1.628				
				330	1.655				
				340	1.682				
				350	1.708				
				360	1.735				
				370	1.762				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
PHENYL ETHER (continued)	(C ₆ H ₅) ₂ O	99.999	L	380	1.788	Sat.	Exper	0.1-0.2	1699
				390	1.815				
				400	1.841				
				410	1.868				
				420	1.894				
				430	1.920				
				440	1.946				
				450	1.973				
				460	1.999				
				470	2.025				
				480	2.051				
				490	2.078				
				500	2.104				
				510	2.130				
				520	2.156				
				530	2.182				
				540	2.208				
550	2.234								
560	2.260								
570	2.286								
PHOSGENE	COCl ₂	-	G	100	0.369	0	Theor	-	24959
				200	0.490				
				298.15	0.584				
				300	0.585				
				400	0.647				
				500	0.688				
				600	0.718				
				700	0.741				
				800	0.758				
				900	0.772				
				1000	0.782				
				1100	0.791				
				1200	0.797				
				1300	0.803				
				1400	0.808				
				1500	0.811				
				PHOSPHINE	PH ₃				
291	0.609								
298	0.614								
300	0.615								
400	0.667								
500	0.702								
600	0.729								
700	0.749								
800	0.766								
900	0.779								
1000	0.786								
PHOSPHINE	PH ₃	-	G	298.1	0.538	0	Theor	-	3771
				400	0.589				
				600	0.648				
				800	0.683				
				900	0.694				
				1000	0.704				
PHOSPHINE	PH ₃	-	G	100	0.978	0	Theor	-	24959
				200	0.998				
				298.15	1.091				
				300	1.094				
				400	1.229				
				500	1.367				
				600	1.497				
				700	1.616				
				800	1.721				
				900	1.812				
				1000	1.891				
				1100	1.958				
				1200	2.016				
1300	2.064								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
PHOSPHINE (continued)	PH ₃	-	G	1400	2.106	0	Theor	-	24959
				1500	2.142				
				298.2	1.092				
				300	1.094				
				400	1.229				
				500	1.367				
				600	1.498				
				700	1.616				
				800	1.722				
				900	1.813				
1000	1.891								
PHOSPHINE, TRIDEUTERATED	PD ₃	-	G	298.2	1.144	0	Theor	-	9770
				300	1.147				
				400	1.319				
				500	1.473				
				600	1.604				
				700	1.712				
				800	1.799				
				900	1.869				
				1000	1.926				
				PHOSPHORUS TRICHLORIDE	PCl ₃				
200	0.460								
298.15	0.523								
300	0.524								
400	0.555								
500	0.571								
600	0.581								
700	0.587								
800	0.591								
900	0.594								
1000	0.596								
1100	0.598								
1200	0.599								
1300	0.600								
1400	0.601								
1500	0.601								
PHOSPHORUS TRIFLUORIDE	PF ₃	-	G	100	0.416	0	Theor	-	24959
				200	0.553				
				298.15	0.667				
				300	0.669				
				400	0.751				
				500	0.805				
				600	0.841				
				700	0.865				
				800	0.882				
				900	0.894				
				1000	0.903				
				1100	0.910				
				1200	0.915				
				1300	0.920				
				1400	0.923				
1500	0.926								
PROPADIENE	C(CH ₂) ₂	-	G	148.1	1.014	0	Exper	-	11104
				148.3	1.014				
				157.6	1.033				
				157.6	1.036				
				158.0	1.036				
				158.0	1.038				
				212.3	1.190				
				213.9	1.183				
				218.1	1.213				
				218.6	1.199				
				223.4	1.227				
				223.9	1.324				
				256.4	1.333				
				258.3	1.320				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
PROPADIENE (continued)	C(CH ₂) ₂	-	G	258.4 259.0	1.340 1.331	0	Exper	-	11104		
		-	G	148.1 148.3 157.6 157.6 158.0 158.0 212.3 213.9 218.1 218.6 223.4 223.9 256.4 258.3 258.4 259.0	1.014 1.014 1.033 1.036 1.036 1.038 1.190 1.183 1.213 1.199 1.227 1.220 1.333 1.320 1.340 1.331	0	Exper	-	3771		
		-	G	272.16 272.16 272.16 300.00 300.00 300.00 334.00 334.00 334.00 366.45 366.45 366.45	1.379 1.386 1.416 1.479 1.481 1.506 1.591 1.593 1.609 1.694 1.695 1.707	1	Exper	0.4	13244		
		-	G	272.16 272.16 300.00 300.00 334.00 334.00 336.45 366.45	1.379 1.386 1.479 1.481 1.591 1.593 1.694 1.695	0	Corr	-	35191		
		-	G	273 291 298 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500	1.385 1.448 1.473 1.479 1.797 2.070 2.298 2.490 2.655 2.799 2.924 3.033 3.129 3.212 3.285 3.348	0	Theor	-	1283		
		-	G	300 400 500 600 700 800 900 1000	1.397 1.686 1.949 2.188 2.400 2.587 2.749 2.886	1	Deriv	-	2500		
		1,2-PROPANEDIOL	CH ₃ CHOHCH ₂ OH	-	L	253.15 263.15 273.15	2.236 2.301 2.364	1	Corr	-	52070

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
1,2-PROPANEDIOL (continued)	CH ₃ CHOHCH ₂ OH	-	L	283.15	2.406	1	Corr	-	52070								
				293.15	2.469												
				303.15	2.531												
				313.15	2.594												
				323.15	2.657												
				333.15	2.699												
				343.15	2.761												
				353.15	2.824												
				363.15	2.887												
				373.15	2.950												
				383.15	2.992												
				393.15	3.054												
				403.15	3.117												
				413.15	3.180												
				423.15	3.243												
				433.15	3.305												
				443.15	3.347												
				453.15	3.410												
				1-PROPANOL	CH ₃ (CH ₂) ₂ OH					-	G	273.15	1.548	1	Corr	-	52070
298.15	1.619																
323.15	1.695																
348.15	1.757																
373.15	1.841																
398.15	1.904																
423.15	1.966																
448.15	2.029																
473.15	2.084																
498.15	2.146																
523.15	2.197																
548.15	2.247																
573.15	2.289																
598.15	2.343																
623.15	2.385																
648.15	2.427																
673.15	2.469																
698.15	2.510																
723.15	2.552																
748.15	2.594																
773.15	2.636																
1-PROPANOL	CH ₃ (CH ₂) ₂ OH	-	L	152.1	1.778	1	Exper	1	21798								
				152.6	1.778												
				185.6	1.824												
				194.1	1.849												
				199.0	1.858												
				275.0	2.221												
				275.0	2.221												
				1-PROPANOL	CH ₃ (CH ₂) ₂ OH					-	L	162.8	1.77	1	Exper	-	18985
												168.0	1.81				
170	1.807																
170.7	1.77																
176.0	1.86																
180	1.879																
182.0	1.86																
190	1.925																
192.3	1.94																
192.3	1.95																
196.8	1.96																
200	1.962																
202.5	1.97																
207.6	1.98																
209.6	1.99																
210	1.991																
215.5	2.01																
220	2.025																
222.5	2.07																
222.9	2.06																
226.5	2.03																
228.6	2.07																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc. %	TPRC No.								
1-PROPANOL (continued)	CH ₃ (CH ₂) ₂ OH	-	L	230	2.063	1	Exper	-	18985								
				230.7	2.05												
				231.7	2.09												
				233.6	2.08												
				234.3	2.11												
				236.9	2.05												
				237.1	2.09												
				240	2.100												
				243.3	2.13												
				244.7	2.11												
				246.4	2.13												
				248.3	2.12												
				250	2.142												
				250.7	2.12												
				254.5	2.16												
				257.3	2.18												
				259.2	2.19												
				260	2.197												
				266.0	2.23												
				268.3	2.31												
				269.8	2.30												
				270	2.264												
				270.5	2.26												
				274.4	2.26												
										-	L	170	1.81	1	Exper	-	22395
												180	1.88				
												190	1.92				
												200	1.96				
210	1.99																
220	2.03																
230	2.06																
240	2.10																
250	2.14																
260	2.20																
270	2.26																
		-	L			279.66	2.272	1	Exper			0.5	4671				
				290.76	2.353												
				297.57	2.419												
				304.06	2.490												
				318.83	2.711												
		-	L	298.15	2.385	1	Cited	-	9335								
				298.15	2.428												
				303.15	2.418												
				303.15	2.502												
		99.9	L	303	2.333	1	Exper	±0.4	1237								
				313	2.447												
				323	2.572												
				333	2.702												
				343	2.835												
				353	2.969												
				363	3.103												
				373	3.245												
				383	3.392												
				393	3.542												
		-	G	273.16	1.377	0	Theor	-	1268								
				291.16	1.455												
				298.16	1.485												
				300	1.495												
				400	1.909												
				500	2.256												
				600	2.534												
				700	2.766												
				800	2.963												
				900	3.131												
				1000	3.280												
1100	3.408																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	PRC No.								
1-PROPANOL (continued)	CH ₃ (CH ₂) ₂ OH	-	G	1200	3.524	0	Theor	-	1288								
				1300	3.619												
				1400	3.703												
				1500	3.779												
		-	G	-	-	373	2.115	1	Exper	0.1	525						
						383	1.922										
						394	1.905										
						405	1.913										
						417	1.931										
						428	1.961										
						437	1.980										
						99.9	G					-	-	375.45	2.100	1	Exper
		383.05	1.929														
		387.15	1.917														
		396.95	1.901														
		409.95	1.914														
		420.75	1.9285														
		422.95	1.9292														
		437.95	1.963														
		461.05	2.025														
475.35	2.089																
504.35	2.159																
511.85	2.179																
532.35	2.247																
560.05	2.327																
578.85	2.389																
603.25	2.453																
-	G	-	-	407.15	1.714	1	Exper	-	14170								
				410.15	1.873												
-	G	-	-	407.15	1.83	1	Exper	-	28289								
				410	1.838												
-	G	-	-	410	1.838	1	Exper	±0.6	31764								
				410	1.824												
2-PROPANOL	(CH ₃) ₂ CHOH	99.95	L	188.45	1.798	1	Exper	1	21816								
				193.02	1.814												
				202.32	1.843												
				212.82	1.870												
				224.07	1.919												
				235.26	1.971												
				246.54	2.059												
				258.40	2.136												
				274.48	2.233												
				280.26	2.345												
				286.76	2.401												
				292.84	2.492												
				-	L					-	-	195.4	1.85	1	Exper	-	21788
												198.5	1.87				
												199.1	1.87				
												227.0	1.97				
												275.3	2.33				
												284.0	2.42				
												287.6	2.45				
												290.2	2.49				
293.1	2.54																
-	L	-	-	293.15	2.702	1	Exper	-	21778								
				303.15	2.830												
-	L	-	-	294-354	3.00	1	Exper	0.3	17534								
				298.15	2.720												
-	L	-	-	298.15	2.572	1	Corr	-	9335								
				298.15	2.745												

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.	
2-PROPANOL (continued)	(CH ₃) ₂ CHOH	-	L	303.15	2.647	1	Corr	-	9335	
				303.15	2.831					
		-	G	-	273.16	1.427	0	Theor	-	1288
					291.16	1.498				
					298.16	1.525				
					300	1.532				
					400	1.915				
					500	2.250				
					600	2.527				
					700	2.761				
					800	2.959				
					900	3.133				
					1000	3.282				
					1100	3.413				
					1200	3.523				
		1300	3.627							
		1400	3.714							
		1500	3.789							
		-	G	-	359	2.322	1	Exper	0.1	525
					363	2.081				
373	1.987									
383	1.943									
394	1.936									
405	1.954									
417	1.982									
428	2.007									
437	2.027									
99.8	G				-	365.75				
		378.85	1.967							
		384.95	1.949							
		393.65	1.927							
		405.35	1.943							
		431.15	1.990							
		453.15	2.051							
		466.75	2.085							
		480.55	2.124							
		499.75	2.183							
		513.95	2.219							
		539.05	2.307							
		567.05	2.398							
597.25	2.474									
-	G	-	570.25	0.619	1	Exper	-	14170		
			370.25	0.620						
			407.15	0.591						
			407.15	0.592						
-	G	-	407.15	1.631	1	Exper	-	28289		
			410	1.845						
-	G	-	410	1.831	0	Exper	±0.6	31764		
			410	1.831						
PROPYL ACETATE	CH ₃ COO(CH ₂) ₂ CH ₃	-	L	298.15	1.940	1	Corr	-	9335	
				298.15	1.902					
				303.15	1.958					
				303.15	1.928					
PROPYLBENZENE	C ₆ H ₅ (CH ₂) ₂ CH ₃	-	L	273.15	1.707	1	Corr	±2.1	56305	
				283.15	1.741					
				293.15	1.770					
				303.15	1.799					
				313.15	1.828					
				323.15	1.858					
				333.15	1.887					
				343.15	1.916					
				353.15	1.941					
				(continued)						

