

**J. Gmehling
U. Onken
P. Grenzheuser**

VAPOR-LIQUID EQUILIBRIUM DATA COLLECTION

Carboxylic Acids, Anhydrides, Esters



Chemistry Data Series

Vol. I, Part 5

**Published by DECHEMA
Gesellschaft für Chemische Technik und Biotechnologie e.V.
Executive Editor: Gerhard Kreysa**

Vapor-Liquid Equilibrium Data Collection

5

Carboxylic Acids, Anhydrides, Esters

Tables and diagrams of data for binary and multicomponent mixtures up to moderate pressures. Constants of correlation equations for computer use.

J. Gmehling, U. Onken, P. Grenzheuser

Lehrstuhl Technische Chemie B
(Prof. Dr. U. Onken)
Universität Dortmund

Die Deutsche Bibliothek – CIP – Einheitsaufnahme

Chemistry data series /

publ. by DECHEMA, Gesellschaft für Chemische Technik und Biotechnologie e.V.

Executive ed.: Gerhard Kreysa. – Frankfurt am Main: DECHEMA. – 25 cm

Früher hrsg. von DECHEMA, Deutsche Gesellschaft für Chemisches Apparatewesen, Chemische Technik und Biotechnologie e.V.; DECHEMA, Deutsche Gesellschaft für Chemisches Apparatewesen e.V.. – Teilw. hrsg. von Dieter Behrens und Reiner Eckermann. – Teilw. hrsg. von Reiner Eckermann und Gerhard Kreysa

SG: 30; 42

IDN: 550844732

Vapor liquid equilibrium data collection / publ. by DECHEMA, Gesellschaft für Chemische Technik und Biotechnologie e.V.. – Frankfurt am Main: DECHEMA. – (Chemistry data series; Vol. 1)

SG: 30; 42

IDN: 550844740

Pt. 5. Carboxylic acids, anhydrides, esters: tables and diagrams of data for binary and multicomponent mixtures up to moderate pressures; constants of correlation equations for computer use. / J. Gmehling; U. Onken; P. Grenzheuser.

– 2., corr. ed. – XLIII, 705 S.: Überw. Tab.

ISBN 3-89746-017-3

© DECHEMA Gesellschaft für Chemische Technik und Biotechnologie e.V.
Postfach 15 01 04, D-60061 Frankfurt am Main, Germany, 2001

Dieses Werk ist urheberrechtlich geschützt. Alle Rechte, auch die der Übersetzung, des Nachdrucks und der Vervielfältigung des Buches oder Teilen daraus sind vorbehalten.

Kein Teil des Werkes darf ohne schriftliche Genehmigung der DECHEMA in irgendeiner Form (Fotokopie, Mikrofilm oder einem anderen Verfahren), auch nicht für Zwecke der Unterrichtsgestaltung, reproduziert oder unter Verwendung elektronischer Systeme verarbeitet, vervielfältigt oder verbreitet werden.

Die Herausgeber übernehmen für die Richtigkeit und Vollständigkeit der publizierten Daten keinerlei Gewährleistung.

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, including those of translation, reprinting, reproduction by photocopying, microfilm or other processes, or implement in electronic information storage and retrieval systems – without the written permission of the publishers.

The publishers accept no liability for the accuracy and completeness of the published data.

This volume of the Chemistry Data Series was printed using acid-free paper.

Printed by Media Process Management GmbH, Mainz

5

Carboxylic Acids, Anhydrides, Esters**Systems with:****Carboxylic Acids:**

Acetic acid	Methacrylic acid
Acrylic acid	Myristic acid
Benzoic acid	Octanoic acid
Butyric acid	Oleic acid
Chloroacetic acid	Palmitic acid
Decanoic acid	Propionic acid
Formic acid	Stearic acid
Hexanoic acid	Trifluoroacetic acid
Isobutyric acid	Valeric acid
Lauric acid	

Anhydrides:

Acetic anhydride	Maleic anhydride
------------------	------------------

Esters:

Allyl acetate	Methyl benzoate
Benzyl acetate	Methyl borate
2,3-Butanediol diacetate	Methyl decanoate
Butyl acetate	Methylene diacetate
Butyl formate	Methyl formate
Butyl methacrylate	Methyl hexanoate
Cyclohexyl acetate	Methyl laurate
Diethyl oxalate	Methyl-9,12-linoleate
Dimethyl carbonate	Methyl methacrylate
Dimethyl isophthalate	Methyl myristate
Ethyl acetate	Methyl octanoate
Ethyl acetoacetate	Methyl palmitate
Ethyl acrylate	Methyl propionate
Ethyl butyrate	Methyl salicylate
Ethyl formate	Methyl stearate
Heptyl acetate	Methyl m-toluate
Isobutyl acetate	Octyl acetate
Isopentyl acetate	Pentyl acetate
Isopentyl formate	Propyl acetate
Isopropenyl acetate	Propylene carbonate
Isopropyl acetate	Propyl formate
Isopropyl formate	Triethyl orthoacetate
Methyl acetate	Triethyl orthoformate
Methyl acrylate	Vinyl acetate

SUBJECTS OF VOLUME I

The table lists the parts of Volume I already published or being in preparation.

Subtitle	Vol. I, Part
Aqueous-Organic Systems	1 published
Supplement 1	1a published
Organic Hydroxy Compounds	
Alcohols	2a published
Alcohols and Phenols	2b published
Supplement 1	2c published
Supplement 2	2d published
Aldehydes, Ketones, Ethers	3/4 published
Carboxylic Acids, Anhydrides, Esters	5 published
Aliphatic Hydrocarbons	6a published
	6b published
Supplement 1	6c in prep.
Aromatic Hydrocarbons	7 published
Halogen, Nitrogen, Sulfur and other Compounds	8 in prep.

AUTHORS' PREFACE

As we explained in the preface to part 6, this part 5 had to be postponed, because we intended to include the effect of dimerization on vapor phase non-ideality also for systems with more than one associating component, i.e. carboxylic acids. This work has now been completed by Peter Grenzheuser, who is therefore co-author of this part. He worked out the calculation procedures for the correlation of data from binary systems consisting of two carboxylic acids and from ternary systems containing up to three carboxylic acids, and for the optimization of parameters of these systems. Besides, he incorporated vapor phase dimerization into the two consistency tests, in order to be able to use them with binary systems containing carboxylic acids.

Again, many colleagues have helped us by sending us preprints and research reports with VLE data. We take this opportunity to thank all of them, especially Prof. Dr. K. Quitzsch (Karl-Marx-University, Leipzig), Prof. F. Aguirre Ode (University of Santa Maria, Valparaiso) and Dr. D. Zudkevitch (Allied Chemical Corporation). Likewise we should like to mention with gratitude the continuous endeavour of Dr. R. Eckermann and Dipl.-Ing. C. Hammer from DECHEMA (Frankfurt/Main) and their efforts in editing the data series.

From our team at Dortmund the following members have contributed to this part: Mrs. A. Brunk, Dipl.-Ing. B. Kolbe, Mrs. L. Kunzner, Dipl.-Chem. J. Menke, Mrs. G. Obermann, Dipl.-Chem. U. Schwaitzer, Dipl.-Chem. U. Weidlich. We should also like to repeat our thanks to Mr. T. Blaszyk from the computer center of the University of Dortmund.

