

**J. Gmehling**  
**U. Onken**

# **VAPOR-LIQUID EQUILIBRIUM DATA COLLECTION**

**Aliphatic Hydrocarbons**  
**C<sub>4</sub> – C<sub>30</sub>**



## **Chemistry Data Series**

**Vol. I, Part 6e (in conjunction with Part 6d)**

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# Vapor-Liquid Equilibrium Data Collection

**6e**

(In conjunction with Part 6d)

**Aliphatic Hydrocarbons**

**C<sub>4</sub> – C<sub>30</sub>**

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**

Technische Chemie  
Universität Oldenburg

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# 6d/e

## Aliphatic Hydrocarbons

$C_4 - C_{30}$

### Systems with:

1,3-Butadiene	2-Methylbutane
Butane	Methylcyclohexane
Cis-2-Butene	Methylene Cyclobutane
Trans-2-Butene	3-Methylhexane
1-Butene	2-Methylpentane
1-Butyne	3-Methylpentane
2-Butyne	Neopentane
1,4-Cyclohexadiene	Nonane
Cyclohexane	1-Nonene
Cyclohexene	3-Nonyne
1,5 Cyclooctadiene	1,7-Octadiene
Cyclopentadiene	Octane
Cyclopentane	1-Octene
Cis-Decahydronaphthalene	1-Octyne
Trans-Decahydronaphthalene	3-Octyne
1-1 Dimethylcyclopentane	Pentadecane
Dodecane	Pentane
4-Ethenylcyclohexane	1-Pentyne
Ethyl Cyclohexane	2-Pentyne
1-Ethyl Cyclopentene	Phenylcyclohexane
Heptane	Beta-Pinene
Hexadecane	Squalene
Hexane	Tetradecane
1-Hexene	2,4,4-Trimethyl-1-Pentene
1-Hexyne	2,4,4-Trimethyl-2-Pentene
Isobutylene	2,6,6-Trimethylbicyclo(3.1.1)Hept-2-ene
Isoprene	2,4,4-Trimethylpentane
3-Methyl Cyclopenten	Undecane
2-Methyl-1-Butene	Vinylacetylene
2-Methyl-2-Butene	5-Vinyl-Bicyclo(2.2.1)Hept-2-Ene
3-Methyl-1-Butyne	

## SUBJECTS OF VOLUME I

The subjects of Volume I in the Chemistry Data Series (CDS) are:

Subtitle	Vol. I, Part
Aqueous Systems	1 1a 1b
Organic Hydroxy Compounds	
Alcohols	2a
Alcohols and Phenols	2b 2c 2d 2e 2f
Aldehydes, Ketones, Ethers	3/4
Aldehydes	3a
Ketones	3b
Ethers	4a 4b
Carboxylic Acids, Anhydrides, Esters	5
Aliphatic Hydrocarbons C <sub>4</sub> -C <sub>6</sub>	6a
Aliphatic Hydrocarbons C <sub>7</sub> -C <sub>18</sub>	6b 6c
Aliphatic Hydrocarbons C <sub>4</sub> -C <sub>30</sub>	6d/e
Aromatic Hydrocarbons	7
Halogen, Nitrogen, Sulfur and other compounds	8

An substance index to Volume I on CD-ROM is available from the DECHEMA eV and its agents.

## CONTENTS

### Vol. I, Part 6e

In Part 6d:	
Subjects of Volume .....	VI
Author's Preface .....	VII
Executive Editor's Preface .....	VIII
Contents Volume I, 6d/6e .....	IX
Contents of previous volumes .....	X
Guide to Tables .....	XI
List of Symbols .....	XII
References .....	XXIV
In Part 6e:	
Subjects of Volume .....	vi
Contents Volume I, 6d/6e .....	vii
In Part 6d:	
Data Tables .....	1
Binary Systems	
Vinylacetylene .....	1
1,3-Butadiene .....	4
1-Butyne .....	14
2-Butyne .....	16
1-Butene .....	25
Cis-2-Butene .....	26
Trans-2-Butene .....	33
Isobutylene .....	36
Butane .....	37
Cyclopentadiene .....	43
Cyclopentene .....	50
Isoprene .....	51
3-Methyl-1-Butyne .....	85
Methylene Cyclobutane .....	92
1-Pentyne .....	96