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.						
PROPYLBENZENE (continued)	C ₆ H ₅ (CH ₂) ₂ CH ₃	-	L	363.15	1.975	1	Corr	±2.1	56305						
				373.15	2.004										
				383.15	2.033										
				393.15	2.063										
				403.15	2.092										
				413.15	2.117										
				423.15	2.151										
				433.15	2.176										
				443.15	2.209										
				453.15	2.234										
				463.15	2.259										
				473.15	2.293										
				-	G					273.15	1.151	1	Corr	-	56305
										323.15	1.360				
										373.15	1.548				
										423.15	1.757				
										473.15	1.925				
										523.15	2.071				
		573.15	2.218												
		623.15	2.343												
		673.15	2.469												
		723.15	2.573												
		773.15	2.657												
		823.15	2.761												
		873.15	2.845												
		923.15	2.929												
		973.15	3.012												
		1023.15	3.075												
		1073.15	3.138												
		1123.15	3.201												
		1173.15	3.243												
		1223.15	3.284												
		1273.15	3.326												
		-	G	298.16	1.279	0	Theor	-	5162						
				300	1.288										
				400	1.671										
500	2.012														
600	2.298														
700	2.531														
800	2.726														
900	2.893														
1000	3.032														
1100	3.154														
1200	3.258														
1300	3.349														
1400	3.429														
1500	3.495														
-	G			300	1.175					1	Cited	-	2500		
				400	1.565										
				500	1.912										
				600	2.216										
		700	2.475												
		800	2.692												
		900	2.864												
		1000	2.994												
		PROPYL ETHER	[CH ₃ (CH ₂) ₂] ₂ O	-	L	193.15	2.008	1	Corr					2	52325
						213.15	2.029								
233.15	2.071														
253.15	2.092														
273.15	2.134														
293.15	2.176														
413.15	2.218														
433.15	2.280														
453.15	2.364														
473.15	2.448														
493.15	2.552														

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
PROPYL ETHER (continued)	[CH ₃ (CH ₂) ₂] ₂ O	-	G	273.15	1.464	1	Corr	1	52325								
				323.15	1.653												
				373.15	1.820												
				423.15	2.008												
				473.15	2.176												
				523.15	2.343												
				573.15	2.469												
				623.15	2.573												
				673.15	2.678												
				723.15	2.782												
				773.15	2.887												
				823.15	2.971												
				873.15	3.054												
				923.15	3.117												
				973.15	3.180												
				1023.15	3.222												
				1073.15	3.243												
1103.15	3.264																
1173.15	3.284																
1223.15	3.305																
1273.15	3.326																
PROPYNE	CH ₃ CCH	-	G	157.6	1.076	0	Theor	-	3771								
				218.1	1.269												
				258.4	1.395												
				-	G					-	G	272.28	1.437	1	Exper	0.4	13244
												299.59	1.523				
												332.83	1.625				
												369.21	1.725				
				-	G					-	G	272.28	1.437	0	Cited	-	35191
												272.28	1.438				
												299.59	1.523				
												332.83	1.624				
												332.83	1.625				
												369.21	1.725				
												369.21	1.730				
				-	G					-	G	273	1.017	0	Theor	-	1283
												291	1.491				
												298	1.514				
300	1.520																
400	1.810																
500	2.062																
600	2.277																
700	2.463																
800	2.626																
900	2.769																
1000	2.894																
1100	3.005																
1200	3.101																
1300	3.186																
1400	3.260																
1500	3.325																
-	G	-	G	294.3	1.507	0	Exper	-	3771								
				306.2	1.545												
				329.4	1.614												
				338.9	1.641												
-	G	-	G	298.16	1.514	0	Theor	-	4525								
				300	1.520												
				400	1.810												
				500	2.062												
				600	2.277												
				700	2.463												
				800	2.626												
				900	2.769												
1000	2.894																
1100	3.005																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
PROPYLENE (continued)	C ₃ H ₆	-	G	1200	3.101	0	Theor	-	4525		
				1300	3.186						
				1400	3.260						
				1500	3.325						
		-	G	-	-	300	1.503	1	Cited	-	2500
						400	1.791				
						500	2.049				
						600	2.277				
						700	2.474				
						800	2.641				
900	2.779										
1000	2.887										
PYRIDINE	C ₅ H ₅ N	-	L	295-369	1.86	1	Exper	±0.4	17523		
				295-402	1.89						
PYROCATACHOL	C ₆ H ₄ (OH) ₂	-	L	377.45	2.174	1	Exper	-	21796		
RESORCINOL	C ₆ H ₄ (OH) ₂	-	L	382.85	2.185	1	Exper	-	21796		
SILANE	SiH ₄	-	G	100	1.034	0	Theor	-	591		
				200	1.102						
				298.16	1.334						
				300	1.338						
				400	1.342						
				500	1.842						
				600	2.052						
				700	2.234						
				800	2.389						
		900	2.523								
		1000	2.633								
		-	G	-	-	100	1.036	0	Theor	-	12098
						200	1.106				
						298.16	1.334				
						300	1.338				
						400	1.602				
						500	1.842				
						600	2.052				
700	2.234										
800	2.389										
900	2.522										
1000	2.633										
-	G	-	-	100	1.036	0	Theor	-	24959		
				200	1.106						
				298.15	1.333						
				300	1.338						
				400	1.602						
				500	1.842						
				600	2.052						
				700	2.234						
				800	2.389						
				900	2.521						
				1000	2.632						
				1100	2.725						
				1200	2.804						
				1300	2.870						
				1400	2.926						
1500	2.973										
SILICON TETRA- CHLORIDE	SiCl ₄	-	L	208.8	0.830	1	Exper	±2	33583		
				294.3	0.854						
		-	L	-	-	298.15	0.840	1	Exper	-	33587
		-	G	-	-	100	0.336	0	Theor	-	591
						200	0.484				
298.16	0.533										
300	0.534										

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
SILICON TETRA- CHLORIDE (continued)	SiCl ₄	-	G	400	0.571	0	Theor	-	591								
				500	0.591												
				600	0.604												
				700	0.612												
				800	0.617												
				900	0.621												
				1000	0.624												
				100	0.336												
				200	0.464												
				298.16	0.533												
				300	0.534												
				400	0.571												
				500	0.591												
				600	0.604												
				700	0.612												
				800	0.617												
				900	0.621												
				1000	0.624												
				SILICON TETRA- FLUORIDE	SiF ₄					-	G	100	0.400	0	Theor	-	24959
200	0.583																
298.15	0.706																
300	0.708																
400	0.798																
500	0.860																
600	0.903																
700	0.933																
800	0.955																
900	0.971																
1000	0.982																
1100	0.991																
1200	0.998																
1300	1.004																
1400	1.009																
1500	1.012																
STYRENE	C ₆ H ₅ CHCH ₂	-	G			273	1.074	0	Theor			-	28506				
						291	1.144										
						298	1.172										
				300	1.179												
				400	1.540												
				500	1.846												
				600	2.095												
				700	2.299												
				800	2.467												
				900	2.609												
				1000	2.729												
				1100	2.832												
				1200	2.919												
				1300	2.995												
				1400	3.060												
1500	3.116																

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFUR, DIATOMIC	S ₂	-	G	273	0.499	0	Theor	-	1344
				291	0.504				
				298	0.506				
				300	0.506				
				400	0.530				
				500	0.546				
				600	0.557				
				700	0.564				
				800	0.569				
				900	0.573				
				1000	0.576				
				1100	0.578				
				1200	0.580				
				1300	0.581				
				1400	0.582				
1500	0.583								
		-	G	298.16	0.506	0	Theor	-	450
				300	0.507				
				400	0.531				
				500	0.547				
				600	0.557				
				700	0.564				
				800	0.570				
				900	0.574				
				1000	0.577				
				1100	0.579				
				1200	0.581				
				1300	0.582				
				1400	0.583				
				1500	0.585				
300	0.506								
400	0.530								
500	0.545								
600	0.555								
700	0.562								
800	0.566								
900	0.570								
1000	0.572								
1100	0.575								
1200	0.575								
1300	0.577								
1400	0.577								
1500	0.578								
SULFUR, MONATOMIC	S	-	G			55.55	0.649	0	Theor
				61.11	0.649				
				66.67	0.650				
				72.21	0.652				
				77.78	0.654				
				83.32	0.656				
				88.88	0.659				
				94.43	0.662				
				99.99	0.666				
				105.55	0.670				
				111.10	0.674				
				116.66	0.678				
				122.21	0.682				
				127.77	0.687				
				133.32	0.691				
				144.43	0.699				
				155.55	0.707				
166.66	0.714								
177.77	0.720								
188.88	0.725								
199.99	0.729								
211.10	0.733								
222.21	0.735								
233.32	0.737								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFUR, MONATOMIC (continued)	S	-	G	244.43	0.738	0	Theor	-	6625
				255.55	0.739				
				266.66	0.739				
				277.77	0.739				
				305.55	0.738				
				333.32	0.735				
				361.10	0.731				
				388.88	0.726				
				416.66	0.722				
				444.43	0.718				
				472.21	0.713				
				499.99	0.709				
				527.77	0.705				
				555.55	0.702				
				611.10	0.695				
				666.66	0.690				
				722.21	0.685				
				777.77	0.681				
				833.32	0.678				
				888.88	0.675				
				944.43	0.672				
				999.99	0.670				
				1055.55	0.668				
1111.09	0.667								
1166.65	0.664								
1333.31	0.662								
1444.42	0.661								
			G	55.55	0.650	0	Theor	-	20987
				61.10	0.651				
				66.66	0.652				
				72.21	0.653				
				77.77	0.655				
				83.32	0.657				
				88.88	0.660				
				94.43	0.664				
				99.99	0.667				
				105.55	0.671				
				111.10	0.671				
				116.66	0.679				
				122.21	0.684				
				127.77	0.688				
				133.32	0.692				
				144.43	0.700				
				155.55	0.708				
				166.66	0.715				
				177.77	0.721				
				188.88	0.726				
				199.99	0.731				
				211.10	0.734				
				222.21	0.737				
				233.32	0.739				
				244.43	0.740				
				255.55	0.741				
				266.66	0.741				
				277.77	0.741				
				305.55	0.739				
				333.32	0.736				
				361.10	0.732				
				388.88	0.728				
				416.66	0.723				
				444.43	0.719				
				472.21	0.715				
				499.99	0.711				
				527.77	0.707				
				555.55	0.703				
				611.10	0.697				
				666.67	0.691				
				722.21	0.687				
				777.77	0.683				
				833.32	0.680				
				(continued)					

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
SULFUR, MONATOMIC (continued)	S	-	G	888.88	0.676	0	Theor	-	20987								
				944.43	0.674												
				999.99	0.672												
				1055.54	0.670												
				1111.10	0.668												
				1222.22	0.665												
				1333.32	0.664												
				1444.43	0.662												
				100	0.666												
				200	0.729												
				298.15	0.738												
				300	0.738												
				400	0.725												
				500	0.709												
				600	0.697												
				700	0.687												
				800	0.680												
				900	0.674												
				1000	0.670												
1100	0.667																
1200	0.664																
1300	0.663																
1400	0.661																
1500	0.661																
SULFUR DICHLORIDE	SCl ₂	-	G	100	0.368	0	Theor	-	24959								
				200	0.445												
				298.15	0.494												
				300	0.495												
				400	0.521												
				500	0.535												
				600	0.544												
				700	0.549												
				800	0.553												
				900	0.555												
				1000	0.557												
				1100	0.558												
				1200	0.559												
				1300	0.560												
				1400	0.561												
				1500	0.561												
				SULFUR DIFLUORIDE	SF ₂					-	G	100	0.478	0	Theor	-	24959
												200	0.539				
												298.15	0.622				
300	0.624																
400	0.686																
500	0.727																
600	0.754																
700	0.772																
800	0.785																
900	0.794																
1000	0.800																
1100	0.805																
1200	0.809																
1300	0.812																
1400	0.815																
1500	0.817																
SULFUR HEXAFLUORIDE	SF ₆	99.6	L			225	0.759	Sat.	Exper			-	35182				
						230	0.818										
		-	G			100	0.266	0	Theor			-	24959				
				200	0.473												
298.15	0.666																
300	0.669																
400	0.799																
500	0.881																
600	0.933																
700	0.968																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFUR HEXAFLUORIDE (continued)	SF ₆	-	G	800	0.993	0	Theor	-	24959
				900	1.010				
				1000	1.023				
				1100	1.032				
				1200	1.040				
				1300	1.046				
				1400	1.051				
				1500	1.055				
SULFUR MONOCHLORIDE	S ₂ Cl ₂	-	G	100	0.362	0	Theor	-	24959
				200	0.480				
				298.15	0.540				
				300	0.540				
				400	0.569				
				500	0.585				
				600	0.594				
				700	0.599				
				800	0.603				
				900	0.605				
				1000	0.607				
				1100	0.609				
				1200	0.610				
				1300	0.611				
				1400	0.611				
1500	0.612								
SULFUR MONOXIDE	SO	-	G	298.16	0.629	0	Theor	-	450
				300	0.630				
				400	0.659				
				500	0.685				
				600	0.706				
				700	0.722				
				800	0.733				
				900	0.742				
				1000	0.749				
				1100	0.754				
				1200	0.758				
				1300	0.762				
				1400	0.765				
				1500	0.768				
SULFUR TETRAFLUORIDE	SF ₄	-	G	100	0.366	0	Theor	-	24959
				200	0.525				
				298.15	0.638				
				300	0.640				
				400	0.781				
				500	0.845				
				600	0.885				
				700	0.913				
				800	0.931				
				900	0.945				
				1000	0.955				
				1100	0.962				
				1200	0.968				
				1300	0.973				
1400	0.976								
1500	0.979								
SULFUR TRIOXIDE	SO ₃	-	G	100	0.426	0	Theor	-	24959
				200	0.529				
				298.15	0.633				
				300	0.634				
				400	0.720				
				500	0.788				
				600	0.840				
				700	0.879				
				800	0.909				
				900	0.931				
				1000	0.949				
				1100	0.963				
1200	0.973								