Dortmund, September 1982

Ulfert Onken Jürgen Gmehling Peter Grenzheuser

PREFACE OF EDITORS

Subjects of the Dechema Chemistry Data Series are the physical and thermodynamic property data of chemical compounds and mixtures essentially for the fluid state covering PVT data, heat capacity, enthalpy, and entropy data, phase equilibrium data, transport and interfacial tension data.

The main purpose is to provide chemists and engineers with data for process design and development. For computer based calculations in process design appropriate correlation methods and accurate data must be used. These are only in some cases available in the open literature. For that reason the most urgent requirement regarding the publication of data is to offer classified and critically evaluated data, thus giving an impression which of them are reliable or not. This will be the goal of the series.

DECHEMA gives the opportunity to authors especially from universities to publish not only their theoretical results, but also their measured or compiled data, most often a large amount, that would otherwise never have been published.

The research work of Dr. Gmehling, Prof. Onken and Dipl.-Chem. Arit on vapor-liquid equilibria which was partly supported by the Federal Ministry of Research and Technology and DECHEMA has been very fruitful; in particular, it led to an extension of the UNIFAC method. The authors have produced what is probably the largest collection of vapor-liquid equilibrium data that is today available with evaluation programs and experimental data.

We present the evaluation of this material in several parts of the first volume of the series. We hope that this gives particularly the users an instrument that will allow them to solve their problems considerably more easily and quickly than before.

Frankfurt/Main, September 1982

Dieter Behrens
Reiner Eckermann

CONTENTS
Vol. I, Part 5

Subjects of Volume I	VI
Authors' Preface	VII
Preface of Editors	VIII
Contents Volume I, Part 5	IX
Contents Volume I, Part 1	XII
Contents Volume I, Part 1a	XIII
Contents Volume I, Part 2a	XIV
Contents Volume I, Part 2b	XV
Contents Volume I, Part 2c	XVII
Contents Volume I, Part 2d	XIX
Contents Volume I, Parts 3 + 4	XXII
Contents Volume I, Part 6a	XXIV
Contents Volume I, Part 6b	XXVI
Contents Volume I, Part 7	XXVIII
Guide to Tables	XXXI
List of Symbols	XLI
References	XLIII
Data Tables	1
Carboxylic Acids	1
Binary Systems	1
Formic acid	1
Trifluoroacetic acid	50
Chloroacetic acid	52
Acetic acid	54
Acrylic acid	192
Propionic acid	202
Methacrylic acid	223
Butyric acid	227
Isobutyric acid	238
Valeric acid	242
Hexanoic acid	245
Benzoic acid	251
Octanoic acid	254
Decanoic acid	257

Lauric acid	260
Myristic acid	264
Palmitic acid	268
Oleic acid	272
Ternary Systems	273
Formic acid	273
Trifluoroacetic acid	278
Acetic acid	280
Anhydrides	297
Binary Systems	297
Maleic anhydride	297
Acetic anhydride	298
Esters	309
Binary Systems	309
Methyl formate	309
Ethyl formate	330
Methyl acetate	339
Dimethyl carbonate	402
Methyl borate	407
Methyl acrylate	409
Vinyl acetate	418
Propylene carbonate	432
Ethyl acetate	436
Methyl propionate	543
Methyl methacrylate	545
Butyl formate	564
Propyl acetate	566
Diethyl oxalate	570
Butyl acetate	572
Ethyl butyrate	594
Isobutyl acetate	596
Methyl hexanoate	598
Pentyl acetate	603
Triethyl orthoformate	606
Methyl benzoate	618
Methyl salicylate	621
Butyl methacrylate	623
Triethyl orthoacetate	624
Benzyl acetate	635

Methyl m-toluate	638
Heptyl acetate	639
Methyl octanoate	640
Octyl acetate	644
Methyl decanoate	645
Methyl laurate	649
Methyl myristate	653
Methyl palmitate	658
Ternary Systems	660
Methyl acetate	660
Ethyl acetate	667
Butyl acetate	669
Appendix A: Pure Component Parameters	671
Appendix B: Dimerization Constants of Carboxylic Acids	677
Formula Index of Systems	679
Alphabetical Index of Systems	693

Formula Index of Systems

R = RECOMMENDED VALUES

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
CH2O2	FORMIC ACID		
CHCL3	CHLOROFORM		1
		C2H4O2 ACETIC ACID	273-274
C2H4CL2	1,2-DICHLOROETHANE		2- 6
C2H4O2	ACETIC ACID		7- 12
		C3H6O2 PROPIONIC ACID	275-277
C3H4O2	ACRYLIC ACID		13
C3H6O2	PROPIONIC ACID		14- 16
C3H7CL	1-CHLOROPROPANE		17
C3H7CL	ISOPROPYL CHLORIDE		18
C3H7NO	N,N-DIMETHYLFORMAMIDE		19- 27 27 R
C4H8O2	BUTYRIC ACID		28
C4H8O2	ISOPROPYL FORMATE		29
C4H8O2	PROPYL FORMATE		30
C4H9CL	BUTYL CHLORIDE		31
C4H9CL	TERT-BUTYL CHLORIDE		32
C4H9CL	ISOBUTYL CHLORIDE		33
C5H10O2	BUTYL FORMATE		34- 36
C5H10O2	VALERIC ACID		37- 39
C6H6	BENZENE		40- 42
C6H12O2	ISOPENTYL FORMATE		43
C6H15N	TRIETHYLAMINE		44- 47
C7H8	TOLUENE		48
C8H10	P-XYLENE		49
C2HF3O2	TRIFLUOROACETIC ACID		
C3H6O2	PROPIONIC ACID		50
		C6H6 BENZENE	278-279
C6H6	BENZENE		51
C2H3CLO2	CHLOROACETIC ACID		
C2H4O2	ACETIC ACID		52- 53
C2H4O2	ACETIC ACID		
		CCL4 TETRACHLOROMETHANE	54-60 60 R
		C6H15N TRIETHYLAMINE	280-281
CHCL3	CHLOROFORM		61- 63
		CH2O2 FORMIC ACID	273-274