2-Pentyne . . . . .	97
Cyclopentane . . . . .	99
2-Methyl-1-Butene . . . . .	104
2-Methyl-1-Butene . . . . .	107
2-Methylbutane . . . . .	109
Neopentane . . . . .	119
Pentane . . . . .	124
1,4-Cyclohexadiene . . . . .	159
Cyclohexene . . . . .	164
1-Hexyne . . . . .	187
3-Methyl Cyclopentene . . . . .	193
Cyclohexane . . . . .	195
1-Hexene . . . . .	327
Hexane . . . . .	337
2-Methylpentane . . . . .	470
3-Methylpentane . . . . .	475
In Part 6e:	
Data Tables . . . . .	482
1-Ethyl Cyclopentene . . . . .	482
1,1-Dimethylcyclopentane . . . . .	493
Methylcyclohexane . . . . .	495
2,3-Dimethylpentane . . . . .	522
Heptane . . . . .	524
3-Methylhexane . . . . .	630
1,5-Cyclooctadiene . . . . .	632
4-Ethenylcyclohexene . . . . .	633
1,7-Octadiene . . . . .	637
1-Octyne . . . . .	638
3-Octyne . . . . .	654
Ethyl Cyclohexane . . . . .	662
1-Octene . . . . .	663
2,4,4-Trimethyl-1-Pentene . . . . .	669
Octane . . . . .	678
2,2,4-Trimethylpentane . . . . .	711
5-Vinyl-Bicyclo(2.2.1)Hept-2-Ene . . . . .	746
3-Nonyne . . . . .	747

1-Nonene	748
Nonane	752
2,6,6-Trimethylbicyclo(3.1.1)Hept-2-Ene	774
Beta-Pinene	787
Cis-Decahydro Naphthalene	792
Trans-Decahydronaphthalene	800
Undecane	807
Phenyl Cyclohexane	808
Dodecane	809
Tetradecane	814
Pentadecane	831
Hexadecane	832
Squalene	839
Ternary Systems	
Butane	849
Isoprene	851
2-Methyl-1-Butene	862
2-Methyl-2-Butene	863
2-Methylbutane	864
Pentane	868
Cyclohexane	869
Hexane	886
1,1-Dimethylcyclopentane	890
1-Heptene	891
Methylcyclohexane	893
2,3-Dimethylpentane	902
Heptane	903
3-Methylhexane	911
Octane	912
2,2,4-Trimethylpentane	916
Nonane	918
(s)-4-Isopropenyl-1-Methylcyclohexene	922
Cis-Decahydro Naphthalene	928
Tetradecane	931
Hexadecane	933



Quaternary Systems	
Pentane .....	936
Cyclohexane .....	937
Methylcyclohexane .....	939
Appendix A: Pure Component Parameters .....	941
Formula Index of Binary Systems .....	949
Alphabetical Index of Binary Systems .....	965
Formula Index of Ternary Systems .....	981
Alphabetical Index of Ternary Systems .....	985
Index of Quaternary Systems .....	989

\* – Recommended values

C <sub>4</sub> H <sub>4</sub>	Vinylacetylene	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	1–3
C <sub>4</sub> H <sub>6</sub>	1,3-Butadiene	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	4
		C <sub>3</sub> H <sub>7</sub> NO	N, N-Dimethylformamide (DMF)	5
		C <sub>4</sub> H <sub>8</sub>	Cis-2-Butene	6–8
		C <sub>4</sub> H <sub>8</sub>	Trans-2-Butene	9–10
		C <sub>4</sub> H <sub>10</sub>	Butane	11–13
C <sub>4</sub> H <sub>6</sub>	1-Butyne	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	14–15
C <sub>4</sub> H <sub>6</sub>	2-Butyne	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	16–19
		C <sub>5</sub> H <sub>8</sub>	Isoprene	20–23
		C <sub>5</sub> H <sub>12</sub>	2-Methylbutane	24
C <sub>4</sub> H <sub>8</sub>	1-Butene	C <sub>3</sub> H <sub>7</sub> NO	N,N-Dimethylformamide (DMF)	25
C <sub>4</sub> H <sub>8</sub>	Cis-2-Butene	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	26
		C <sub>4</sub> H <sub>8</sub>	Trans-2-Butene	27–29
		C <sub>4</sub> H <sub>10</sub>	Butane	30–32
C <sub>4</sub> H <sub>8</sub>	Trans-2-Butene	C <sub>4</sub> H <sub>10</sub>	Butane	34–35
C <sub>4</sub> H <sub>8</sub>	Isobutylene	C <sub>3</sub> H <sub>7</sub> NO	N,N-Dimethylformamide (DMF)	36
C <sub>4</sub> H <sub>10</sub>	Butane	CH <sub>5</sub> N	Methylamine	37–38
		C <sub>2</sub> H <sub>3</sub> Cl	Vinyl Chloride	39
		C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	40
		C <sub>4</sub> H <sub>10</sub>	2-Methylpropane	41
		C <sub>6</sub> H <sub>6</sub>	Benzene	42
C <sub>5</sub> H <sub>6</sub>	Cyclopentadiene	C <sub>5</sub> H <sub>8</sub>	Cyclopentene	43
		C <sub>5</sub> H <sub>8</sub>	Isoprene	44–45
		C <sub>5</sub> H <sub>10</sub>	Cyclopentane	46
		C <sub>5</sub> H <sub>10</sub>	2-Methyl-2-Butene	47