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
SULFUR TRIOXIDE (continued)	SO ₃	-	G	1300	0.982	0	Theor	-	24959								
				1400	0.989												
				1500	0.995												
		-	G	273	0.606	0	Theor	-	1344								
				291	0.625												
				298	0.633												
				300	0.635												
				400	0.734												
				500	0.817												
				600	0.883												
				700	0.933												
				800	0.972												
				900	1.005												
				1000	1.032												
				1100	1.055												
				1200	1.076												
				1300	1.094												
										-	G	298.16	0.633	0	Theor	-	948
400	0.734																
500	0.818																
600	0.883																
700	0.933																
800	0.972																
900	1.004																
1000	1.032																
		-	G			298.16	0.632	0	Theor			-	450				
						300	0.634										
				400	0.735												
				500	0.818												
				600	0.883												
				700	0.933												
				800	0.972												
				900	1.005												
				1000	1.032												
				1100	1.056												
				1200	1.077												
				1300	1.095												
				1400	1.112												
1500	1.128																
		-	G	298.16	0.616	0	Theor	-	1702								
				300	0.618												
				400	0.708												
				500	0.779												
				600	0.833												
				700	0.875												
				800	0.906												
				900	0.929												
				1000	0.946												
				1100	0.960												
				1200	0.971												
				1300	0.981												
				1400	0.988												
1500	0.994																
SULFURYL FLUORIDE	SO ₂ F ₂	-	G	100	0.351	0	Theor	-	24959								
				200	0.505												
				298.15	0.645												
				300	0.647												
				400	0.749												
				500	0.832												
				600	0.875												
				700	0.913												
				800	0.941												
				900	0.962												
				1000	0.978												
				1100	0.991												
				1200	1.001												

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFURYL FLUORIDE (continued)	SO ₂ F ₂	-	G	1300	1.009	0	Theor	-	24959
				1400	1.015				
				1500	1.020				
1, 1, 2, 2-TETRABROMOETHANE	(CHBr ₂) ₂	-	L	285-323	0.49	1	Exper	-	731
				289-373	0.51				
				288-405	0.53				
1, 1, 2, 2-TETRACHLORO-1, 2-DIFLUOROETHANE	(CCl ₂ F) ₂	-	G	353.15	0.634	1	Deriv	-	28272
				413.15	0.683				
1, 1, 2, 2-TETRACHLOROETHANE	(CHCl ₂) ₂	-	L	290-327	0.94	1	Exper	-	731
				292-353	1.02				
				292-354	1.04				
				291-400	1.02				
				288-414	1.05				
				289-418	1.06				
TETRACHLOROETHYLENE	(CCl ₂) ₂	-	L	249-289	0.88	1	Exper	±0.1	731
				289-392	0.92				
TETRADECANE	CH ₃ (CH ₂) ₁₂ CH ₃	99.93	L	280	2.169	1	Exper	±0.1	550
				282.71	2.176				
				285.88	2.183				
				288.48	2.188				
				290	2.191				
				291.74	2.196				
				295.65	2.204				
				298.16	2.210				
				298.60	2.211				
				300	2.215				
				302.77	2.222				
				1, 2, 3, 4-TETRAMETHYLBENZENE	C ₆ H ₂ (CH ₃) ₄				
281.8	1.745								
286.5	1.749								
291.9	1.757								
285-328	1.89	1	Exper			-	1562		
289-372	1.97								
290-410	2.04								
289-471	2.16								
1, 2, 3, 5-TETRAMETHYLBENZENE	C ₆ H ₂ (CH ₃) ₄	-	L	255.3	1.678	1	Exper	0.05	33584
				275.7	1.732				
				281.6	1.745				
				288.6	1.766				
				297.1	1.791				
1, 2, 4, 5-TETRAMETHYLBENZENE	C ₆ H ₂ (CH ₃) ₄	-	L	361-404	2.16	1	Exper	-	1562
				361-429	2.21				
				361-466	2.27				
THIONYL CHLORIDE	SOCl ₂	-	G	100	0.358	0	Theor	-	24959
				200	0.492				
				298.15	0.560				
				300	0.561				
				400	0.600				
				500	0.626				
				600	0.643				
				700	0.655				
				800	0.664				
				900	0.670				
				1000	0.675				
				1100	0.679				
				1200	0.682				
				1300	0.684				
				1400	0.686				
1500	0.688								

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
THIONYL FLUORIDE	SOF ₂	-	G	100	0.410	0	Theor	-	24959
				200	0.543				
				298.15	0.660				
				300	0.662				
				400	0.745				
				500	0.801				
				600	0.840				
				700	0.867				
				800	0.887				
				900	0.901				
				1000	0.912				
				1100	0.921				
				1200	0.928				
				1300	0.933				
1400	0.937								
1500	0.941								
THIOPHOSGENE	CSCl ₂	-	G	273	0.544	0	Theor	-	1360
				291	0.558				
				298	0.562				
				300	0.563				
				400	0.611				
				500	0.640				
				600	0.661				
				700	0.675				
				800	0.685				
				900	0.682				
				1000	0.697				
TIN TETRACHLORIDE	SnCl ₄	-	L	266.1	0.61	1	Exper	±2	33583
				294.0	0.63				
				-	-				
-	-	-	L	287-371	0.55	1	Deriv	-	9340
-	-			298.15	0.61				
TITANIUM TETRACHLORIDE	TiCl ₄	-	L	251.6	0.800	1	Exper	±2	33583
				294.3	0.807				
m-TOLUIC ACID	CH ₃ C ₆ H ₄ COOH	-	L	381.90	2.29	1	Exper	-	21796
o-TOLUIC ACID	CH ₃ C ₆ H ₄ COOH	-	L	376.85	2.09	1	Exper	-	21796
p-TOLUIC ACID	CH ₃ C ₆ H ₄ COOH	-	L	452.75	2.36	1	Exper	-	21796
TRIBROMOFLUOROMETHANE	CBr ₃ F	-	G	100	0.201	0	Theor	-	23025
				298.16	0.311				
				1000	0.386				
				1500	0.393				
1,2,3-TRIBROMOPROPANE	CHBr(CH ₂ Br) ₂	-	L	290-350	0.65	1	Exper	-	731
				292-373	0.66				
				293-396	0.68				
				293-428	0.70				
				293-468	0.73				
				290-491	0.78				
1,1,1-TRICHLOROETHANE	CH ₃ CCl ₃	-	G	298	0.776	0	Theor	-	32178
				347.3	0.767				
				400	0.892				
				600	1.048				
TRICHLOROETHYLENE	CHClCCl ₂	-	L	289-308	0.89	1	Exper	-	731
				285-329	0.93				
				289-353	0.96				
-	-	-	L	298.15	1.159	1	Exper	-	11120
-	-								
1,2,3-TRICHLOROPROPANE	ClCH ₂ CHClCH ₂ Cl	-	L	291-350	1.22	1	Exper	-	731
				291-390	1.27				
				290-427	1.31				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
TRICHLOROSILANE	SiHCl ₃	-	G	100	0.343	0	Theor	-	12098								
				200	0.466												
				298.16	0.556												
				300	0.557												
				400	0.615												
				500	0.652												
				600	0.679												
				700	0.698												
				800	0.713												
				900	0.725												
1000	0.734																
1,1,1-TRICHLORO-2,2,2-TRIFLUOROETHANE	CF ₃ CCl ₃	-	G	200	0.499	0	Theor	-	3933								
				298.16	0.626												
				400	0.721												
				500	0.785												
				600	0.828												
				700	0.862												
				800	0.885												
				-	G					298	0.624	0	Theor	-	32178		
				318.8	0.647												
				400	0.720												
600	0.830																
TRIDECANE	CH ₃ (CH ₂) ₁₁ CH ₃	99.95	L	270	2.154	1	Exper	±0.1	550								
				271.66	2.155												
				276.53	2.159												
				278.11	2.161												
				280	2.164												
				283.24	2.171												
				285.26	2.175												
				290	2.186												
				291.39	2.198												
				298.16	2.207												
				299.11	2.209												
				300	2.212												
				306.38	2.231												
				310	2.240												
				1,1,1-TRIFLUOROETHANE	CH ₃ CF ₃					-	G	100	0.476	0	Theor	-	47854
												200	0.709				
												298.15	0.932				
300	0.936																
400	1.132																
500	1.289																
600	1.413																
700	1.512																
800	1.592																
900	1.659																
1000	1.715																
1100	1.762																
1200	1.803																
1300	1.838																
1400	1.867																
1500	1.892																
TRIFLUOROETHANE	-	G	-			250	0.823	0	Theor			-	32178				
						298	0.930										
						400	1.134										
						600	1.419										
				-	G	100	0.214			0	Theor			-	4037		
200	0.299																
273.16	0.348																
298.16	0.362																
300	0.363																
400	0.410																
500	0.445																
600	0.470																
700	0.487																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.				
TRIFLUOROiodo- METHANE (continued)	CF ₃ I	-	G	800	0.500	0	Theor	-	4037				
				900	0.510								
				1000	0.517								
TRIMETHYLAMINE	(CH ₃) ₃ N	-	G	273.15	1.448	0	Theor	-	1231				
				291.15	1.523								
				298.15	1.552								
				373.15	1.874								
				473.15	2.281								
				573.15	2.630								
				673.15	2.923								
				773.15	3.170								
				873.15	3.381								
				973.15	3.564								
				1073.15	3.723								
				1173.15	3.859								
				1273.15	3.978								
				1373.15	4.081								
1473.15	4.171												
1,2,4-TRIMETHYL- BENZENE	C ₆ H ₃ (CH ₃) ₃	-	L	239.5	1.623	1	Exper	0.05	33584				
				246.9	1.640								
				260.5	1.674								
				277.0	1.724								
				277.4	1.720								
				283.6	1.736								
				297.3	1.766								
				-	-					1	Exper	-	1562
				288-329	1.82								
				289-353	1.85								
				289-373	1.90								
		290-406	1.97										
		289-441	2.02										
		99.994	L	294.26	1.734	Sat.	Exper	1	1278				
				299.82	1.750								
				305.37	1.767								
				310.93	1.784								
				316.49	1.802								
				322.04	1.820								
		327.59	1.838										
		333.15	1.857										
		338.71	1.876										
		344.26	1.896										
		349.82	1.916										
		355.37	1.937										
		360.93	1.958										
		366.48	1.979										
		372.04	2.002										
		277.59	2.025										
2,2,3-TRIMETHYL- BUTANE	(CH ₃) ₃ CCH(CH ₃) ₂	99.69	G	328.80	1.578	0.3	Exper	±0.1	3901				
				348.85	1.661								
				369.20	1.743								
				400.40	1.869								
				434.30	2.001								
		99.69	G	328.80	1.615	0.3	Exper	±0.1	3901				
				348.85	1.687								
				369.20	1.763								
				400.40	1.880								
				434.30	2.008								
		99.69	G	328.80	1.566	0.3	Exper	±0.1	3901				
				348.85	1.652								
				369.20	1.736								
				400.40	1.865								
				434.30	1.998								
		461.80	2.101										

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
2,2,3-TRIMETHYL-BUTANE (continued)	$(CH_3)_3CCH(CH_3)_2$	99.69	G	369.20	1.763	0.3	Exper	±0.1	3901		
				400.40	1.880						
				434.30	2.008						
				461.80	2.107						
2,2,4-TRIMETHYL-PENTANE	$(CH_3)_3CCH_2CH(CH_3)_2$	-	L	169.6	1.62	1	Exper	<1	31769		
				173.4	1.63						
				177.8	1.64						
				188.3	1.67						
				194.4	1.69						
				213.8	1.76						
				218.5	1.77						
				230.2	1.807						
				255.2	1.891						
				275.0	1.971						
				278.4	1.987						
				283.1	1.996						
				287.6	2.017						
				292.0	2.038						
		295.2	2.046								
				99.99	L	171.15	1.633	1	Exper	0.5	7833
						182.89	1.664				
						203.80	1.727				
						233.44	1.834				
						256.60	1.923				
				279.95	2.014						
				301.93	2.110						
				317.34	2.176						
		-	L	283.15	2.024	Sat.	Exper	0.1	1781		
				288.15	2.042						
				293.15	2.066						
				298.15	2.088						
				303.15	2.110						
				308.15	2.133						
2,3,3-TRIMETHYL-PENTANE	$(CH_3)_2CHC(CH_3)_2CH_2CH_3$	99.99	G	423	2.26	1	Exper	-	7833		
		-	L	278.15	2.077	Sat.	Exper	0.1	1781		
				283.15	2.093						
				288.15	2.110						
				293.15	2.129						
				298.15	2.149						
				303.15	2.171						
				308.15	2.194						
				313.15	2.219						
				318.15	2.244						
2,3,4-TRIMETHYL-PENTANE	$[(CH_3)_2CH]_2CHCH_3$	-	L	278.15	2.082	Sat.	Exper	0.1	1781		
				283.15	2.101						
				288.15	2.121						
				293.15	2.143						
				298.15	2.165						
				303.15	2.188						
				308.15	2.212						
				313.15	2.237						
				318.15	2.263						
										99.5	G
				463.6	2.45						
				521.6	2.66						
		99.5	G	403.0	2.188	0.5	Exper	1	980		
				460.8	2.423						
				521.0	2.654						
2,4,4-TRIMETHYL-2-PENTENE	$(CH_3)_3CCHC(CH_3)_2$	-	L	183.0	1.703	1	Exper	<1	31768		
				189.1	1.715						
				210.5	1.778						
				230.1	1.837						