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
C2H4O2	ACETIC ACID			
CH2CL2	DICHLOROMETHANE		64- 65	
CH2O2	FORMIC ACID		7- 12	
		C3H6O2	PROPIONIC ACID	275-277
C2HCL3	TRICHLOROETHYLENE		66- 73 73	
C2H3CLO2	CHLOROACETIC ACID		52- 53	
C2H4CL2	1,2-DICHLOROETHANE		74- 76	
C2H5NO	ACETAMIDE		77	
C3H4O2	ACRYLIC ACID		78- 80	
C3H5CL	3-CHLORO-1-PROPENE		81	
C3H6O2	METHYL ACETATE		82- 83	
C3H6O2	PROPIONIC ACID		84- 86	
		C4H8O2	BUTYRIC ACID	282
C3H7CL	1-CHLOROPROPANE		87	
C3H7CL	ISOPROPYL CHLORIDE		88	
C4H5N	METHACRYLONITRILE		89	
C4H6O2	VINYL ACETATE		90- 95	
C4H6O3	ACETIC ANHYDRIDE		96-102	
		C5H8O4	METHYLENE DIACETATE	283-284
		C6H6	BENZENE	285-286
C4H8O2	BUTYRIC ACID		103	
C4H8O2	ETHYL ACETATE		104-108	
		C5H8O2	ETHYL ACRYLATE	287
		C6H14	HEXANE	288
C4H9CL	BUTYL CHLORIDE		109	
C4H9CL	TERT-BUTYL CHLORIDE		110	
C4H9CL	ISOBUTYL CHLORIDE		111	
C4H9NO	N,N-DIMETHYLACETAMIDE		112-116 116	
C5H5N	PYRIDINE		117-118	
C5H8O2	ALLYL ACETATE		119	
C5H8O2	ETHYL ACRYLATE		120	
C5H8O4	METHYLENE DIACETATE		121	
C5H10	2-METHYL-2-BUTENE		122	
C5H10O2	ISOPROPYL ACETATE		123	
C5H10O2	PROPYL ACETATE		124	
C5H12	2-METHYLBUTANE		125	
C6H6	BENZENE		126-145 145	
		C6H12	CYCLOHEXANE	289

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
C2H4O2	ACETIC ACID		
C6H12	CYCLOHEXANE		146
C6H12O2	BUTYL ACETATE		147-151
		C7H14O2 ISOPENTYL ACETATE	290
C6H14	HEXANE		152-153
C6H15N	TRIETHYLAMINE		154-156
C6H18OSi2	HEXAMETHYLDISILOXANE		157-158
C7H8	TOLUENE		159-168 168 R
		C7H16 HEPTANE	291-292
C7H9N	2,6-DIMETHYLPYRIDINE		169
		C10H22 DECANE	293
C7H14O2	ISOPENTYL ACETATE		170-172
C7H16	HEPTANE		173-176
C8H8	STYRENE		177
		C8H10 ETHYLBENZENE	294
C8H10	ETHYLBENZENE		178-179
C8H10	O-XYLENE		180
C8H10	P-XYLENE		181-182
C8H11N	N,N-DIMETHYLANILINE		183
C8H14O2	CYCLOHEXYL ACETATE		184
C8H14O4	2,3-BUTANEDIOL DIACETATE		185-188 188 R
C8H18	OCTANE		189-190
C10H22	DECANE		191
C2H4O2	METHYL FORMATE		
CH4S	METHANETHIOL		309
C3H7NO	N,N-DIMETHYLFORMAMIDE		310-326 326 R
C5H8	ISOPRENE		327
C5H10	2-METHYL-2-BUTENE		328
C6H14	HEXANE		329
C3H4O2	ACRYLIC ACID		
CH2O2	FORMIC ACID		13
C2H2CL2	1,1-DICHLOROETHYLENE		192
C2H4O2	ACETIC ACID		78-80
C4H6O2	VINYL ACETATE		193
C5H10O2	ISOPROPYL ACETATE		194
C8H8	STYRENE		195-201

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
C3H6O2	ETHYL FORMATE			
CHCL3	CHLOROFORM		330-331	
C2H2CL2	CIS-1,2-DICHLOROETHYLENE		332	
C2H2CL2	TRANS-1,2-DICHLOROETHYLENE		333	
C3H6O2	METHYL ACETATE		334	
C6H6	BENZENE		335-336	
C6H12	CYCLOHEXANE		337-338	
C3H6O2	METHYL ACETATE			
CCL4	TETRACHLOROMETHANE		339-340	
CHCL3	CHLOROFORM		341-346 346	
		C6H6	BENZENE	660-664
CH2CL2	DICHLOROMETHANE		347	
CH3I	METHYL IODIDE		348	
CS2	CARBON DISULFIDE		349-350	
C2H2CL2	CIS-1,2-DICHLOROETHYLENE		351	
C2H2CL2	TRANS-1,2-DICHLOROETHYLENE		352	
C2H3N	ACETONITRILE		353-354	
C2H4O2	ACETIC ACID		82- P3	
C3H6O2	ETHYL FORMATE		334	
C4H6O2	VINYL ACETATE		355	
C4H6O3	ACETIC ANHYDRIDE		299	
C4H8O2	ETHYL ACETATE		356-370	
C5H10O2	PROPYL ACETATE		371-373	
C6H5CL	CHLOROBENZENE		374	
C6H6	BENZENE		375-390 390	
		C6H12	CYCLOHEXANE	665-666
C6H12	CYCLOHEXANE		391-394 394	
C6H12	1-HEXENE		395	
C6H12O2	BUTYL ACETATE		396-397	
C7H14O2	PENTYL ACETATE		398-401	
C3H6O2	PROPIONIC ACID			
CCL4	TETRACHLOROMETHANE		202-208	
CH2O2	FORMIC ACID		14- 16	
		C2H4O2	ACETIC ACID	275-277
C2HF3O2	TRIFLUOROACETIC ACID		50	
		C6H6	BENZENE	278-279

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
C3H6O2	PROPIONIC ACID			
C2H4O2	ACETIC ACID		84-86	
		C4H8O2	BUTYRIC ACID	282
C6H5Cl	CHLOROBENZENE		209	
C6H6	BENZENE		210-211	
C6H12	CYCLOHEXANE		212	
C6H18OSi2	HEXAMETHYLDISILOXANE		213-214	
C7H16	HEPTANE		215	
C8H10	ETHYLBENZENE		216	
C8H10	M-XYLENE		217	
C8H10	O-XYLENE		218	
C8H10	P-XYLENE		219	
C8H18	OCTANE		220-221	
C9H12	ISOPROPYLBENZENE		222	
C3H6O3	DIMETHYL CARBONATE			
C6H10	1-HEXYNE		402-404	
C7H8	TOLUENE		405	
C7H14	METHYLCYCLOHEXANE		406	
C3H9BO3	METHYL BORATE			
CCL4	TETRACHLOROMETHANE		407	
C6H6	BENZENE		408	
C4H2O3	MALEIC ANHYDRIDE			
C8H10	O-XYLENE		297	
C4H6O2	METHACRYLIC ACID			
C2H2Cl2	1,1-DICHLOROETHYLENE		223	
C4H6O2	VINYL ACETATE		224	
C5H8O2	METHYL METHACRYLATE		225	
C8H14O2	BUTYL METHACRYLATE		226	
C4H6O2	METHYL ACRYLATE			
C4H6O2	VINYL ACETATE		409	
C7H8	TOLUENE		410	
C8H8	STYRENE		411	
C8H10	ETHYLBENZENE		412	
C8H10	M-XYLENE		413	