		$C_6H_6$	Benzene	48
		$C_6H_{14}$	Hexane	49
$C_5H_8$	Cyclopentene	$C_5H_{10}$	Cyclopentane	50
$C_5H_8$	Isoprene	$C_2H_3N$	Acetonitrile	51–53
		$C_5H_8$	3-Methyl-1-Butyne	54–57
		$C_5H_8$	Methylene Cyclobutane	58–59
		$C_5H_{10}$	2-Methyl-1-Butene	60–64
		$C_5H_{10}$	2-Methyl-1-Butene	65*
		$C_5H_{10}$	2-Methyl-2-Butene	66–73
				73*
		$C_5H_{12}$	Pentane	74–79
		$C_6H_{14}$	Hexane	80–81
		$C_7H_8$	Toluene	82
		$C_{10}H_{12}$	Dicyclopentadiene	83–84
$C_5H_8$	3-Methyl-1-Butyne	$C_2H_3N$	Acetonitrile	85–87
		$C_5H_{10}$	2-Methyl-1-Butene	88
		$C_5H_{12}$	2-Methylbutane	89–91
$C_5H_8$	Methylene Cyclobutane	$C_5H_{10}$	2-Methyl-2-Butyne	92–93
		$C_5H_{12}$	Pentane	94
		$C_6H_{12}$	1-Hexene	95
$C_5H_8$	1-Pentyne	$C_5H_8$	2-Pentyne	96
$C_5H_8$	2-Pentyne	$C_5H_{10}$	2-Methyl-2-Butene	97
		$C_5H_{12}$	2-Methylbutane	98
$C_5H_{10}$	Cyclopentane	$C_2H_2Cl_2$	Trans-1,2-Dichloroethylene	99
		$C_2H_4Cl_2$	1,2-Dichloroethane	100
		$C_5H_{11}N$	Piperidine	101

		$C_6H_{10}$	Cyclohexene	102
		$C_7H_{14}$	Cycloheptane	103
$C_5H_{10}$	2-Methyl-1-Butene	$C_5H_{10}$	2-Methyl-2-Butene	104
		$C_6H_{14}$	Hexane	105
		$C_7H_8$	Toluene	106
$C_5H_{10}$	2-Methyl-2-Butene	$C_6H_{14}$	Hexane	107
		$C_7H_8$	Toluene	108
$C_5H_{12}$	2-Methylbutane	$C_5H_{10}$	1-Pentene	109
		$C_5H_{12}$	Pentane	115–118
				118*
		$C_6H_6S$	Dimethyl Sulfide	110–112
		$C_6H_6S$	Ethanethiol	113–114
$C_5H_{12}$	Neopentane	$C_5H_{11}Br$	Neopentyl Bromide	119–123
$C_5H_{12}$	Pentane	$CH_2Cl_2$	Dichloromethane	124–126
		$C_2H_6S$	Dimethyl Sulfide	127–129
		$C_2H_6S$	Ethanethiol	130–131
		$C_3H_5N$	Propionitrile	132
		$C_4H_9Cl$	Butyl Chloride	133
		$C_5F_{12}$	Perfluoropentane	134–135
		$C_5H_{11}Br$	3-Bromopentane	136–143
		$C_6H_6$	Benzene	144–149
		$C_6H_{14}$	Hexane	150–153
				153*
		$C_8H_{18}$	Octane	154–155
		$C_{10}H_{12}$	Dicyclopentadiene	156–157
		$C_{30}H_{62}$	Squalane	158