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
2,4,4-TRIMETHYL-2-PENTENE (continued)	(CH ₃) ₃ CCHC(CH ₃) ₂	-	L	251.8	1.900	1	Exper	<1	31768								
				275.2	1.987												
				281.2	2.013												
				296.0	2.079												
UNDECANE	CH ₃ (CH ₂) ₉ CH ₃	99.98	L	250	2.108	1	Exper	±0.1	550								
				251.74	2.110												
				255.08	2.112												
				259.76	2.117												
				260	2.118												
				271.07	2.135												
				279.07	2.153												
				280	2.155												
				280.00	2.156												
				288.50	2.179												
				289.52	2.182												
				290	2.183												
				297.98	2.207												
				298.16	2.208												
				298.92	2.209												
				300	2.213												
				-	-					-	L	258.5	2.105	1	Exper	0.05	33584
												274.9	2.138				
												283.4	2.155				
290.8	2.176																
298.0	2.192																
VINYL ACETATE	CH ₃ COOCHCH ₂	-	G	407.15	1.435	1	Exper	-	28289								
WATER, DIDEUTERATED	D ₂ O	99.2	L	283.15	4.225	1	Exper	±0.1	8796								
				285.12	4.223												
				287.03	4.217												
				287.81	4.217												
				287.93	4.215												
				288.15	4.216												
				289.87	4.215												
				291.91	4.212												
				292.71	4.210												
				292.90	4.210												
				293.15	4.210												
				293.51	4.211												
				294.68	4.208												
				294.90	4.209												
				294.90	4.207												
				296.71	4.209												
				297.84	4.205												
				298.15	4.205												
				298.68	4.205												
				303.15	4.202												
				303.18	4.202												
				305.07	4.202												
				305.16	4.201												
				306.98	4.200												
				307.07	4.202												
				308.15	4.200												
				309.01	4.201												
				310.78	4.202												
				310.81	4.199												
				311.97	4.200												
				313.15	4.200												
				314.15	4.198												
				314.39	4.198												
315.21	4.199																
315.50	4.197																
316.93	4.199																
318.15	4.200																
320.99	4.202																

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.	
WATER, DIDEUTERATED (continued)	D ₂ O	99.2	L	323.15	4.201	1	Exper	±0.1	8796	
				325.80	4.204					
		99.2	L	288.15	4.225	1	Exper	-	11671	
				293.15	4.216					
				298.15	4.207					
				303.15	4.202					
				308.15	4.199					
				313.15	4.197					
				318.15	4.197					
		96.0	L	293	4.221	1	Exper	±0.15	1237	
				303	4.203					
				313	4.188					
				323	4.177					
				333	4.169					
				343	4.157					
				353	4.146					
				363	4.136					
				373	4.133					
				383	4.136					
				393	4.138					
		398	4.143							
		-	L	-	293.15	4.192	50	Exper	-	26587
					313.15	4.176				
333.15	4.18									
353.15	4.167									
373.15	4.163									
393.15	4.17									
413.15	4.18									
433.15	4.200									
453.15	4.243									
473.15	4.310									
493.15	4.397									
513.15	4.531									
533.15	4.728									
-	L	-	293.15	4.184	100	Exper	-	26587		
			313.15	4.167						
			333.15	4.155						
			353.15	4.163						
			373.15	4.151						
			393.15	4.151						
			413.15	4.159						
			433.15	4.184						
			453.15	4.217						
			473.15	4.280						
			493.15	4.364						
			513.15	4.489						
			533.15	4.678						
553.15	4.929									
573.15	5.414									
-	L	-	303.16	4.208	1	Corr	-	23644		
			333.16	4.204						
-	G	-	0	1.692	0	Theor	-	15168		
			100	1.755						
			200	1.830						
			300	1.909						
			400	1.995						
			500	2.079						
			600	2.160						
			700	2.231						
			800	2.302						
			900	2.363						
			1000	2.417						
			1100	2.467						
			1200	2.509						
			1300	2.549						

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
WATER, DIDEUTERATED (continued)	D ₂ O	-	G	1400	2.578	0	Theor	-	15168
				1500	2.607				
				50	1.662				
				100	1.662				
				110	1.663				
				120	1.663				
				130	1.663				
				140	1.663				
				150	1.664				
				160	1.665				
				170	1.665				
				180	1.667				
				190	1.668				
				200	1.670				
				210	1.672				
				220	1.675				
				230	1.678				
				240	1.682				
				250	1.686				
				260	1.690				
				270	1.695				
				280	1.700				
				290	1.706				
				300	1.711				
				310	1.717				
				320	1.724				
				330	1.730				
				340	1.737				
				350	1.743				
				360	1.750				
				370	1.757				
				380	1.765				
				390	1.772				
400	1.779								
450	1.817								
500	1.857								
550	1.897								
600	1.939								
650	1.981								
700	2.024								
750	2.067								
800	2.110								
850	2.151								
900	2.191								
950	2.230								
1000	2.268								
1050	2.304								
1100	2.338								
1150	2.370								
1200	2.401								
1300	2.458								
1400	2.508								
1500	2.553								
		-	G	273.15	1.692	0	Theor	-	21010
				373.15	1.755				
				473.15	1.830				
				573.15	1.909				
				673.15	1.995				
				773.15	2.078				
				873.15	2.160				
				973.15	2.231				
				1073.15	2.302				
				1173.15	2.369				
				1273.15	2.417				
				1373.15	2.467				
		1473.15	2.509						

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.	
m-XYLENE	C ₈ H ₄ (CH ₃) ₂	-	L	217.0	1.502	1	Exper	<1	21826	
				221.1	1.519					
				225.0	1.523					
				226.9	1.523					
				275.0	1.657					
				275.3	1.653					
		97.7	L	230	1.553	1	Exper	1	33589	
				231.40	1.555					
				237.18	1.562					
				240	1.565					
				249.43	1.581					
				250	1.583					
				260	1.607					
				262.62	1.613					
				268.83	1.635					
				270	1.636					
				276.80	1.655					
				276.97	1.656					
				280	1.676					
				284.83	1.686					
				290	1.700					
				292.93	1.711					
		300	1.731							
		305.27	1.748							
		318.16	1.784							
		320	1.797							
		-	L	-	273.15	1.686	1	Corr	4.1	56767
					283.15	1.699				
					293.15	1.715				
					303.15	1.724				
					313.15	1.741				
					323.15	1.757				
					333.15	1.774				
					343.15	1.791				
					353.15	1.816				
					363.15	1.841				
					373.15	1.866				
					383.15	1.895				
					393.15	1.925				
					403.15	1.958				
		413.15	1.987							
		423.15	2.021							
433.15	2.050									
443.15	2.084									
453.15	2.113									
463.15	2.142									
473.15	2.176									
-	L	-	290-329	1.79	1	Exper	-	1562		
			289-372	1.88						
			290-405	1.96						
-	L	-	293.15	1.65	1	Exper	-	21778		
			303.15	1.68						
			412.35	2.06						
-	L	-	293.15	1.643	1	Corr	-	9335		
			293.15	1.691						
			298.15	1.660						
			298.15	1.713						
-	L	-	294-379	1.87	1	Exper	±0.3	17524		
-	G	-	273.15	1.109	1	Corr	-	56767		
			323.15	1.297						
			373.15	1.464						
			423.15	1.653						
			473.15	1.841						
523.15	1.987									

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.								
m-XYLENE (continued)	C ₈ H ₄ (CH ₃) ₂	-	G	573.15	2.134	1	Corr	-	56767								
				623.15	2.259												
				673.15	2.385												
				723.15	2.489												
				773.15	2.594												
				823.15	2.678												
				873.15	2.741												
				923.15	2.803												
				973.15	2.887												
				1023.15	2.950												
				1073.15	3.012												
				1123.15	3.075												
				1173.15	3.138												
				1223.15	3.180												
				1273.15	3.222												
				-	G	298.16	1.197	0	Theor	-	33589						
		400	1.577														
		500	1.910														
		600	2.190														
		800	2.621														
		1000	2.928														
		1500	3.387														
				-	G	298.16	1.202	0	Theor	-	5162						
		300	1.208														
		400	1.578														
		500	1.909														
		600	2.188														
		700	2.421														
		800	2.617														
		900	2.784														
1000	2.926																
1100	3.047																
1200	3.151																
1300	3.240																
1400	3.318																
1500	3.385																
		-	G	300	1.206	1	Corr	-	2500								
400	1.574																
500	1.901																
600	2.187																
800	2.635																
1000	2.917																
		-	G	393	1.545	0.2	Exper	-	33589								
				393	1.541					0	Exper	-	33589				
		-	G	428	1.683	0.7	Exper	-	33589								
				428	1.671					0	Exper	-	33589				
		-	G	463	1.801	1	Exper	-	33589								
				463	1.789					0	Exper	-	33589				
o-XYLENE	C ₈ H ₄ (CH ₃) ₂	-	L	250	1.636	1	Exper	0.2	33589								
				251.65	1.642												
				256.79	1.657												
				260	1.667												
				268.19	1.681												
				268.81	1.692												
				270	1.690												
				276.52	1.707												
				280	1.718												
				284.82	1.733												
				290	1.746												
				293.52	1.756												
				300	1.774												
										(continued)							

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
o-XYLENE (continued)	C ₆ H ₄ (CH ₃) ₂	-	L	301.31 301.86	1.776 1.789	1	Exper	0.2	33588
		-	L	253.3 263.0 275.2 275.3 278.5 285.3 288.7 295.1	1.636 1.657 1.690 1.686 1.695 1.711 1.720 1.732	1	Exper	<1	21826
		-	L	273.15 283.15 293.15 303.15 313.15 323.15 333.15 343.15 353.15 363.15 373.15 383.15 393.15 403.15 413.15 423.15 433.15 443.15 453.15 463.15 473.15	1.732 1.753 1.770 1.791 1.807 1.824 1.841 1.866 1.879 1.900 1.920 1.941 1.966 1.992 2.013 2.042 2.075 2.109 2.138 2.171 2.213	1	Corr	4.1	56767
		-	L	289-329 288-373 288-405	1.77 1.85 1.91	1	Exper	-	1562
		-	L	293.15 303.15 414.15	1.689 1.720 2.085	1	Exper	-	21778
		-	L	295-300	1.95	1	Exper	±0.3	17524
		-	G	273.15 323.15 373.15 423.15 473.15 523.15 573.15 623.15 673.15 723.15 773.15 823.15 873.15 923.15 973.15 1023.15 1073.15 1123.15 1173.15 1223.15 1273.15	1.172 1.339 1.506 1.674 1.841 1.987 2.134 2.259 2.385 2.489 2.594 2.678 2.741 2.803 2.887 2.950 3.012 3.075 3.138 3.180 3.222	1	Corr	-	56767
		-	G	298.16 400 500 600 800	1.258 1.619 1.837 2.207 2.629	0	Theor	-	33589

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
o-XYLENE (continued)	C ₆ H ₄ (CH ₃) ₂	-	G	1000	2.931	0	Theor	-	33589		
				1500	3.389						
				-	G	298.16	1.255	0	Theor	-	5162
						300	1.262				
						400	1.617				
						500	1.936				
						600	2.206				
						700	2.434				
						800	2.626				
						900	2.790				
						1000	2.930				
						1100	3.051				
						1200	3.154				
						1300	3.243				
						1400	3.320				
				1500	3.387						
				-	G	300	1.252	1	Deriv	-	2500
						400	1.606				
						500	1.910				
						600	2.241				
800	2.643										
-	G	300	1.258	1	Cited	-	2500				
		400	1.619								
		500	1.937								
		600	2.207								
		800	2.629								
-	G	393	1.588	0.2	Exper	-	33589				
		393	1.584	0	Exper	-	33589				
-	G	428	1.722	0.7	Exper	-	33589				
		428	1.714	0	Exper	-	33589				
-	G	463	1.841	1	Exper	-	33589				
		463	1.813	0	Exper	-	33589				
p-XYLENE	C ₆ H ₄ (CH ₃) ₂	99.98	L	290	1.705	1	Exper	1	33589		
				292.02	1.719						
				300	1.737						
				301.10	1.733						
				310.04	1.751						
				314.69	1.783						
				318.47	1.813						
				319.24	1.793						
				320	1.797						
				327.36	1.846						
				338.96	1.907						
				340	1.892						
				345.49	1.908						
				354.65	1.956						
				360	1.986						
				-	L	290.7	1.682	1	Exper	-	21826
						292.1	1.678				
						294.4	1.682				
						299.0	1.699				
						299.4	1.703				
-	L	289-329	1.79	1	Exper	-	1562				
		288-373	1.91								
		293-405	1.96								
(continued)											