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
C4H6O2	METHYL ACRYLATE			
C8H1C	O-XYLENE		414	
C8H1C	P-XYLENE		415	
C9H12	ISOPROPYLBENZENE		416	
C9H12	1,3,5-TRIMETHYLBENZENE		417	
C4H6O2	VINYL ACETATE			
C2H2CL2	1,1-DICHLOROETHYLENE		418	
C2H4O2	ACETIC ACID		90-95	
C3H3N	ACRYLONITRILE		419-420	
C3H4O2	ACRYLIC ACID		193	
C3H6O2	METHYL ACETATE		355	
C4H6O2	METHACRYLIC ACID		224	
C4H6O2	METHYL ACRYLATE		409	
C5H8O2	ALLYL ACETATE		421	
C5H8O2	METHYL METHACRYLATE		422	
C6H12	CYCLOHEXANE		423	
C6H12	1-HEXENE		424-426 426 R	
C6H14	HEXANE		427-430 430 R	
C7H16	2,4-DIMETHYLPENTANE		431	
C4H6O3	ACETIC ANHYDRIDE			
CH3I	METHYL IODIDE		298	
C2H4O2	ACETIC ACID		96-102	
		C5H8O4	METHYLENE DIACETATE	283-284
		C6H6	BENZENE	285-286
C3H6O2	METHYL ACETATE		299	
C5H5N	PYRIDINE		300	
C5H8O2	ISOPROPENYL ACETATE		301	
C5H8O4	METHYLENE DIACETATE		302-304	
C6H6	BENZENE		305	
C6H12	CYCLOHEXANE		306	
C4H6O3	PROPYLENE CARBONATE			
C2H6S	ETHANETHIOL		432-435	
C4H8O2	BUTYRIC ACID			
CH2CL2	DICHLOROMETHANE		227	
CH2O2	FORMIC ACID		28	

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
C4H8O2	BUTYRIC ACID			
C2H4O2	ACETIC ACID		103	
		C3H6O2	PROPIONIC ACID	282
C5H10O2	VALERIC ACID		228	
C6H18OSi2	HEXAMETHYLDISILOXANE		229-230	
C8H10	P-XYLENE		231	
C8H10	O-XYLENE		232	
C8H10	F-XYLENE		233	
C8H11N	N,N-DIMETHYLANILINE		234	
C8H18	OCTANE		235	
C9H12	ISOPROPYLBENZENE		236	
C10H15N	N,N-DIETHYLANILINE		237	
C4H8O2	ETHYL ACETATE			
CCL4	TETRACHLOROMETHANE		436-442 442 R	
CHCL3	CHLOROFORM		443-448 448 R	
CH2CL2	DICHLOROMETHANE		449	
C2HCL3	TRICHLOROETHYLENE		450-454	
C2H3N	ACETONITRILE		455-458	
C2H4O2	ACETIC ACID		104-108	
		C5H8O2	ETHYL ACRYLATE	287
		C6H14	HEXANE	288
C2H5I	ETHYL IODIDE		459	
C2H6OS	DIMETHYL SULFOXIDE		460-461	
C3H6O2	METHYL ACETATE		356-370	
C4H9NO	METHYL ETHYL KETOXIM		462	
C4H11N	DIETHYLAMINE		463-486 486 R	
C5H10O2	ISOPROPYL ACETATE		487	
C6H5Cl	CHLOROBENZENE		488-492	
C6H6	BENZENE		493-504 504 R	
		C6H12	CYCLOHEXANE	667-668
C6H10O3	ETHYL ACETOACETATE		505	
C6H12	CYCLOHEXANE		506-509 509 R	
C6H12	1-HEXENE		510-513 513 R	
C6H14	HEXANE		514-515	
C7H8	TOLUENE		516-530	

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
C4H8O2	ETHYL ACETATE			
	C7H14O2	PENTYL ACETATE	531-537	
	C8H10	ETHYLBENZENE	536-540	
	C8H10	P-XYLENE	541	
	C8H16	1-OCTENE	542	
C4H8O2	ISOBUTYRIC ACID			
	C8H10	P-XYLENE	238	
	C8H11N	N,N-DIMETHYLANILINE	239	
	C8H18	OCTANE	240	
	C10H15N	N,N-DIETHYLANILINE	241	
C4H8O2	ISOPROPYL FORMATE			
	CH2O2	FORMIC ACID	29	
C4H8O2	METHYL PROPIONATE			
	C6H6	BENZENE	543	
	C7H8	TOLUENE	544	
C4H8O2	PROPYL FORMATE			
	CH2O2	FORMIC ACID	30	
C5H8O2	ALLYL ACETATE			
	C2H4O2	ACETIC ACID	119	
	C4H6O2	VINYL ACETATE	421	
C5H8O2	ETHYL ACRYLATE			
	C2H4O2	ACETIC ACID	120	
		C4H8O2	ETHYL ACETATE	287
C5H8O2	ISOPROPENYL ACETATE			
	C4H6O3	ACETIC ANHYDRIDE	301	
C5H8O2	METHYL METHACRYLATE			
	C4H6O2	METHACRYLIC ACID	225	
	C4H6O2	VINYL ACETATE	422	
	C6H6	BENZENE	545-547	
	C7H8	TOLUENE	548-550	
	C8H8	STYRENE	551	

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
C5H8O2	METHYL METHACRYLATE			
C8H10	ETHYLENENZENE		552-554	
C8H10	P-XYLENE		555-557	
C8H10	P-XYLENE		558-560	
C9H12	ISOPROPYLBENZENE		561-563	
C5H8O4	METHYLENE DIACETATE			
C2H4O2	ACETIC ACID		121	
		C4H6O3	ACETIC ANHYDRIDE	283-284
C4H6O3	ACETIC ANHYDRIDE		302-304	
C5H10O2	BUTYL FORMATE			
CH2O2	FORMIC ACID		34-36	
C5H5N	PYRIDINE		564	
C6H12O2	BUTYL ACETATE		565	
C5H10O2	ISOPROPYL ACETATE			
C2H4O2	ACETIC ACID		123	
C3H4O2	ACRYLIC ACID		194	
C4H8O2	ETHYL ACETATE		487	
C5H10O2	PROPYL ACETATE			
CCL4	TETRACHLOROMETHANE		566	
C2H3N	ACETONITRILE		567	
C2H4O2	ACETIC ACID		124	
C3H6O2	METHYL ACETATE		371-373	
C6H6	BENZENE		568-569	
C5H10O2	VALERIC ACID			
CH2O2	FORMIC ACID		37-39	
C4H8O2	BUTYRIC ACID		228	
C7H16	HEPTANE		242-244	
C6H10O3	ETHYL ACETOACETATE			
C4H8O2	ETHYL ACETATE		505	
C6H10O4	DIETHYL OXALATE			
C8H18	OCTANE		570	
C8H18	2,2,4-TRIMETHYLPENTANE		571	