C <sub>6</sub> H <sub>8</sub>	1,4-Cyclohexadiene	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	159–160
		C <sub>4</sub> H <sub>9</sub> Cl	Butyl Chloride	161–162
C <sub>6</sub> H <sub>10</sub>	Cyclohexene	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	163–164
		C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	1,2-Dichloroethane	165–167
				167*
		C <sub>4</sub> H <sub>9</sub> Cl	Butyl Chloride	168–169
		C <sub>6</sub> H <sub>4</sub> F <sub>2</sub>	1,4-Difluorobenzene	170–172
				172*
		C <sub>6</sub> H <sub>5</sub> F	Fluorobenzene	173–175
				175*
		C <sub>6</sub> H <sub>6</sub>	Benzene	176–178
				178*
		C <sub>7</sub> H <sub>5</sub> F <sub>3</sub>	1',1',1'-Trifluorotoluene	179–180
		C <sub>8</sub> H <sub>10</sub>	M-Xylene	181–182
		C <sub>8</sub> H <sub>10</sub>	P-Xylene	183–184
		C <sub>10</sub> H <sub>16</sub>	2,6,6-Trimethylbicyclo(3.1.1)Hept-2-Ene	185–186
C <sub>6</sub> H <sub>10</sub>	1-Hexyne	C <sub>7</sub> H <sub>16</sub>	Heptane	187
		C <sub>8</sub> H <sub>18</sub>	Octane	188–192
C <sub>6</sub> H <sub>10</sub>	3-Methyl Cyclopentene	C <sub>6</sub> H <sub>12</sub>	1-Hexene	193–194
C <sub>6</sub> H <sub>12</sub>	Cyclohexane	CCl <sub>4</sub>	Tetrachloromethane	196
		CCl <sub>4</sub>	Tetrachloromethane	197
		CH <sub>2</sub> BrCl	Bromochloromethane (R30B1)	198–200
				200
		C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	201–202
		C <sub>2</sub> H <sub>4</sub> Br <sub>2</sub>	1,2-Dibromoethane	203
		C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	1,2-Dichloroethane	204–206

		206*
C <sub>2</sub> H <sub>5</sub> NO <sub>2</sub>	Nitroethane	207–213
C <sub>3</sub> H <sub>3</sub> N	Acrylonitrile	214
C <sub>3</sub> H <sub>5</sub> N	Propionitrile	215
C <sub>3</sub> H <sub>6</sub> Cl <sub>2</sub>	1,2-Dichloropropane	216
C <sub>3</sub> H <sub>6</sub> Cl <sub>2</sub>	1,3-Dichloropropane	217
C <sub>3</sub> H <sub>7</sub> Br	Propyl Bromide	218–219
C <sub>3</sub> H <sub>7</sub> NO	N,N-Dimethylformamide (DMF)	220–222
		222*
C <sub>3</sub> H <sub>9</sub> BO <sub>3</sub>	Methyl Borate	223
C <sub>4</sub> H <sub>9</sub> Cl	Butyl Chloride	224–226
C <sub>4</sub> H <sub>9</sub> Cl	Sec-Butyl Chloride	227
C <sub>4</sub> H <sub>9</sub> N	Pyrrolidine	228–230
		230*
C <sub>4</sub> H <sub>11</sub> N	Butylamine	231–232
C <sub>4</sub> H <sub>11</sub> N	Diethylamine	233–235
C <sub>5</sub> H <sub>5</sub> N	Pyridine	236–242
C <sub>5</sub> H <sub>9</sub> N	Valeronitrile	243
C <sub>5</sub> H <sub>14</sub> N <sub>2</sub>	N,N,N',N'-Tetramethyldiaminomethane	244–248
C <sub>6</sub> F <sub>12</sub>	Perfluorocyclohexane	249
C <sub>6</sub> H <sub>6</sub>	Benzene	250–275
		273–275*
C <sub>6</sub> H <sub>7</sub> N	Aniline	276
C <sub>6</sub> H <sub>11</sub> Cl	Chlorocyclohexane	277–278
C <sub>6</sub> H <sub>13</sub> N	N-Methylpiperidine	279
C <sub>6</sub> H <sub>14</sub>	Hexane	280–289