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C _p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.		
p-XYLENE (continued)	C ₆ H ₄ (CH ₃) ₂	-	L	293.15 410.65	1.662 2.065	1	Exper	-	21778		
		-	L	293.15 303.15 313.15 323.15 333.15 343.15 353.15 363.15 373.15 383.15 393.15 403.15 413.15 423.15 433.15 443.15 453.15 463.15 473.15	1.695 1.724 1.757 1.787 1.816 1.849 1.883 1.920 1.958 1.996 2.033 2.075 2.109 2.151 2.188 2.226 2.264 2.301 2.343	1	Corr	4.1	56767		
		-	L	294-379 295-399	1.87 1.90	1	Exper	±0.3	17524		
		-	G	273.15 323.15 373.15 423.15 473.15 523.15 573.15 623.15 673.15 723.15 773.15 823.15 873.15 923.15 973.15 1023.15 1073.15 1123.15 1173.15 1223.15 1273.15	1.109 1.297 1.464 1.653 1.841 1.987 2.134 2.259 2.385 2.489 2.594 2.678 2.741 2.803 2.887 2.950 3.012 3.075 3.138 3.180 3.222	1	Corr	-	56767		
		-	G	298.16 400 500 600 800 1000 1500	1.192 1.564 1.896 2.176 2.610 2.920 3.384	0	Theor	-	33589		
		-	G	298.16 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500	1.195 1.202 1.565 1.894 2.174 2.409 2.607 2.774 2.917 3.040 3.145 3.255 3.313 3.381	0	Theor	-	5162		
		(continued)									

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg ⁻¹ K ⁻¹	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
p-XYLENE (continued)	<chem>C6H4(CH3)2</chem>	-	G	300	1.195	1	Corr	-	2500
				400	1.564				
				500	1.892				
				600	2.179				
				800	2.630				
				1000	2.916				
				393	1.541	0.2	Exper	-	33589
				393	1.537	0	Exper	-	33589
				428	1.691	0.7	Exper	-	33589
				428	1.679	0	Exper	-	33589
				463	1.793	1	Exper	-	33589
463	1.781	0	Exper	-	33589				

SECTION II - SUPPLEMENTAL REFERENCES

A						B								
ACETALDEHYDE						BROMOETHANE								
Gas:	3985	6339	18269	21746	26338	Gas:	27788	49793						
	33982	33983	41288	49916	56372	Liquid:	834	18269	34822	40184	49793			
Liquid:	954	1514	3002	3985	12962	BROMOFORM								
	28401	49916				Gas:	292	701	1507	5178	7784			
ACETIC ACID							28274	46803	46804	64391	64392			
Gas:	22278					Liquid:	7784	18269	23025	28292				
Liquid:	465	1783	12862	17062	18269	BROMOMETHANE								
	22724	26417	28405	34822	37750	Gas:	292	5178	7784	10204	18269			
	38169	40184	44406	50253			28274	46803	46804					
ALLYL ALCOHOL						Liquid:	1369	7784	10394	11853	28292			
Gas:	44325						34822	38169	49793					
Liquid:	1288	44325				1-BROMOPROPANE								
AMMONIA, TRIDEUTERATED						Gas:	27788							
Gas:	34722	70829				Liquid:	18269	40184						
Liquid:	65396					BROMOTRICHLOROMETHANE								
ANILINE						Gas:	292	5178	7784	28274	64391			
Gas:	63931						64392							
Liquid:	834	10394	11802	21399	21894	Liquid:	7784	23025						
	22724	26417	37750	38169	40184	1,3-BUTADIENE								
	44535	55830				Gas:	1008	1076	1119	5065	6339			
ARSINE							11748	18248	28281	28468	30298			
Gas:	20533						34172	37757	42510	45765				
Liquid:	440	33706	47415			Liquid:	1119	2500	11037	11041	42510			
							45765							
B						1-BUTANOL								
BENZENE, HEXADEUTERATED						Gas:	1502	16990	18269	27811	28983			
Liquid:	25220	26917	26918				35914	41433						
BENZOIC ACID						Liquid:	465	813	834	12862	18269			
Gas:	5186						26417	28983	35914	41433	44406			
Liquid:	1699	2024	5186	14680	16021		48328	62083	62112	73615				
	17062	23327	25528	28440	34822	2-BUTANOL								
p-BENZOQUINONE						Gas:	1502	27438						
Gas:	36436					Liquid:	13331	21778	48774					
Liquid:	1172					2-BUTANONE								
BENZYL ALCOHOL						Gas:	10761	23720	37226					
Liquid:	15365	18269				Liquid:	465	1187	13883	15314	18269			
BORON TRIBROMIDE							34822	37226	45169	46894	50607			
Gas:	6339	6538	10563	10832	26125	1-BUTENE								
	27798	75473	75494			Gas:	794	1008	2676	6339	8599			
BORON TRICHLORIDE							18248	19088	28281	34172	37757			
Gas:	6339	6538	7006	8282	10563		42508	45765	47007	51600	58887			
	10832	10928	15932	26107	27798	Liquid:	2002	2500	2676	11037	19088			
	27854	57314	75473	75474			35625	40544	42508	45765	58887			
BROMINE, MONATOMIC						2-BUTENE								
Gas:	7001	10832	36301	60200		Gas:	1008	18248	35191					
Liquid:	34822	60200				Liquid:	35625							
BROMINE CHLORIDE						cis-2-BUTENE								
Gas:	625	7001	9708	10832		Gas:	794	2445	2500	6339	8599			
BROMINE FLUORIDE							18269	19088	28281	34172	42508			
Gas:	7001	9708	10832				45568	45765	51600					
BROMINE PENTAFLUORIDE						Liquid:	1874	2500	42508	45568	45765			
Gas:	7001	64266				trans-2-BUTENE								
BROMOBENZENE						Gas:	794	6339	8599	18269	19088			
Gas:	22026	22899	54836	63931			28281	34172	42508	45765	51600			
Liquid:	834	13886	15314	22026	34822	Liquid:	1894	19088	42508	45765				
	38169	40184	43272			BUTYL ACETATE								
1-BROMOBUTANE						Gas:	19338	51738						
Gas:	27788	36827	43781			Liquid:	13883	15314	19338	51738				
Liquid:	21843	34822				BUTYLBENZENE								
BROMODICHLOROMETHANE						Gas:	794	6339	23064	34172	37187			
Gas:	292	664	7784	10477	23025	Liquid:	18269	23064	38981	45765				
	28274	64391	64392			tert-BUTYLBENZENE								
Liquid:	7784	23025	28292			Gas:	28472							
						Liquid:	45765							
BUTYL ETHER						Liquid:	10550							

D					
DIBROMOMETHANE					
Gas:	292	626	10191	28274	64391
	64392				
Liquid:	3533	14916	18269	28292	
1,1-DICHLOROETHANE					
Gas:	279				
Liquid:	18269				
1,2-DICHLOROETHANE					
Gas:	731	1769	7890	34574	37143
	41431				
Liquid:	834	7823	18269	41431	54732
1,2-DICHLOROETHYLENE					
Gas:	292				
Liquid:	18269				
DICHLOROFLUOROMETHANE, MONODEUTERATED					
Gas:	61223				
DICHLOROMETHANE					
Gas:	292	1507	28274	28651	32701
	34556	35774	37757	46803	46804
	51332	64391	64392		
Liquid:	465	834	1360	1578	5410
	9091	15361	18269	28153	28292
	28417	28647	36452	51332	
1,2-DICHLOROPROPANE					
Gas:	41431				
Liquid:	18269	41431			
1,1-DICHLOROTETRAFLUOROETHANE					
Gas:	69656	69657			
2,2-DICHLORO-1,1,1-TRIFLUOROETHANE					
Liquid:	3933	18269			
DIETHYL OXALATE					
Liquid:	22724				
1,1-DIFLUOROETHYLENE					
Gas:	30167				
Liquid:	49049				
DIFLUOROMETHANE					
Gas:	701	5178	8282	10530	10928
	28274	64391	64392		
Liquid:	339	28292			
DIODOMETHANE					
Gas:	5178	10028	28274	28651	46803
	46804	64391	64392		
Liquid:	18269				
DIMETHYLAMINE					
Gas:	317	15325	18269	25770	28272
Liquid:	11866				
2,2-DIMETHYLBUTANE					
Gas:	794	1815	6339	19088	34172
Liquid:	5626	19088	45765		
2,3-DIMETHYLBUTANE					
Gas:	957	4980	6339	19088	28281
	34172				
Liquid:	603	18269	19088	45765	
1,2-DIMETHYLCYCLOPENTANE					
Liquid:	34822				
2,3-DIMETHYLHEXANE					
Gas:	794	34172			
2,5-DIMETHYLHEXANE					
Gas:	794	34172			
Liquid:	9330	45765			
3,3-DIMETHYLHEXANE					
Gas:	794	34172			
Liquid:	18269	45765			
3,4-DIMETHYLHEXANE					
Gas:	794	34172			
DIMETHYLPROPANE					
Gas:	1254	3863	5178	6339	18269
	19088	28281	34172	65033	69033
Liquid:	3863	12077	24835	38169	49183
	53408	69033			

D					
2,5-DIMETHYLTHIOPHENE					
Liquid:	35002	46894			
m-DINITROBENZENE					
Liquid:	1172				
o-DINITROBENZENE					
Liquid:	1172				
p-DINITROBENZENE					
Liquid:	1172				
1,1-DIPHENYLETHANE					
Gas:	23064				
Liquid:	23064				
DIPHENYLMETHANE					
Liquid:	1200	1477	9330	18269	21826
	21894				
DODECANE					
Gas:	794	29181	34172	51384	
Liquid:	405	708	834	27707	29181
	38853	40974	40975	43978	44504
	45765	50824	51367	51384	65782
	72308				
E					
ETHANE, HEXADEUTERATED					
Gas:	1521	11635	11640		
ETHANETHIOL					
Gas:	1797	2007	23748	27102	28771
	50182				
Liquid:	1797	2007	18269	23748	24177
	27102	59026			
ETHYL ACETATE					
Gas:	19338	37738	51738		
Liquid:	465	834	3002	12862	18269
	19338	22724	33189	37738	40184
	44406	51738	60646		
ETHYLBENZENE					
Gas:	794	1008	1076	6339	28281
	28296	34172	37167	56305	
Liquid:	834	2500	5096	13886	15314
	17062	18269	20569	21399	21894
	22724	38169	45765	62112	
	65103				
ETHYL BUTYRATE					
Liquid:	465	12862	13883	15314	22724
	37738	40184	60646		
ETHYLENE OXIDE					
Gas:	1852	28245	31578	37757	42251
	42252	48775			
Liquid:	1514	31578	34822	38169	
ETHYL FORMATE					
Gas:	22026	22899	52327		
Liquid:	465	12862	13883	15314	22026
	40184	52327	53209	53210	
3-ETHYLHEXANE					
Gas:	794	34172			
3-ETHYL-2-METHYLPENTANE					
Gas:	794				
3-ETHYL-3-METHYLPENTANE					
Gas:	794	34172			
ETHYL PROPIONATE					
Liquid:	465	22724	60646		
F					
FLUORINE, MONATOMIC					
Gas:	7001	8274	8282	10530	10928
	17036	36301			
Liquid:	34822				
FLUOROBENZENE					
Gas:	7266	8980	9727	54836	62648
Liquid:	7266	31514	31714	34822	38169

F					
FLUOROETHANE					
Gas:	47342				
FLUOROETHYLENE					
Gas:	30167	45281	45282		
FLUOROMETHANE					
Gas:	1833	3533	3771	5178	7784
	8282	10530	18269	28274	
Liquid:	7784	28292			
FORMALDEHYDE					
Gas:	10530	10832	18269	24721	26338
	31865	45281	45282	56372	70329
Liquid:	49916				
FORMYL					
Gas:	10530	24721	70329		
FURAN					
Gas:	18603	53412			
Liquid:	43492	47328			
FURFURYL ALCOHOL					
Liquid:	1187				

H					
HEXADECANE					
Gas:	794	23064	29181	34172	51384
Liquid:	8429	19088	20103	23064	28101
	29181	29971	37953	40974	40975
	43978	44504	45765	50824	51367
	51384	52599	52601	58692	61498
	61499	65782	72308		
HEXAFLUOROETHANE					
Gas:	907	4838	54159		
Liquid:	4838	10004	24984		
HEXAMETHYLBENZENE					
Gas:	7269	18269			
Liquid:	548	9330	21896		
1-HEXANOL					
Gas:	27811	44325			
Liquid:	834	12862	22997	44325	72308
HYDRAZINE					
Gas:	6538	12901	32672	40408	40980
	40981	42656	50641	59354	
Liquid:	938	24177	32672	39029	40408
	43870	47415			
HYDROBROMIC ACID					
Gas:	7001	10530	13938	21517	23890
	25198	47378	50641	59354	
Liquid:	21810	24177	43110	60647	
HYDROCYANIC ACID					
Gas:	1255	5178	8282	10042	10530
	10832	10928	13938	23890	36825
	37757				
Liquid:	1255	1604	11874	18269	34822
	36825				
HYDROFLUORIC ACID					
Gas:	6538	7001	7006	7051	8274
	8282	8892	10530	10928	14916
	17036	22959	23890	25198	28261
	43805	47378	60202	69619	
Liquid:	1370	1700	10435	14916	24177
	69619				
HYDROFLUORIC ACID, MONODEUTERATED					
Gas:	25198	43805			
HYDROGEN, MONATOMIC					
Gas:	794	6996	8274	8282	10142
	10145	10530	10591	10928	17036
	24721	28850	30457	36301	60667
	70329				
Liquid:	14114	34822			
HYDROGEN, MONODEUTERATED					
Gas:	2445	25198	60667	61434	75384
Liquid:	15822	27433	30953	51450	75384