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
C6H12O2	BUTYL ACETATE			
CCL4	TETRACHLOROMETHANE		572-573	
		C6H6	BENZENE	669
CHCL3	CHLOROFORM		574	
C2HCL3	TRICHLOROETHYLENE		575	
C2H3N	ACETONITRILE		576-580 580	
C2H4O2	ACETIC ACID		147-151	
		C7H14O2	ISOPENTYL ACETATE	290
C3H3N	ACRYLONITRILE		581	
C3H6O2	METHYL ACETATE		396-397	
C5H10O2	BUTYL FORMATE		565	
C6H6	BENZENE		582-584	
C6H12	CYCLOHEXANE		585	
C7H8	TOLUENE		586-588	
C7H14O2	ISOPENTYL ACETATE		589	
C7H16	HEPTANE		590-591	
C10H20	1-DECENE		592-593	
C6H12O2	ETHYL BUTYRATE			
C7H16	HEPTANE		594-595	
C6H12O2	HEXANOIC ACID			
C8H16O2	OCTANOIC ACID		245-250	
C6H12O2	ISOBUTYL ACETATE			
C7H8	TOLUENE		596-597	
C6H12O2	ISOPENTYL FORMATE			
CH2O2	FORMIC ACID		43	
C7H6O2	BENZOIC ACID			
C9H10O2	BENZYL ACETATE		251-253	
C7H14O2	ISOPENTYL ACETATE			
C2H4O2	ACETIC ACID		170-172	
		C6H12O2	BUTYL ACETATE	290
C6H12O2	BUTYL ACETATE		589	
C7H14O2	METHYL HEXANOATE			
C9H18O2	METHYL OCTANOATE		598-602	

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
C7H14O2	PENTYL ACETATE		
CCL4	TETRACHLOROMETHANE		603
C3H6O2	METHYL ACETATE		398-401
C4H8O2	ETHYL ACETATE		531-537
C7H8	TOLUENE		604-605
C7H16O3	TRIETHYL ORTHOFORMATE		
C6H6	BENZENE		606-608
C6H12	CYCLOHEXANE		609-611
C7H14	1-HEPTENE		612-614
C7H16	HEPTANE		615-617
C8H8O2	METHYL BENZOATE		
C9H10O2	METHYL P-TOLUATE		618
C9H18O2	METHYL OCTANOATE		619
C10H10O4	DIMETHYL ISOPHTHALATE		620
C8H8O3	METHYL SALICYLATE		
C8H10	P-XYLENE		621
C8H10	F-XYLENE		622
C8H14O2	BUTYL METHACRYLATE		
C4H6O2	METHACRYLIC ACID		226
C6H12	CYCLOHEXANE		623
C8H14O2	CYCLOHEXYL ACETATE		
C2H4O2	ACETIC ACID		184
C8H14O4	2,3-BUTANEDIOL DIACETATE		
C2H4O2	ACETIC ACID		185-188 188 R
C8H16O2	OCTANOIC ACID		
C6H12O2	HEXANOIC ACID		245-250
C10H20O2	DECANOIC ACID		254-256
C8H18O3	TRIETHYL ORTHOACETATE		
C6H6	BENZENE		624-626
C6H12	CYCLOHEXANE		627-628
C7H14	1-HEPTENE		629-631
C7H16	HEPTANE		632-634

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
C9H1002	BENZYL ACETATE		
	C7H602	BENZOIC ACID	251-253
	C7H7CL	BENZYL CHLORIDE	635
	C7H8	TOLUENE	636-637
C9H1002	METHYL M-TOLUATE		
	C8H802	METHYL BENZOATE	618
	C10H1004	DIMETHYL ISOPHTHALATE	638
C9H1802	HEPTYL ACETATE		
	CCL4	TETRACHLOROMETHANE	639
C9H1802	METHYL OCTANOATE		
	C7H1402	METHYL HEXANOATE	598-602
	C8H802	METHYL BENZOATE	619
	C11H2202	METHYL DECANOATE	640-643
C10H1004	DIMETHYL ISOPHTHALATE		
	C8H802	METHYL BENZOATE	620
	C9H1002	METHYL M-TOLUATE	638
C10H2002	DECANOIC ACID		
	C8H1602	OCTANOIC ACID	254-256
	C12H2402	LAURIC ACID	257-259
C10H2002	OCTYL ACETATE		
	CCL4	TETRACHLOROMETHANE	644
C11H2202	METHYL DECANOATE		
	C9H1802	METHYL OCTANOATE	640-643
	C13H2602	METHYL LAURATE	645-648
C12H2402	LAURIC ACID		
	C10H2002	DECANOIC ACID	257-259
	C13H2602	METHYL LAURATE	260
	C14H2802	MYRISTIC ACID	261-263
C13H2602	METHYL LAURATE		
	C11H2202	METHYL DECANOATE	645-648
	C12H2402	LAURIC ACID	260

Formula Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
C13H26O2	METHYL LAURATE		
	C15H30O2	METHYL MYRISTATE	649-652
C14H28O2	MYRISTIC ACID		
	C12H24O2	LAURIC ACID	261-263
	C16H32O2	PALMITIC ACID	264-267
C15H30O2	METHYL MYRISTATE		
	C13H26O2	METHYL LAURATE	649-652
	C17H34O2	METHYL PALMITATE	653-657
C16H32O2	PALMITIC ACID		
	C14H28O2	MYRISTIC ACID	264-267
	C18H34O2	OLEIC ACID	268-269
	C18H36O2	STEARIC ACID	270-271
C17H34O2	METHYL PALMITATE		
	C15H30O2	METHYL MYRISTATE	653-657
	C19H34O2	METHYL-9,12-LINOLEATE	658
	C19H38O2	METHYL STEARATE	659
C18H34O2	OLEIC ACID		
	C6H14	HEXANE	272
	C16H32O2	PALMITIC ACID	268-269
C18H36O2	STEARIC ACID		
	C16H32O2	PALMITIC ACID	270-271
C19H34O2	METHYL-9,12-LINOLEATE		
	C17H34O2	METHYL PALMITATE	658
C19H38O2	METHYL STEARATE		
	C17H34O2	METHYL PALMITATE	659

Alphabetical Index of Systems

R = RECOMMENDED VALUES

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
ACETIC ACID	C2H4O2		
ACETAMIDE	C2H5NO		77
ACETIC ANHYDRIDE	C4H6O3		96-102
		BENZENE	C6H6 285-286
		METHYLENE DIACETATE	C5H8O4 283-284
ACRYLIC ACID	C3H4O2		78- 80
ALLYL ACETATE	C5H8O2		119
BENZENE	C6H6		126-145 145 R
		CYCLOHEXANE	C6H12 289
2,3-BUTANEDIOL DIACETATE	C8H14O4		185-188 188 R
BUTYL ACETATE	C6H12O2		147-151
		ISOPENTYL ACETATE	C7H14O2 290
BUTYL CHLORIDE	C4H9CL		109
TERT-BUTYL CHLORIDE	C4H9CL		110
BUTYRIC ACID	C4H8O2		103
		PROPIONIC ACID	C3H6O2 282
CHLOROACETIC ACID	C2H3ClO2		52- 53
CHLOROFORM	CHCL3		61- 63
		FORMIC ACID	CH2O2 273-274
1-CHLOROPROPANE	C3H7CL		87
2-CHLORO-1-PROPANE	C3H5CL		81
CYCLOHEXANE	C6H12		146
CYCLOHEXYL ACETATE	C8H14O2		184
DECANE	C10H22		191
		2,6-DIMETHYLPYRIDINE	C7H9N 293
1,2-DICHLOROETHANE	C2H4CL2		74- 76
DICHLOROMETHANE	CH2CL2		64- 65
N,N-DIMETHYLACETAMIDE	C4H9NO		112-116 116 R
N,N-DIMETHYLANILINE	C8H11N		183
2,6-DIMETHYLPYRIDINE	C7H9N		169
ETHYL ACETATE	C4H8O2		104-108
		ETHYL ACRYLATE	C5H8O2 287
		HEXANE	C6H14 288
ETHYL ACRYLATE	C5H8O2		120
ETHYLBENZENE	C8H10		178-179
		STYRENE	C8H8 294
FORMIC ACID	CH2O2		7- 12
		PROPIONIC ACID	C3H6O2 275-277