			289*
		$C_7H_7NO_2$	P-Nitrotoluene
		$C_7H_8$	Toluene
			290
			291–303
			303*
		$C_7H_{13}NO$	N-Methyl-6-Caprolactam
		$C_7H_{14}$	Methylcyclohexane
		$C_7H_{14}$	Methylcyclohexane
		$C_7H_{16}$	2,2-Dimethylpentane
		$C_7H_{16}$	2,4-Dimethylpentane
		$C_7H_{16}$	Heptane
			304–305
			306–307
			307
			308–309
			310
			311–315
			315*
		$C_8H_{18}$	Octane
		$C_9H_{12}$	Propylbenzene
		$C_{10}H_{12}$	1,2,3,4-Tetrahydronaphthalene
		$C_{10}H_{16}$	Beta-Pinene
		$C_{14}H_{30}$	Tetradecane
		$C_{16}H_{34}$	Hexadecane
		$C_{30}H_{62}$	Squalane
		$Cl_2OS$	Thionyl Chloride
			316
			317–321
			322
			323
			324
			325
			326
			195
$C_6H_{12}$	1-Hexene	$CH_2Cl_2$	Dichloromethane
		$C_6H_6$	Benzene
		$C_6H_{14}$	Hexane
		$C_7F_{14}$	Perfluoromethylcyclohexane
		$C_7H_{16}$	Heptane
			327
			328–329
			330
			331–335
			336
$C_6H_{14}$	Hexane	$CCL_4$	Tetrachloromethane
		$CD_4S$	Tetraduteromethanethiol
			337
			338–345

CHCl <sub>3</sub>	Chloroform	346
CH <sub>2</sub> Cl <sub>2</sub>	Dichloromethane	355–357
CH <sub>3</sub> DS	Methanedeuteriothiol	358–365
CH <sub>4</sub> S	Methanethiol	366
CHD <sub>3</sub> S	Trideuteromethanethiol	347–354
C <sub>2</sub> Cl <sub>3</sub> F <sub>3</sub>	1,1,2-Trichloro-1,2,2-Trifluoroethane (R113)	367–371
C <sub>2</sub> HBrClF <sub>3</sub>	1-Bromo-1-Chloro-2,2,2-Trifluoroethane	372
C <sub>2</sub> H <sub>2</sub> Cl <sub>4</sub>	1,1,2,2-Tetrachloro Ethane	373–374
C <sub>2</sub> H <sub>3</sub> Cl	Vinyl Chloride	375–376
C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	1,2-Dichloroethane	377–380
		380*
C <sub>3</sub> H <sub>3</sub> N	Acrylonitrile	381
C <sub>3</sub> H <sub>5</sub> N	Propionitrile	382
C <sub>3</sub> H <sub>6</sub> Cl <sub>2</sub>	1,2-Dichloropropane	383–385
C <sub>3</sub> H <sub>7</sub> D <sub>2</sub> N	N-Dideuteroisopropylamine	386–398
C <sub>3</sub> H <sub>7</sub> NO	N,N-Dimethylformamide (DMF)	392
C <sub>3</sub> H <sub>9</sub> N	Isopropylamine	399–404
C <sub>3</sub> H <sub>9</sub> N	Propylamine	405–410
C <sub>3</sub> H <sub>9</sub> N	Trimethylamine	411–412
C <sub>4</sub> H <sub>8</sub> Cl <sub>2</sub>	1,4-Dichlorobutane	413
C <sub>4</sub> H <sub>9</sub> Br	Butyl Bromide	414
C <sub>4</sub> H <sub>9</sub> Cl	Butyl Chloride	415–416
		416*
C <sub>4</sub> H <sub>11</sub> N	Butylamine	417
C <sub>4</sub> H <sub>11</sub> N	Diethylamine	418–422
C <sub>5</sub> H <sub>5</sub> N	Pyridine	423–428