H					
HYDROGEN PEROXIDE					
Gas:	10671	18269	24721	33267	45281
	45282	49427	49428	51250	
Liquid:	1202	18269	24058	37647	51250
HYDROGEN SELENIDE					
Gas:	467	23890	30155	41545	
HYDROGEN SELENIDE, DIDEUTERATED					
Gas:	467	30155			
HYDROGEN SULFIDE, DIDEUTERATED					
Gas:	10116	30155	56361		
Liquid:	56361				
HYDROGEN SULFIDE, DITRITIATED					
Gas:	10116				
HYDROGEN SULFIDE, MONODEUTERATED					
Gas:	10116	35266			
HYDROGEN SULFIDE, MONODEUTERATED MONOTRITIATED					
Gas:	10116				
HYDROGEN SULFIDE, MONOTRITIATED					
Gas:	10116				
HYDROQUINONE					
Liquid:	1172	12954	14680	28278	
HYDROXYL					
Gas:	8274	8282	10145	10498	10530
	10591	10928	15326	24508	24721
	25198	30457	61224	70329	
Liquid:	14114	34822			

I					
IODINE					
Gas:	7001	10832	21424	27460	30301
	33547	47378			
Liquid:	11849	33547			
IODINE, MONATOMIC					
Gas:	7001	23617	30301	36301	
Liquid:	34822				
IODINE BROMIDE					
Gas:	7001	9708	10832		
IODINE CHLORIDE					
Gas:	7001	9708	10832		
Liquid:	35019	44845			
IODINE FLUORIDE					
Gas:	7001	9708	10832		
IODINE PENTAFLUORIDE					
Gas:	27808	30152	61836	64266	
Liquid:	61836				
IODOBENZENE					
Gas:	54836				
Liquid:	10394	14116	34822	38169	
IODOMETHANE					
Gas:	3797	5178	7784	28651	46803
	46804				
Liquid:	3533	7784	14916		
ISOBUTYL ACETATE					
Liquid:	22724				
ISOPENTYL ACETATE					
Liquid:	12862				
ISOPRENE					
Gas:	1008	28261	34172		
Liquid:	2500	45765	57379		
ISOPROPYLAMINE					
Liquid:	64586				
K					
KETENE					
Gas:	26338	31751	56372		
Liquid:	31751	38169			

N					P						
NAPHTHALENE					PHOSGENE						
Gas:	481	694	1046	1697	57381	Gas:	5178	10832	18149	18269	31994
	63533	63534	75806				45281	45282	53731		
Liquid:	694	1172	9330	10394	11381	Liquid:	11155	18149	24177	28402	53731
	16021	21894	21896	28307	34822						
	59651	74086	74087	75806		PHOSPHINE					
1-NAPHTHOL					PHOSPHORUS TRICHLORIDE						
Liquid:	12954					Gas:	5178	7006	26149		
2-NAPHTHOL					PHOSPHORUS TRIFLUORIDE						
Liquid:	12954	16021				Gas:	5178	10530	10832	23815	24959
m-NITROANILINE					PROPADIENE						
Liquid:	14680	17911	34822	37750		Gas:	1008	2445	34172	42510	56048
o-NITROANILINE					1,2-PROPANEDIOL						
Liquid:	37750					Gas:	18269				
p-NITROANILINE					1-PROPANOL						
Gas:	75798					Gas:	1237	16990	18269	19881	21746
Liquid:	14680						22278	24531	26338	27811	41433
NITROBENZENE					2-PROPANOL						
Liquid:	834	11689	14096	15365	15401	Gas:	4301	16990	18269	21746	26338
	21399	23026	26417	26423	34822		31271	31273	33092	56372	
	37750	38188	45169			Liquid:	834	1288	1714	3002	12862
NITROGEN, MONATOMIC					PROPYL ACETATE						
Gas:	794	4640	7071	8274	8282	Liquid:	465	708	22724	40184	
	10144	10530	10577	10928	17036	PROPYLBENZENE					
	26702	27406	28968	36107	36301	Gas:	754	1008	6339	34172	37167
	38223	61224				Liquid:	405	708	2500	22724	34822
Liquid:	14114	34822					38981				
NITROMETHANE					PROPYL ETHER						
Gas:	519	5384	7840	26338	33866	Gas:	14727				
	52230	56372				PROPYNE					
Liquid:	21399	21792	34822	43115	50273	Gas:	794	1008	4016	6339	11104
	52230						28281	34172	42509		
O					PYRIDINE						
OXYGEN, MONATOMIC					PYROCATECHOL						
Gas:	794	8274	8282	10143	10145	Liquid:	1172	12954	14680	28278	
	10530	10577	10591	10928	17036	R					
	24721	27406	30457	36301	38223	RESORCINOL					
	60667					Liquid:	1172	12954	14680	28278	
Liquid:	14114	34822				S					
OXYGEN FLUORIDE					SILANE						
Gas:	947	18269	54182			Gas:	689	10832	20690	36913	42528
Liquid:	40072						46792	46803	46804	64383	64384
P					SILICON TETRACHLORIDE						
PENTADECANE											
Gas:	794	1348	18172	34172	51384	Gas:	1507	2445	7006	8282	10832
Liquid:	27707	40974	40975	43978	45765		20690	42249	42250	42528	45281
	50824	51367	51384	61498	61499		45282	46803	46804	48461	59340
							60899	64383	64384		
1-PENTANOL					Liquid:						
Gas:	27811	44325	59199			591	7006	20690	41524		
Liquid:	834	11120	12862	21399	26417						
	34822	44325	50606	62083	62112						
3-PENTANONE											
Gas:	46115										
Liquid:	465	34822	50607								
1-PENTENE											
Gas:	794	1825	2916	6339	8599						
	19088	34172	45568	51600	52071						
Liquid:	2002	19088	28400	35625	45568						
	52071										
1-PENTYNE											
Gas:	794	6339									
Liquid:	18269										
2-PENTYNE											
Gas:	794	6339									
Liquid:	18269										
PHENYL ETHER											
Gas:	970	1699									
Liquid:	970	10749	28101	28925	34822						
	70444										

S					
SILICON TETRAFLUORIDE					
Gas:	488	3409	7006	8282	10822
	10832	20690	42528	45281	45282
	60899				
Liquid:	20690				
STYRENE					
Gas:	1008	1076	6339	28281	28396
Liquid:	1200	1477	15314	17047	21841
	28395	38169	45765	57987	
SULFUR, DIATOMIC					
Gas:	8282	10530	11893	21596	25591
	32769				
Liquid:	1344	2016			
SULFUR, MONATOMIC					
Gas:	8282	10530	12092	17036	36301
Liquid:	25193	34822			
SULFUR DICHLORIDE					
Gas:	2761	30153	31265		
SULFUR DIFLUORIDE					
Gas:	54182				
SULFUR HEXAFLUORIDE					
Gas:	1906	9999	10832	33819	37112
	43338	54182	65463	73567	73568
Liquid:	47048	71840	72660		
SULFUR MONOCHLORIDE					
Gas:	31265				
Liquid:	47105				
SULFUR MONOXIDE					
Gas:	8282	10530			
SULFUR TETRAFLUORIDE					
Gas:	22212	38167	54182	54754	
SULFUR TRIOXIDE					
Gas:	2445	10530	14099	35010	47007
Liquid:	450	1344	14099	18269	
SULFURYL FLUORIDE					
Gas:	35627	45586			

T

1,1,2,2-TETRABROMOETHANE					
Gas:	46896				
1,1,2,2-TETRACHLORO-1,2-DIFLUOROETHANE					
Liquid:	207	33502	70584	72341	
1,1,2,2-TETRACHLOROETHANE					
Gas:	731				
Liquid:	44406				
TETRACHLOROETHYLENE					
Gas:	292	480	8794	30167	41434
	45281	45282	53486	59371	
Liquid:	480	834	18269	41434	41524
	55509				
TETRADECANE					
Gas:	794	6339	34172	51384	
Liquid:	405	708	9330	34822	40974
	40975	43978	45765	50824	51367
	51384	65782			
1,2,3,4-TETRAMETHYLBENZENE					
Gas:	7269	18269			
Liquid:	18269				
1,2,3,5-TETRAMETHYLBENZENE					
Gas:	7269	23064			
Liquid:	23064	45765			
1,2,4,5-TETRAMETHYLBENZENE					
Gas:	7269				
Liquid:	15373				
THIONYL CHLORIDE					
Gas:	42275				

T

THIONYL FLUORIDE					
Gas:	42275	45281	45282		
Liquid:	38681				
THIOPHOSGENE					
Gas:	5178	31865			
Liquid:	1360	18269	58899		
TIN TETRACHLORIDE					
Gas:	2445	7006	28758		
Liquid:	7006	28758			
TITANIUM TETRACHLORIDE					
Gas:	2445	2737	7001	7006	10832
	30154				
Liquid:	2737	7001	7006	41524	
TRIBROMOFLUOROMETHANE					
Gas:	7784	18269	64391	64392	
Liquid:	7784	23025			
1,1,1-TRICHLOROETHANE					
Gas:	1071	4081	72400		
Liquid:	1071	18269	34822	38169	72400
TRICHLOROETHYLENE					
Gas:	292	8794	30167	37757	41434
	45281	45282	53486	59371	
Liquid:	834	41434	59567		
TRICHLOROSILANE					
Gas:	591	10832	20690	42249	42250
	43004	43005	46803	46804	64383
	64384				
Liquid:	591	20690			
1,1,1-TRICHLORO-2,2,2-TRIFLUOROETHANE					
Liquid:	18269	70584	72341		
TRIDECANE					
Gas:	794	34172	51384		
Liquid:	405	708	28472	40974	40975
	43978	50824	51367	51384	
1,1,1-TRIFLUOROETHANE					
Gas:	375	1065	18269	47342	
Liquid:	1065				
TRIFLUOROIODOMETHANE					
Gas:	7784	64391	64392		
Liquid:	7784				
TRIMETHYLAMINE					
Gas:	4684	15325	18269	51384	
Liquid:	28387				
1,2,4-TRIMETHYLBENZENE					
Gas:	794	1278	5162	7269	7292
	14916	34172			
Liquid:	7292	14916	22724	45765	46894
2,2,3-TRIMETHYLBUTANE					
Gas:	471	794	19088	34172	37738
Liquid:	471	19088	24529	45765	
2,2,4-TRIMETHYLPENTANE					
Gas:	794	1824	4840	19088	23064
	28281	34172	46161		
Liquid:	9330	19088	23664	44406	45765
	46161				
2,3,3-TRIMETHYLPENTANE					
Gas:	794	19088	34172		
Liquid:	45765				
2,3,4-TRIMETHYLPENTANE					
Gas:	794	1112	19088	28281	34172
	65033				
Liquid:	1112	19088	45765		
2,4,4-TRIMETHYL-2-PENTENE					
Liquid:	12076				

U					
UNDECANE					
Gas:	794	24060	34172	51384	
Liquid:	405	708	834	11381	18269
	27767	38853	40974	40975	43978
	45765	50824	51367	51384	61498
	61499				

V	
VINYL ACETATE	
Gas:	51738
Liquid:	51738

W					
WATER, DIDEUTERATED					
Gas:	1237	14901	29718	30117	34720
	50406	67400	70167	73858	73859
Liquid:	1540	4035	9461	12673	13453
	13907	25739	27982	29047	29507
	29718	30117	31200	34527	39667
	45404	47389	50406	56165	58305
	64373	67400	70167	72097	72218
	73858	73859			

X					
m-XYLENE					
Gas:	794	2445	3863	6339	19088
	28281	34172			
Liquid:	526	834	2500	3863	18269
	19088	22724	24136	26417	43111
	45765	47389			
o-XYLENE					
Gas:	794	2445	3863	6339	7269
	18269	19088	28281	34172	
Liquid:	834	2500	3863	18269	19088
	24136	34822	45765		
p-XYLENE					
Gas:	794	2445	3863	6339	19088
	28281	34172	61690	65033	
Liquid:	526	1837	2500	3863	19088
	22724	24136	35625	36573	39164
	39165	43111	43272	47389	64303
	72374				