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
ACETIC ACID	C2H4O2		
HEPTANE	C7H16		173-176
		TOLUENE	C7H8 291-292
HEXAMETHYL DISILOXANE	C6H18OSi2		157-158
HEXANE	C6H14		152-153
ISOBUTYL CHLORIDE	C4H9CL		111
ISOPENTYL ACETATE	C7H14O2		170-172
ISOPROPYL ACETATE	C5H10O2		123
ISOPROPYL CHLORIDE	C3H7CL		88
METHACRYLONITRILE	C4H5N		89
METHYL ACETATE	C3H6O2		62- 83
2-METHYLBUTANE	C5H12		125
2-METHYL-2-BUTENE	C5H10		122
METHYLENE DIACETATE	C5H8O4		121
OCTANE	C8H18		189-190
PROPIONIC ACID	C3H6O2		84- 86
PROPYL ACETATE	C5H10O2		124
PYRIDINE	C5H5N		117-118
STYRENE	C8H8		177
TETRACHLOROMETHANE	CCl4		54- 60 60
		TRIETHYLAMINE	C6H15N 280-281
TOLUENE	C7H8		159-168 168
TRICHLOROETHYLENE	C2HCL3		66- 73 73
TRIETHYLAMINE	C6H15N		154-156
VINYL ACETATE	C4H6O2		90- 95
O-XYLENE	C8H10		180
P-XYLENE	C8H10		181-182
ACETIC ANHYDRIDE	C4H6O3		
ACETIC ACID	C2H4O2		96-102
		FENZENE	C6H6 285-286
		METHYLENE DIACETATE	C5H8O4 283-284
BENZENE	C6H6		305
CYCLOHEXANE	C6H12		306
ISOPROPENYL ACETATE	C5H8O2		301
METHYL ACETATE	C3H6O2		299
METHYLENE DIACETATE	C5H8O4		302-304
METHYL IODIDE	CH3I		298
PYRIDINE	C5H5N		300

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
ACRYLIC ACID		C3H4O2	
	ACETIC ACID	C2H4O2	78-80
	1,1-DICHLOROETHYLENE	C2H2CL2	192
	FORMIC ACID	CH2O2	13
	ISOPROPYL ACETATE	C5H10O2	194
	STYRENE	C8H8	195-201
	VINYL ACETATE	C4H6O2	193
ALLYL ACETATE		C5H8O2	
	ACETIC ACID	C2H4O2	119
	VINYL ACETATE	C4H6O2	421
BENZOIC ACID		C7H6O2	
	BENZYL ACETATE	C9H10O2	251-253
BENZYL ACETATE		C9H10O2	
	BENZOIC ACID	C7H6O2	251-253
	BENZYL CHLORIDE	C7H7CL	635
	TOLUENE	C7H8	636-637
2,2-FUTANEDIOL DIACETATE		C8H14O4	
	ACETIC ACID	C2H4O2	185-188 188 R
BUTYL ACETATE		C6H12O2	
	ACETIC ACID	C2H4O2	147-151
		ISOPENTYL ACETATE C7H14O2	290
	ACETONITRILE	C2H3N	576-580 580 R
	ACRYLONITRILE	C3H3N	581
	BENZENE	C6H6	582-584
		TETRACHLOROMETHANE CCL4	669
	BUTYL FORMATE	C5H10O2	565
	CHLOROFORM	CHCL3	574
	CYCLOHEXANE	C6H12	585
	1-DECANE	C10H20	592-593
	HEPTANE	C7H16	590-591
	ISOPENTYL ACETATE	C7H14O2	589
	METHYL ACETATE	C3H6O2	396-397
	TETRACHLOROMETHANE	CCL4	572-573
	TOLUENE	C7H8	586-588
	TRICHLOROETHYLENE	C2HCL3	575

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
BUTYL FORMATE		C5H10O2		
	BUTYL ACETATE	C6H12O2	565	
	FORMIC ACID	CH2O2	34-36	
	PYRIDINE	C5H5N	564	
BUTYL METHACRYLATE		C8H14O2		
	CYCLOHEXANE	C6H12	623	
	METHACRYLIC ACID	C4H6O2	226	
BUTYRIC ACID		C4H8O2		
	ACETIC ACID	C2H4O2	103	
		PROPIONIC ACID	C3H6O2	282
	DICHLOROMETHANE	CH2CL2	227	
	N,N-DIETHYLANILINE	C10H15N	237	
	N,N-DIMETHYLANILINE	C8H11N	234	
	FORMIC ACID	CH2O2	28	
	HEXAMETHYLDISILOXANE	C6H18OS12	229-230	
	ISOPROPYLBENZENE	C9H12	236	
	OCTANE	C8H18	235	
	VALERIC ACID	C5H10O2	228	
	M-XYLENE	C8H10	231	
	O-XYLENE	C8H10	232	
	P-XYLENE	C8H10	233	
CHLOROACETIC ACID		C2H3ClO2		
	ACETIC ACID	C2H4O2	52-53	
CYCLOHEXYL ACETATE		C8H14O2		
	ACETIC ACID	C2H4O2	184	
DECANOIC ACID		C10H20O2		
	LAURIC ACID	C12H24O2	257-259	
	OCTANOIC ACID	C8H16O2	254-256	
DIETHYL OXALATE		C6H10O4		
	OCTANE	C8H18	570	
	2,2,4-TRIMETHYLPENTANE	C8H18	571	
DIMETHYL CARBONATE		C3H6O3		
	1-HEXYNE	C6H10	402-404	

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
DIMETHYL CARBONATE	C3H6O3		
	METHYLCYCLOHEXANE	C7H14	406
	TOLUENE	C7H8	405
DIMETHYL ISOPHTHALATE	C10H10O4		
	METHYL BENZOATE	C8H8O2	620
	METHYL M-TOLUATE	C9H10O2	638
ETHYL ACETATE	C4H8O2		
	ACETIC ACID	C2H4O2	104-108
		ETHYL ACRYLATE	C5H8O2 287
		HEXANE	C6H14 288
	ACETONITRILE	C2H3N	455-458
	BENZENE	C6H6	493-504 504 R
		CYCLOHEXANE	C6H12 667-668
	CHLOROBENZENE	C6H5Cl	488-492
	CHLOROFORM	CHCl3	443-448 448 R
	CYCLOHEXANE	C6H12	506-509 509 R
	DICHLOROMETHANE	CH2Cl2	449
	DIETHYLAMINE	C4H11N	463-486 486 R
	DIMETHYL SULFOXIDE	C2H6OS	460-461
	ETHYL ACETOACETATE	C6H10O3	505
	ETHYLBENZENE	C8H10	538-540
	ETHYL IODIDE	C2H5I	459
	HEXANE	C6H14	514-515
	1-HEXENE	C6H12	510-513 513 R
	ISOPROPYL ACETATE	C5H10O2	487
	METHYL ACETATE	C3H6O2	356-370
	METHYL ETHYL KETOXIM	C4H9NO	462
	1-OCTENE	C8H16	542
	PENTYL ACETATE	C7H14O2	531-537
	TETRACHLOROMETHANE	CCl4	436-442 442 R
	TOLUENE	C7H8	516-530
	TRICHLOROETHYLENE	C2HCl3	450-454
	P-XYLENE	C8H10	541
ETHYL ACETOACETATE	C6H10O3		
	ETHYL ACETATE	C4H8O2	505