		C <sub>5</sub> H <sub>13</sub> N	Methyl Diethyl Amine	429–431
		C <sub>6</sub> H <sub>3</sub> Cl <sub>3</sub>	1,2,4-Trichlorobenzene	432
		C <sub>6</sub> H <sub>5</sub> Cl	Chlorobenzene	433
		C <sub>6</sub> H <sub>6</sub>	Benzene	434–439
				438–439*
		C <sub>6</sub> H <sub>7</sub> N	Aniline	440
		C <sub>6</sub> H <sub>7</sub> N	2-Methylpyridine	441
		C <sub>6</sub> H <sub>7</sub> N	3-Methylpyridine	442
		C <sub>7</sub> F <sub>14</sub>	Perfluoromethylcyclohexane	443–444
		C <sub>7</sub> H <sub>7</sub> Cl	O-Chlorotoluene	445
		C <sub>7</sub> H <sub>7</sub> Cl	P-Chlorotoluene	446
		C <sub>7</sub> H <sub>8</sub>	Toluene	447–452
				452*
		C <sub>7</sub> H <sub>13</sub> NO	N-Methyl-6-Caprolactam	453
		C <sub>7</sub> H <sub>16</sub>	Heptane	454–460
		C <sub>8</sub> H <sub>10</sub>	Ethylbenzene	461–462
		C <sub>8</sub> H <sub>10</sub>	P-Xylene	463
		C <sub>8</sub> H <sub>18</sub>	Octane	464
		C <sub>10</sub> H <sub>12</sub>	1,2,3,4-Tetrahydronaphthalene	465
		C <sub>16</sub> H <sub>34</sub>	Hexadecane	466–468
		C <sub>30</sub> H <sub>62</sub>	Squalane	469
C <sub>6</sub> H <sub>14</sub>	2-Methylpentane	C <sub>7</sub> H <sub>16</sub>	Heptane	470–472
				472*
		C <sub>8</sub> H <sub>18</sub>	Octane	473–474
C <sub>6</sub> H <sub>14</sub>	3-Methylpentane	C <sub>7</sub> H <sub>16</sub>	Heptane	475–479
				479*

		$C_8H_{18}$	Octane	480–481
$C_7H_{12}$	1-Ethyl Cyclopentene	$C_2H_6OS$	Dimethyl Sulfoxide	482–484
		$C_7H_8$	Toluene	485–488
		$C_7H_{16}$	Heptane	489–492
$C_7H_{14}$	1,1-Dimethylcyclopentane	$C_3H_7NO$	N,N-Dimethylformamide (DMF)	493
		$C_6H_6$	Benzene	494
$C_7H_{14}$	Methylcyclohexane	$C_2H_2Cl_4$	1,1,2,2-Tetrachloro Ethane	496
		$C_2H_4Cl_2$	1,2-Dichloroethane	497
		$C_3H_7NO$	N,N-Dimethylformamide (DMF)	498
		$C_3H_8S$	1-Propanethiol	499–501
		$C_4H_9Cl$	Butyl Chloride	502
		$C_4H_9Cl$	Sec-Butyl Chloride	503–505
				505*
		$C_4H_9Cl$	Tert-Butyl Chloride	506
		$C_6H_5Cl$	Chlorobenzene	507
		$C_6H_5F$	Fluorobenzene	508–511
				511*
		$C_6H_6$	Benzene	512–513
		$C_6H_7N$	Aniline	514
		$C_7H_8$	Toluene	515–517
				517*
		$C_7H_{13}NO$	N-Methyl-6-Caprolactam	518
		$C_7H_{16}$	Heptane	519–520
		$C_8H_{10}$	Ethylbenzene	521
		$Cl_2OS$	Thionyl Chloride	495
$C_7H_{16}$	2,3-Dimethylpentane	$C_3H_7NO$	N,N-Dimethylformamide (DMF)	522

C <sub>7</sub> H <sub>16</sub>	Heptane	C <sub>6</sub> H <sub>6</sub>	Benzene	523
		CCl <sub>4</sub>	Tetrachloromethane	529–530
		CH <sub>2</sub> BrCl	Bromochloromethane (R30B1)	531–533
				533*
		C <sub>2</sub> Cl <sub>4</sub>	Tetrachloroethylene	534
		C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	1,2-Dichloroethane	535–537
				537*
		C <sub>2</sub> H <sub>6</sub> Cl <sub>2</sub> Si	Dimethyldichlorosilane	538
		C <sub>3</sub> H <sub>5</sub> N	Propionitrile	539–541
		C <sub>3</sub> H <sub>7</sub> Br	Propyl Bromide	542
		C <sub>3</sub> H <sub>7</sub> NO	N,N-Dimethylformamide (DMF)	543
		C <sub>3</sub> H <sub>9</sub> BO <sub>3</sub>	Methyl Borate	544
		C <sub>4</sub> H <sub>7</sub> N	Butyronitrile	545–546
		C <sub>4</sub> H <sub>9</sub> Br	Butyl Bromide	547–548
		C <sub>4</sub> H <sub>9</sub> Cl	Sec-Butyl Chloride	549–550
		C <sub>4</sub> H <sub>9</sub> Cl	Tert-Butyl Chloride	551
		C <sub>4</sub> H <sub>9</sub> NO	Methyl Ethyl Ketoxime	552–556
				556*
		C <sub>5</sub> H <sub>5</sub> N	Pyridine	557–563
		C <sub>5</sub> H <sub>9</sub> N	Valeronitrile	564
C <sub>5</sub> H <sub>14</sub> N <sub>2</sub>	N,N,N',N'-Tetramethyldiaminomethane	565–569		
C <sub>6</sub> H <sub>5</sub> Cl	Chlorobenzene	570–573		
		573*		
C <sub>6</sub> H <sub>6</sub>	Benzene	574–591		
		590–591		
C <sub>6</sub> H <sub>7</sub> N	2-Methylpyridine	592		