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TAYLOR WILLIAM J EBERT JOAN P KILPATRICK JOHN E
BECKETT CHARLES W WILLIAMS MARY G
WERNER HELENE G NBS NBS
SUPT OF DOCS USGPO
NBS CIRC C461
1-472 1947 CA 42 2830
- 00813 THE PRACTICAL CALCULATION OF THE HEAT-TRANSMISSION
COEFFICIENT OF LIQUIDS
BOEHM J
ARCH GES WARMETECH
1 209-14 1950 CA 45 5464
- 00834 THERMAL CONDUCTIVITY OF LIQUIDS
PALMER GERALD
IND ENG CHEM
40 89-92 1948 CA 42 2150
- 00907 HEAT CAPACITY OF GASEOUS HEXAFLUOROETHANE
WICKLUND JOHN S FLIEGER HOWARD W JR
MASI JOSEPH J
J RESEARCH NATL BUR STANDARDS
51 91-2 1953 CA 48 3780
- 00938 HYDRAZINE. HEAT CAPACITY, HEATS OF FUSION AND
VAPORIZATION, VAPOR PRESSURE, ENTROPY, AND
THERMODYNAMIC FUNCTIONS.
SCOTT D W OLIVER G D GROSS MARGARET E
HUBBARD W N HUFFMAN HUGH A
J AM CHEM SOC
71 2293-7 1949 CA 44 4322
- 00942 THERMODYNAMIC FUNCTIONS OF CHLOROBENZENE
GODNEV I N SVERDLIN A S SAVOGINA M S
ZHUR FIZ KHIM
24 807-12 1950 CA 45 4128
- 00947 THERMODYNAMIC PROPERTIES OF OXYGEN FLUORIDE AND
CHLORINE FLUORIDE FROM SPECTROSCOPIC DATA
POTTER ROBERT L
J CHEM PHYS
17 957-9 1949 CA 44 2361
- 00949 THERMODYNAMIC PROPERTIES OF SOME SULFUR COMPOUNDS
BARROW GORDON M PITZER KENNETH S
IND ENG CHEM
41 2737-40 1949 CA 44 2361
- 00954 THERMODYNAMICS AND VIBRATIONAL SPECTRUM OF
ACETALDEHYDE
PITZER KENNETH S WELTNER WM JR
J AM CHEM SOC
71 2842-4 1949 CA 44 2812
- 00957 EXPERIMENTAL VAPOR HEAT CAPACITIES AND HEATS OF
VAPORIZATION OF 2-METHYLPENTANE, 3-METHYLPENTANE, AND
2,3-DIMETHYLBUTANE.
WADDINGTON GUY SMITH J C SCOTT D W
HUFFMAN H M
J AM CHEM SOC
71 3902-6 1949 CA 44 2840
- 00967 ULTRASONIC RELAXATION AND THE VIBRATIONAL SPECIFIC
HEAT OF CARBON DISULFIDE
ANDREA J H HEASELL E L LAMB J
PROC PHYS SOC /LONDON/
69 B 625-32 1956 CA 50 16352
- 00970 CALORIMETRIC PROPERTIES OF DIPHENYL ETHER FROM C TO
370 K
FURUKAWA GEORGE T GINNINGS DEFOE C
MCCOSKEY ROBERT E NELSON RAYMOND A
J RESEARCH NATL BUR STANDARDS
46 195-206 1951 CA 45 5505
- 00974 ISOBARIC HEAT CAPACITIES AT BUBBLE POINT--HEXANE,
METHYLCYCLOPENTANE, AND OCTANE.
CONNOLLY T J SAGE B H LACEY W N
IND ENG CHEM
43 946-50 1951 CA 45 6476
- 00980 EXPERIMENTAL VAPOR HEAT CAPACITIES AND HEATS OF
VAPORIZATION OF SEVEN OCTANES
BARROW GORDON M
J AM CHEM SOC
73 1824-6 1951 CA 45 7341
- 01008 HEAT CAPACITIES OF HYDROCARBON GASES.
STULL DANIEL R MAYFIELD F DREW
IND ENG CHEM
35 639-45 1943 CA 37 4002
CORRECTION
35 1303-4 1943 CA 38 677

- 01029 BEHAVIOR OF SUPERCOOLED LIQUID AT LOW TEMPERATURES
KANDA EIZO OTSUBO AKIO HASEDA TAIICHIRO
SCIENCE REPTS RESEARCH INSTS TOKUO UNIV
2 A 9-15 1950 CA 45 7401
- 01030 THE HEAT CAPACITY, HEATS OF FUSION AND VAPORIZATION,
VAPOR PRESSURES, ENTROPY, AND THERMODYNAMIC FUNCTIONS
OF METHYLHYDRAZINE.
ASTON J G FINK H L JANZ G J RUSSELL K E
J AM CHEM SOC
73 1939-43 1951 CA 45 7423
- 01046 VAPOR HEAT CAPACITIES DETERMINED BY THE USE OF
VAPOR-PRESSURE EQUATIONS
BARROW GORDON M
J CHEM PHYS
21 1912-13 1953 CA 48 1751
- 01065 THE HEAT CAPACITY, HEATS OF TRANSITION, FUSION AND
VAPORIZATION, VAPOR PRESSURE AND ENTROPY OF
1,1,1,-TRIFLUOROETHANE.
RUSSELL HORACE JR GOLDING D R V YUST DON M
J AM CHEM SOC
66 16-20 1944 CA 38 1168
- 01066 MOLECULAR HEAT OF CHLORINE DIOXIDE
MARTIN H STRAUSS W
MONATSH
85 1261-75 1954 CA 49 7357
- 01071 THE HEAT CAPACITY, HEAT OF TRANSITION, VAPORIZATION,
VAPOR PRESSURE AND ENTROPY OF 1,1,1,-TRICHLOROETHANE.
RUBIN THOR R LEVEDAHL BLAINE H YOST DON M
J AM CHEM SOC
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- 01076 THE SPECIFIC HEATS OF GASEOUS 1,3-BUTADIENE,
ISOBUTENE, STYRENE, AND ETHYLBENZENE.
SCOTT RUSSELL B MELLORS JANE W
J RESEARCH NATL BUR STANDARDS
34 243-54 1945 CA 39 2690
- 01112 THE THERMODYNAMICS OF BRANCHED-CHAIN PARAFFINS. THE
HEAT CAPACITY, HEAT OF FUSION AND VAPORIZATION AND
ENTROPY OF 2,3,4-TRIMETHYLPENTANE.
PITZER KENNETH S SCOTT DONALD W
J AM CHEM SOC
63 2419-22 1941 CA 35 7276
- 01119 THERMODYNAMIC PROPERTIES OF 1,3-BUTADIENE IN THE
SOLID, LIQUID, AND VAPOR STATES.
SCOTT RUSSELL B MEYERS CYRIL H
HANDS ROBERT D JR BRICKWEDDE FERDINAND G
BEKKEDAHL NORMAN
J RESEARCH NATL BUR STANDARDS
35 39-65 1945 CA 39 4792
- 01172 SPECIFIC HEATS, SPECIFIC VOLUMES, TEMPERATURE
CONDUCTIVITIES, AND THERMAL CONDUCTIVITIES OF SEVERAL
DISUBSTITUTED BENZENES AND POLYCYCLIC SUBSTANCES.
UEBERREITER KURT ORTHMANN HANS JOACHIM
Z NATURFORSCH
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- 01183 THERMODYNAMIC PROPERTIES OF THE SYSTEM
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HEAT CAPACITIES.
RUITER L H
REC TRAV CHIM
74 1467-81 1955 CA 50 6170
- 01187 THERMAL DATA ON ORGANIC COMPOUNDS. XVII. SOME
HEAT-CAPACITY, ENTROPY, AND FREE-ENERGY DATA FOR
SEVEN COMPOUNDS CONTAINING OXYGEN.
PARKS GEO S KENNEDY WM D GATES ROBERT R
MOSLEY JOHN R MOORE GEO E RENQUIST MELVIN L
J AM CHEM SOC
78 56-9 1956 CA 50 5387
- 01200 THE HEAT CAPACITY OF LIQUIDS. III. THE HEAT
CAPACITY OF HYDROCARBONS WITH SEVERAL UNCONDENSED
NUCLEI.
KURBATOV V YA
J GEN CHEM USSR
20 1183-9 1950 CA 46 3385
- 01202 HYDROGEN PEROXIDE AND ITS ANALOGS. IV. SOME THERMAL
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FOLEY WM T GIGUERE PAUL A
CAN J CHEM
29 895-903 1951 CA 46 3385
- 01220 THERMO DATA FOR PETROLEUM CHEMICALS. XX.
KETENEACETONE EQUILIBRIUM.
KUBE KENNETH A HARRISON ROLAND H
PETROLEUM REFINER
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AMMONIA, HYDRAZINE, AND THE METHYLAMINES.
KUBE KENNETH A HARRISON ROLAND H
PETROLEUM REFINER
33 11 161-4 1954 CA 49 2172
- 01237 A STUDY OF THE ASSOCIATION STRUCTURE OF HEAVY WATER
AND OF PROPANOL BY MEANS OF THERMAL MEASUREMENTS,
ESPECIALLY OF SPECIFIC HEATS.
EUCKEN A EIGEN M
Z ELEKTROCHEM
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NEOPENTANE AND ISOBUTANE
KAZAVCHINSKII YA Z KATKHE G I
ZHUR FIZ KHIM
29 2230-5 1955 CA 50 13538
- 01255 IDEAL GAS THERMODYNAMIC FUNCTIONS OF THE ISOTOPIC
HYDROGEN CYANIDES
BRADLEY JOE C HAAR LESTER FRIEDMAN ABRAHAM S
J RESEARCH NATL BUR STANDARDS
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- 01256 THERMODYNAMIC INVESTIGATION OF THE TRANSITIONS IN
CARBON TETRABROMIDE AND AMMONIUM CHLORIDE
MARSHALL J G STAVELEY L A K HART K R
TRANS FARADAY SOC
52 19-31 1956 CA 50 13538
- 01261 THERMODYNAMIC FUNCTIONS FOR PHOSPHINE AND THE
PHOSPHONIUM ION
ALTSHULLER AUBREY P
J AM CHEM SOC
77 4220-1 1955 CA 49 15430
- 01268 THERMODYNAMIC PROPERTIES OF LIQUID CHLORETHANE
GILBERT JAMES W LAGEMANN ROBERT T
J PHYS CHEM
60 804-5 1956 CA 50 14296
- 01278 ISOBARIC HEAT CAPACITIES AT BOYLE POINT--TWO
TRIMETHYLBENZENES AND HEPTANE.
HELFREY P I HEISER D A SAGE B H
IND ENG CHEM
47 2385-8 1955 CA 50 2267
- 01283 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. VI.
ACETYLENES AND DIOLIFINS.
KUBE KENNETH A LONG ERNEST G
PETROLEUM REFINER
28 10 133-6 1949 CA 44 1679
- 01288 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY.
XVII. SOME C3 OXYGENATED COMPOUNDS.
KUBE KENNETH A HARRISON ROLAND H
PENNINGTON ROBERT E
PETROLEUM REFINER
30 8 119-22 1951 CA 45 9241
- 01315 THE THERMODYNAMIC FUNCTIONS OF METHYL MERCAPTAN AND
DIMETHYL SULFIDE
BINDER JOHN L
J CHEM PHYS
18 77-8 1950 CA 44 5692
- 01344 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY.
VIII. SULFUR COMPOUNDS.
KUBE KENNETH A LONG ERNEST G
PETROLEUM REFINER
29 1 126-30 1950 CA 44 5083
- 01348 METHODS OF DETERMINATION OF HEAT CAPACITIES OF VAPORS
OF ORGANIC SUBSTANCES
MASLOV P G
ZHUR PRIKLAD KHIM
30 736-44 1957 CA 51 15240
FOR ENGLISH TRANSLATION SEE TPRC NO. 18172
- 01355 THE HEAT CAPACITIES OF CERTAIN LIQUIDS
HARRISON D MOELWYN-MUGHES E A
PROC ROY SOC /LONDON/
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- 01362 THE MOLAR HEAT OF THE DIBROMIDES OF DEUTERIOETHYLENE WUYTS-ROBIETTE J JUNGERS J C BULL SOC CHIM BELGES 58 80-6 1949 CA 44 5201
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- 01370 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. IX. THE HALOGENS AND HALOGEN ACIDS. KOBE KENNETH A LONG ERNEST G PETROLEUM REFINER 29 2 124-8 1950 CA 44 5570
- 01384 THE SPECIFIC HEAT OF ORGANIC VAPORS. I. METHOD OF MEASUREMENT AND PRELIMINARY RESULTS. EUCKEN A SARSTEDT B Z PHYSIK CHEM 53 B 143-70 1941 CA 37 2648
- 01477 HEAT CAPACITY OF LIQUIDS. III. HEAT CAPACITY OF HYDROCARBONS WITH SEVERAL NONCONDENSED RINGS. KURBATOV V YA ZHUR OBSHCHEI KHIM 20 1139-44 1950 CA 44 8757
- 01500 HEAT CAPACITIES OF SEVERAL ORGANIC LIQUIDS HOUGH E W MASON D M SAGE B H J AM CHEM SOC 72 5775-7 1950 CA 45 3232
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- 01507 MEASUREMENT OF GASEOUS HEAT CAPACITIES OF ORGANIC SUBSTANCES BY THE HOT-WIRE METHOD. I. HEAT CAPACITIES AND ACCOMMODATION COEFFICIENTS OF CARBON DIOXIDE, CARBON TETRACHLORIDE, CHLOROFORM, SILICON TETRACHLORIDE, METHYLENE DIBROMIDE, AND BROMOFORM. AIHARA ARIYUKI J CHEM SOC JAPAN 70 384-7 1949 CA 45 2733
- 01514 SOME OXYGENATED HYDROCARBONS C1 AND C2 KOBE KENNETH A PENNINGTON R E PETROLEUM REFINER 29 9 135-8 1950 CA 45 430
- 01521 ROLE OF INTERACTION IN THE ETHANE-D6 MOLECULE MASLOV P G ZHUR FIZ KHIM 28 1507-20 1954 CA 49 13781
- 01522 ENTROPY, HEAT CAPACITY, AND HEATS OF TRANSITION OF 1,3,5-TRIMETHYLBENZENE. TAYLOR R DEAN KILPATRICK JOHN E J CHEM PHYS 25 1232-5 1955 CA 49 13754
- 01540 DIFFERENCE BETWEEN THE THERMAL AND CALORIC PROPERTIES OF HEAVY AND LIGHT WATER EUCKEN A VACHR AKAD WISS GUTTINGEN MATH-PHYSIK KLASSE B10L -PHYSIOL-CHEM ABT 1 1-11 1949 CA 44 7641
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- 01578 HEAT CAPACITY, ENTHALPY AND ENTROPY OF MODERN REFRIGERANTS IN THE GAS PHASE AT LOW PRESSURE. I. CH2CL2 AND CF2CL2. JUSTI E LANGER F Z TECH PHYSIK 21 189-94 1940 CA 35 3515
- 01604 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. XI. CYANOGEN COMPOUNDS. KOBE KENNETH A LONG ERNEST G PETROLEUM REFINER 29 5 89-92 1950 CA 44 8097
- 01606 THERMODYNAMIC FUNCTIONS OF HOCL AND CL2O LUFT N W J PHYS CHEM 58 928 1954 CA 49 1418
- 01697 HEAT CAPACITIES OF VAPORS BRIGGS D K H CHEMISTRY AND INDUSTRY 1328 1954 CA 49 3640
- 01699 HEAT-CAPACITY STANDARDS FOR THE RANGE 14 TO 1206 K. GINNINGS DEFOE C FURUKAWA GEO T J AM CHEM SOC 75 522-7 1953 CA 47 5237
- 01700 HEAT CAPACITY, HEAT OF FUSION, AND HEAT OF VAPORIZATION OF HYDROGEN FLUORIDE. HU JIM-HENG WHITE DAVID JOHNSTON H L J AM CHEM SOC 75 1232-6 1953 CA 47 5785
- 01722 THERMODYNAMIC CONSTANTS OF GASES AT HIGH TEMPERATURES RIBAUD G PUGL SCI ET TECH MINISTERE AIR /FRANCE/ 266 1-169 1952 CA 47 6722
- 01714 COOLANTS FOR THE COMBUSTION MOTOR WILKE W AUTOMOBILTECH 56 21-4 1954 CA 48 7818
- 01769 GAS HEAT CAPACITY AND INTERNAL ROTATION IN 1,2-DICHLOROETHANE AND 1,2-DIBROMOETHANE. GWINN WM D PITZER KENNETH S J CHEM PHYS 16 303-9 1948 CA 42 4310
- 01777 THE ENTROPY OF ETHYL CHLORIDE. HEAT CAPACITY FROM 13 TO 287 K. VAPOR PRESSURE. HEATS OF FUSION AND VAPORIZATION. GORDON JOSEPH GIAUQUE W F J AM CHEM SOC 70 1506-10 1948 CA 42 4441
- 01781 MEASUREMENTS OF HEAT OF VAPORIZATION AND HEAT CAPACITY OF A NUMBER OF HYDROCARBONS OSBORNE NATHAN S GINNINGS DEFOE C J RESEARCH NATL BUR STANDARDS 39 453-77 1947 CA 42 1795
- 01783 HEAT OF MIXING OF ACETIC ACID WITH PYRIDINE AND QUINOLINE PUSHIN N A FEDJUSHKIN A V KRGOVIC B BULL SOC CHIM BELGRADE 11 1 12-24 1947 CA 42 2168
- 01790 THE MEASUREMENT OF THE SPECIFIC HEATS OF SOME ORGANIC LIQUIDS USING THE COOLING METHOD LEECH J W PROC PHYS SOC /LONDON/ 62 B 390-8 1949 CA 44 1320
- 01797 ETHANETHIOL /ETHYL MERCAPTAN/. THERMODYNAMIC PROPERTIES IN THE SOLID, LIQUID, AND VAPOR STATES. THERMODYNAMIC FUNCTIONS TO 1000 K. MCCULLOUGH J P SCOTT D W FINKE H L GROSS M E WILLIAMSON K D PENNINGTON R E WADDINGTON GUY HUFFMAN H M J AM CHEM SOC 74 2801-4 1952 CA 46 9405
- 01799 THERMODYNAMIC PROPERTIES OF CHLORINE TRIFLUORIDE SCHEER MILTON D J CHEM PHYS 20 924 1952 CA 46 9952
- 01806 ROTATIONAL HINDRANCE IN ETHER AND ALCOHOL MOLECULES ON THE BASIS OF HEAT-CAPACITY DETERMINATIONS EUCKEN A FRANCK E U Z ELEKTROCHEM 52 195-204 1948 CA 44 394
- 01809 THERMAL DATA, VAPOR PRESSURE, AND ENTROPY OF CHLORINE TRIFLUORIDE. GRISARD J M BERNHARDT H A OLIVER GEORGE O J AM CHEM SOC 73 5725-7 1951 CA 46 2388