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
ETHYL ACRYLATE		C5H8O2	
	ACETIC ACID	C2H4O2	120
		ETHYL ACETATE	C4H8O2 267
ETHYL BUTYRATE		C6H12O2	
	HEPTANE	C7H16	594-595
ETHYL FORMATE		C3H6O2	
	BENZENE	C6H6	335-336
	CHLOROFORM	CHCL3	330-331
	CYCLOHEXANE	C6H12	337-338
	CIS-1,2-DICHLOROETHYLENE	C2H2CL2	332
	TRANS-1,2-DICHLOROETHYLENE	C2H2CL2	333
	METHYL ACETATE	C3H6O2	334
FORMIC ACID		CH2O2	
	ACETIC ACID	C2H4O2	7- 12
		CHLOROFORM	CMCL3 273-274
		PROPIONIC ACID	C3H6O2 275-277
	ACRYLIC ACID	C3H4O2	13
	BENZENE	C6H6	40- 42
	BUTYL CHLORIDE	C4H9CL	31
	TERT-BUTYL CHLORIDE	C4H9CL	32
	BUTYL FORMATE	C5H10O2	34- 36
	BUTYRIC ACID	C4H8O2	28
	CHLOROFORM	CHCL3	1
	1-CHLOROPROPANE	C3H7CL	17
	1,2-DICHLOROETHANE	C2H4CL2	2- 6
	N,N-DIMETHYLFORMAMIDE	C3H7NO	19- 27 27 P
	ISOBUTYL CHLORIDE	C4H9CL	33
	ISOPENTYL FORMATE	C6H12O2	43
	ISOPROPYL CHLORIDE	C3H7CL	18
	ISOPROPYL FORMATE	C4H8O2	29
	PROPIONIC ACID	C3H6O2	14- 16
	PROPYL FORMATE	C4H8O2	30
	TOLUENE	C7H8	48
	TRIETHYLAMINE	C6H15N	44- 47
	VALERIC ACID	C5H10O2	37- 39
	P-XYLENE	C8H10	49

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
HEPTYL ACETATE		C9H18O2		
	TETRACHLOROMETHANE	CCL4	639	
HEXANOIC ACID		C6H12O2		
	OCTANOIC ACID	C8H16O2	245-250	
ISOPHTYL ACETATE		C6H12O2		
	TOLUENE	C7H8	596-597	
ISOBUTYRIC ACID		C4H8O2		
	N,N-DIETHYLANILINE	C10H15N	241	
	N,N-DIMETHYLANILINE	C8H11N	239	
	OCTANE	C8H18	240	
	P-XYLENE	C8H10	238	
ISOPENTYL ACETATE		C7H14O2		
	ACETIC ACID	C2H4O2	170-172	
		BUTYL ACETATE	C6H12O2	290
	BUTYL ACETATE	C6H12O2	589	
ISOPENTYL FORMATE		C6H12O2		
	FORMIC ACID	CH2O2	43	
ISOPROPENYL ACETATE		C5H8O2		
	ACETIC ANHYDRIDE	C4H6O3	301	
ISOPROPYL ACETATE		C5H10O2		
	ACETIC ACID	C2H4O2	123	
	ACRYLIC ACID	C3H4O2	194	
	ETHYL ACETATE	C4H8O2	487	
ISOPROPYL FORMATE		C4H8O2		
	FORMIC ACID	CH2O2	29	
LAURIC ACID		C12H24O2		
	DECANOIC ACID	C10H20O2	257-259	
	METHYL LAURATE	C13H26O2	260	
	MYRISTIC ACID	C14H28O2	261-263	
MALEIC ANHYDRIDE		C4H2O3		
	O-XYLENE	C8H10	297	

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
METHACRYLIC ACID		C4H6O2	
	BUTYL METHACRYLATE	C8H14O2	226
	1,1-DICHLOROETHYLENE	C2H2CL2	223
	METHYL METHACRYLATE	C5H8O2	225
	VINYL ACETATE	C4H6O2	224
METHYL ACETATE		C3H6O2	
	ACETIC ACID	C2H4O2	82-83
	ACETIC ANHYDRIDE	C4H6O3	299
	ACETONITRILE	C2H3N	353-354
	BENZENE	C6H6	375-390 390
		CHLOROFORM	CHCL3 660-664
		CYCLOHEXANE	C6H12 665-666
	BUTYL ACETATE	C6H12O2	396-397
	CARBON DISULFIDE	CS2	349-350
	CHLOROBENZENE	C6H5CL	374
	CHLOROFORM	CHCL3	341-346 346
	CYCLOHEXANE	C6H12	391-394 394
	CIS-1,2-DICHLOROETHYLENE	C2H2CL2	351
	TRANS-1,2-DICHLOROETHYLENE	C2H2CL2	352
	DICHLOROMETHANE	CH2CL2	347
	ETHYL ACETATE	C4H8O2	356-370
	ETHYL FORMATE	C3H6O2	334
	1-HEXENE	C6H12	395
	METHYL IODIDE	CH3I	348
	PENTYL ACETATE	C7H14O2	398-401
	PROPYL ACETATE	C5H10O2	371-373
	TETRACHLOROMETHANE	CCL4	339-340
	VINYL ACETATE	C4H6O2	355
METHYL ACRYLATE		C4H6O2	
	ETHYLBENZENE	C8H10	412
	ISOPROPYLBENZENE	C9H12	416
	STYRENE	C8H8	411
	TOLUENE	C7H8	410
	1,3,5-TRIMETHYLBENZENE	C9H12	417
	VINYL ACETATE	C4H6O2	409
	M-XYLENE	C8H10	413
	O-XYLENE	C8H10	414