- 01815 EXPERIMENTAL VAPOR HEAT CAPACITIES AND HEATS OF VAPORIZATION OF HEXANE AND 2,2-DIMETHYLBUTANE. WADDINGTON GUY DOUSLIN DONALD R
J AM CHEM SOC
69 2275-9 1947 CA 42 812
- 01816 THE THERMODYNAMIC PROPERTIES AND MOLECULAR STRUCTURE OF CYCLOHEXANE, METHYLCYCLOHEXANE, ETHYLCYCLOHEXANE, AND THE SEVEN DIMETHYLCYCLOHEXANES. BECKETT CHARLES W PITZER KENNETH S
SPITZER RALPH
J AM CHEM SOC
69 2488-95 1947 CA 42 813
- 01824 ISOBARIC HEAT CAPACITIES AT BUBBLE POINT. PROPENE, NEOHEXANE, CYCLOHEXANE, AND ISOOCTANE. AUERBACH C E SAGE B M LACEY W N
IND ENG CHEM
42 110-13 1950 CA 44 2838
- 01825 THERMODYNAMIC PROPERTIES OF THREE ISOMERIC PENTENES SCOTT D W WADDINGTON GUY SMITH J C
HUFFMAN H M
J AM CHEM SOC
71 2767-73 1949 CA 44 2838
- 01831 THERMODYNAMICS OF MIXED PHASES. IX. THE VAPORIZATION EQUILIBRIUM OF BENZENE AND 1,2-DICHLOROETHANE. SIEG L CRUTZEN J L JOST W
Z PHYSIK CHEM
198 263-9 1951 CA 46 4870
- 01833 ISOTHERMS AND THERMODYNAMIC FUNCTIONS OF METHYL FLUORIDE AT TEMPERATURES BETWEEN 0 DEGREES AND 150 DEGREES AND AT PRESSURES UP TO 150 ATMOSPHERES. MICHELIS A VISSER A LUNBECK R J WOLKERS G J
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- 01837 THE ENTHALPY, ENTROPY, AND SPECIFIC HEAT OF LIQUID P-XYLENE FROM 0 TO 300 DEGREES. THE HEAT OF FUSION. CORRUCINI R J GINNINGS B C
J AM CHEM SOC
69 2291-4 1947 CA 42 1112
- 01852 THERMODYNAMIC FUNCTIONS OF ETHYLENE OXIDE GODNEV I MOROZOV V
ZHUR FIZ KHIM
22 801-3 1948 CA 42 8603
- 01874 THERMODYNAMIC PROPERTIES OF CIS-2-BUTENE FROM 15 DEGREES TO 1500 K SCOTT RUSSELL B FERGUSON W JULIAN
PRICKWEDDE FERDINAND G
J RESEARCH NATL BUR STANDARDS
53 1-20 1944 CA 38 5723
- 01894 TRANS-2-BUTENE. THE HEAT CAPACITY, HEATS OF FUSION AND VAPORIZATION, AND VAPOR PRESSURE. THE ENTROPY AND BARRIER TO INTERNAL ROTATION. GUTTMAN LESTER PITZER KENNETH S
J AM CHEM SOC
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- 01906 NOTE ON THE SPECIFIC HEAT OF SULFUR HEXAFLUORIDE MEYER E GERALD BUELL C E
J CHEM PHYS
16 744 1948 CA 42 6635
- 02002 ISOBARIC HEAT CAPACITY OF 1-BUTENE AND 1-PENTENE AT BUBBLE POINT SCHLINGER W G SAGE B M
IND ENG CHEM
41 1779-82 1949 CA 44 4322
- 02007 ETHANETHIOL AND 2-THIAPROPANE. HEATS OF FORMATION AND ISOMERIZATION, THE CHEMICAL THERMODYNAMIC PROPERTIES FROM 0 TO 1000 K. MCCULLOUGH J P HUBBARD W N FROM F R
HOSSENLOPP I A WADDINGTON GUY
J AM CHEM SOC
79 561-6 1957 CA 51 8527
- 02016 SPECIFIC HEATS OF COMPOUNDS IN LIQUID AND IN SOLID STATE NEAR THE MELTING, HEAT OF FUSION AND HEAT OF ASSOCIATION. PROPCOPIU STEFAN
COMPT REND
226 1001-2 1948 CA 42 6223
- 02024 CALORIMETRIC PROPERTIES OF BENZOIC ACID FROM 0 DEGREE TO 410 K FURUKAWA GEORGE T MCCOSKEY ROBERT E
KING GERAARD J
J RESEARCH NATL BUR STANDARDS
47 256-61 1951 CA 46 4348
- 02445 EMPIRICAL HEAT-CAPACITY EQUATIONS OF VARIOUS GASES SPENCER HUGH M
J AM CHEM SOC
67 1859-60 1945 CA 40 783
- 02500 SPECIFIC HEAT OF HYDROCARBONS VVEDENSKII A A NEFTYANOE KHOZ
25 2 47-50 1947 CA 41 6126
- 02542 THE HEAT CAPACITY OF GASEOUS PARAFFIN HYDROCARBONS, INCLUDING EXPERIMENTAL VALUES FOR PENTANE AND 2,2-DIMETHYLBUTANE. PITZER KENNETH S
J AM CHEM SOC
63 2413-18 1941 CA 35 7692
- 02563 THE HEAT CAPACITY AND ENTROPY, HEATS OF FUSION AND VAPORIZATION AND THE VAPOR PRESSURE OF DIMETHYL ETHER. THE DENSITY OF GASEOUS DIMETHYL ETHER. KENNEDY R M SAGENKAMN MALCOLM ASTON J G
J AM CHEM SOC
63 2267-72 1941 CA 35 7278
- 02676 THE HEAT CAPACITY AND ENTROPY, HEATS OF FUSION AND VAPORIZATION, AND THE VAPOR PRESSURE OF 1-BUTENE. THE ZERO-POINT ENTROPY OF THE GLASS. THE ENTROPY OF THE GAS FROM MOLECULAR DATA. ASTON J G FINK H L BESTUL A B PACE E L
SZASZ G J
J AM CHEM SOC
68 52-7 1946 CA 40 1385
- 02737 THERMODYNAMIC PROPERTIES OF THE TITANIUM CHLORIDES ALTMAN DAVID FARBER WILTON MASON DAVID M
J CHEM PHYS
25 531-6 1956 CA 51 836
- 02761 SOME THERMODYNAMICAL PROPERTIES OF GASEOUS SULFUR DICHLORIDE MCDOWELL C A MOELWYN-HUGHES E A
PROC ROY SOC /LONDON/
187 A 398-402 1946 CA 41 1513
- 02916 HEATS, EQUILIBRIUM CONSTANTS, AND FREE ENERGIES OF FORMATION OF THE MONOCLEFIN HYDROCARBONS. KILPATRICK JOHN E PROSEN EDWARD J
PITZER KENNETH S ROSSINI FREDERICK D
J RESEARCH NATL BUR STANDARDS
36 559-612 1946 CA 40 6330
- 03002 HEAT CAPACITY OF SOME PURE LIQUIDS AND AZEOTROPIC MIXTURES. II. ZHDANOV A K
J GEN CHEM /U S S R/
15 895-902 1945 CA 40 6328
- 03083 THERMODYNAMIC PROPERTIES OF METHYL CYANIDE AND METHYL ISOCYANIDE EWELL RAYMOND H BOURLAND JAMES F
J CHEM PHYS
8 635-6 1940 CA 34 6499
- 03281 THE HEAT CAPACITY OF CYANOGEN GAS BURCIK E J YOST DON M
J CHEM PHYS
7 1114-15 1939 CA 34 1217
- 03409 THERMODYNAMIC CONSTANTS OF SILICON TETRAFLUORIDE. THE HYDROLYSIS EQUILIBRIUM OF SILICON TETRAFLUORIDE. RYSS I G
J PHYS CHEM /U S S R/
14 571-81 1940 CA 35 2057
- 03533 STATISTICAL THERMODYNAMICS OF SEVERAL HALOMETHANES EDGELL WALTER F GLOCKLER GEORGE
J CHEM PHYS
9 484-5 1941 CA 35 4646
- 03771 SPECTRUM PHYSICS AND THERMODYNAMICS. THE CALCULATION OF FREE ENERGIES, ENTROPIES, SPECIFIC HEATS AND EQUILIBRIA FROM SPECTROSCOPIC DATA AND THE VALIDITY OF THE THIRD LAW. VS. PROGRESS IN THE PERIOD 1935-40. ZEISE H
Z ELEKTROCHEM
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- 03797 SUBSTITUTED METHANES. VII. VIBRATIONAL SPECTRA, FORCE CONSTANTS, AND CALCULATED THERMODYNAMIC PROPERTIES FOR METHYL IODIDE AND METHYL-OD3 IODIDE. FENLON PAUL F CLEVELAND FORREST F
MEISTER ARNOLD G
J CHEM PHYS
19 1561-5 1951 CA 46 5968
- 03863 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. XIV. SOME MISCELLANEOUS HYDROCARBONS. KOBE KENNETH A PENNINGTON R E
PETROLEUM REFINER
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J AM CHEM SOC
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