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
METHYL ACRYLATE		C4H6O2	
	P-XYLNF	C8H10	415
METHYL BENZOATE		C8H8O2	
	DIMETHYL ISOPHTHALATE	C10H10O4	620
	METHYL OCTANOATE	C9H18O2	619
	METHYL M-TOLUATE	C9H10O2	618
METHYL BORATE		C3H9B03	
	BENZENE	C6H6	408
	TETRACHLOROMETHANE	CCL4	407
METHYL DECANOATE		C11H22O2	
	METHYL LAURATE	C13H26O2	645-648
	METHYL OCTANOATE	C9H18O2	640-643
METHYLENE DIACRYLATE		C5H8O4	
	ACETIC ACID	C2H4O2	121
		ACETIC ANHYDRIDE	C4H6O3 283-284
	ACETIC ANHYDRIDE	C4H6O3	302-304
METHYL FORMATE		C2H4O2	
	N,N-DIPETHYLFORMAMIDE	C3H7NO	310-326 326 R
	HEXANE	C6H14	329
	ISOPRENE	C5H8	327
	METHANETHIOL	CH4S	309
	2-METHYL-2-BUTENE	C5H10	328
METHYL HEXANOATE		C7H14O2	
	METHYL OCTANOATE	C9H18O2	598-602
METHYL LAURATE		C13H26O2	
	LAURIC ACID	C12H24O2	260
	METHYL DECANOATE	C11H22O2	645-648
	METHYL MYRISTATE	C15H30O2	649-652
METHYL-9,12-LINOLEATE		C19H34O2	
	METHYL PALMITATE	C17H34O2	658

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
METHYL METHACRYLATE		C5H8O2	
	BENZENE	C6H6	545-547
	ETHYLBENZENE	C8H10	552-554
	ISOPROPYLBENZENE	C9H12	561-563
	METHACRYLIC ACID	C4H6O2	225
	STYRENE	C8H8	551
	TOLUENE	C7H8	548-550
	VINYL ACETATE	C4H6O2	422
	M-XYLENE	C8H10	555-557
	P-XYLENE	C8H10	558-560
METHYL MYRISTATE		C15H30O2	
	METHYL LAURATE	C13H26O2	649-652
	METHYL PALMITATE	C17H34O2	653-657
METHYL OCTANOATE		C9H18O2	
	METHYL BENZOATE	C8H8O2	619
	METHYL DECANOATE	C11H22O2	640-643
	METHYL HEXANOATE	C7H14O2	598-602
METHYL PALMITATE		C17H34O2	
	METHYL-9,12-LINOLEATE	C19H34O2	658
	METHYL MYRISTATE	C15H30O2	653-657
	METHYL STEARATE	C19H38O2	659
METHYL PROPIONATE		C4H8O2	
	BENZENE	C6H6	543
	TOLUENE	C7H8	544
METHYL SALICYLATE		C8H8O3	
	M-XYLENE	C8H10	621
	P-XYLENE	C8H10	622
METHYL STEARATE		C19H38O2	
	METHYL PALMITATE	C17H34O2	659
METHYL M-TOLUATE		C9H10O2	
	DIMETHYL ISOPHTHALATE	C10H10O4	638
	METHYL BENZOATE	C8H8O2	618

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE	
MYRISTIC ACID		C14H28O2		
	LAURIC ACID	C12H24O2	261-263	
	PALMITIC ACID	C16H32O2	264-267	
OCTANOIC ACID		C8H16O2		
	DECANOIC ACID	C10H20O2	254-256	
	HEXANOIC ACID	C6H12O2	245-250	
OCTYL ACETATE		C10H20O2		
	TETRAChLOROMETHANE	CCl4	644	
OLEIC ACID		C18H34O2		
	MXANE	C6H14	272	
	PALMITIC ACID	C16H32O2	268-269	
PALMITIC ACID		C16H32O2		
	MYRISTIC ACID	C14H28O2	264-267	
	OLEIC ACID	C18H34O2	268-269	
	STEARIC ACID	C18H36O2	270-271	
PENTYL ACETATE		C7H14O2		
	ETHYL ACETATE	C4H8O2	531-537	
	METHYL ACETATE	C3H6O2	398-401	
	TETRAChLOROMETHANE	CCl4	603	
	TOLUENE	C7H8	604-605	
PROPIONIC ACID		C3H6O2		
	ACETIC ACID	C2H4O2	84-86	
		BUTYRIC ACID	C4H8O2	282
		FORMIC ACID	CH2O2	275-277
	BENZENE	C6H6	210-211	
		TRIFLUOROACETIC ACID	C2HF3O3	278-279
	CHLOROPENZENE	C6H5Cl	209	
	CYCLOHEXANE	C6H12	212	
	ETHYLBENZENE	C6H10	216	
	FORMIC ACID	CH2O2	14-16	
	HEPTANE	C7H16	215	
	HEXAMETHYLDISILOXANE	C6H18OSi2	213-214	
	ISOPROPYLBENZENE	C9H12	222	

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
PROPIONIC ACID		C3H6O2	
	OCTANE	C8H18	220-221
	TETRACHLOROMETHANE	CCL4	202-208
	TRIFLUOROACETIC ACID	C2HF3O2	50
	M-XYLENE	C8H10	217
	O-XYLENE	C8H10	218
	P-XYLENE	C8H10	219
PROPYL ACETATE		C5H10O2	
	ACETIC ACID	C2H4O2	124
	ACETONITRILE	C2H3N	567
	BENZENE	C6H6	568-569
	METHYL ACETATE	C3H6O2	371-373
	TETRACHLOROMETHANE	CCL4	566
PROPYLENE CARBONATE		C4H6O3	
	ETHANETHIOL	C2H6S	432-435
PROPYL FORMATE		C4H8O2	
	FORMIC ACID	CH2O2	30
STEARIC ACID		C18H36O2	
	PALMITIC ACID	C16H32O2	270-271
TRIETHYL ORTHOACETATE		C6H18O3	
	BENZENE	C6H6	624-626
	CYCLOHEXANE	C6H12	627-628
	HEPTANE	C7H16	632-634
	1-HEPTENE	C7H14	629-631
TRIETHYL ORTHOFORMATE		C7H16O3	
	BENZENE	C6H6	606-608
	CYCLOHEXANE	C6H12	609-611
	HEPTANE	C7H16	615-617
	1-HEPTENE	C7H14	612-614
TRIFLUOROACETIC ACID		C2HF3O2	
	BENZENE	C6H6	51
		PROPIONIC ACID	C3H6O2
	PROPIONIC ACID	C3H6O2	278-279
			50

Alphabetical Index of Systems

1ST COMPONENT	2ND COMPONENT	3RD COMPONENT	PAGE
VALERIC ACID	C5H10O2		
	BUTYRIC ACID	C4H8O2	228
	FORMIC ACID	CH2O2	37- 39
	HEPTANE	C7H16	242-244
VINYL ACETATE	C4H6O2		
	ACETIC ACID	C2H4O2	90- 95
	ACRYLIC ACID	C3H4O2	193
	ACRYLONITRILE	C3H3N	419-420
	ALLYL ACETATE	C5H8O2	421
	CYCLOHEXANE	C6H12	423
1,1-DICHLOROETHYLENE	C2H2CL2		418
2,4-DIMETHYLPENTANE	C7H16		431
	HEXANE	C6H14	427-430 430 R
1-HEXENE	C6H12		424-426 426 R
	METHACRYLIC ACID	C4H6O2	224
	METHYL ACETATE	C3H6O2	355
	METHYL ACRYLATE	C4H6O2	409
	METHYL METHACRYLATE	C5H8O2	422