		C <sub>7</sub> F <sub>16</sub>	Perfluoroheptane	593–595
		C <sub>7</sub> H <sub>8</sub>	Toluene	596–608
				608*
		C <sub>7</sub> H <sub>13</sub> NO	N-Methyl-6-Caprolactam	609
		C <sub>8</sub> H <sub>10</sub>	Ethylbenzene	610–615
				615*
		C <sub>8</sub> H <sub>10</sub>	P-Xylene	616–617
		C <sub>8</sub> H <sub>16</sub>	Cyclooctane	618–619
		C <sub>8</sub> H <sub>18</sub>	Octane	620–625
				625*
		C <sub>10</sub> H <sub>16</sub>	Beta-Pinene	627–628
		C <sub>10</sub> H <sub>16</sub>	2,6,6-Trimethylbicyclo (3.1.1)Hept-2-Ene	626
		C <sub>30</sub> H <sub>62</sub>	Squalane	629
		Cl <sub>2</sub> OS	Thionyl Chloride	524
		Cl <sub>4</sub> Si	Silicon Tetrachloride	525–528
C <sub>7</sub> H <sub>16</sub>	3-Methylhexane	C <sub>3</sub> H <sub>7</sub> NO	N,N-Dimethylformamide (DMF)	630
		C <sub>6</sub> H <sub>6</sub>	Benzene	631
C <sub>8</sub> H <sub>12</sub>	1,5-Cyclooctadiene	C <sub>8</sub> H <sub>16</sub>	Cyclooctane	632
C <sub>8</sub> H <sub>12</sub>	4-Ethenylcyclohexene	C <sub>9</sub> H <sub>12</sub>	4,7,8,9-Tetrahydroindene	633
		C <sub>9</sub> H <sub>12</sub>	5-Vinyl-Bicyclo (2.2.1)Hept-2-Ene	634
		C <sub>10</sub> H <sub>12</sub>	Dicyclopentadiene	635–636
C <sub>8</sub> H <sub>14</sub>	1,7-Octadiene	C <sub>9</sub> H <sub>12</sub>	Isopropylbenzene	637
C <sub>8</sub> H <sub>14</sub>	1-Octyne	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	638–641
		C <sub>8</sub> H <sub>10</sub>	Ethylbenzene	642–645
		C <sub>8</sub> H <sub>14</sub>	3-Octyne	646–649
		C <sub>8</sub> H <sub>16</sub>	1-Octene	650–653

C <sub>8</sub> H <sub>14</sub>	3-Octyne	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	654–657
		C <sub>8</sub> H <sub>16</sub>	1-Octene	658–661
C <sub>8</sub> H <sub>16</sub>	Ethyl Cyclohexane	C <sub>7</sub> H <sub>13</sub> NO	N-Methyl-6-Caprolactam	662
C <sub>8</sub> H <sub>16</sub>	1-Octene	C <sub>3</sub> H <sub>7</sub> NO	N-Methylacetamide	663–664
		C <sub>10</sub> H <sub>16</sub>	2,6,6-Trimethylbicyclo (3.1.1) Hept-2-Ene	665–666
		C <sub>10</sub> H <sub>16</sub>	Beta-Pinene	667–668
C <sub>8</sub> H <sub>16</sub>	2,4,4-Trimethyl-1-Pentene	C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	669–670
		C <sub>4</sub> H <sub>9</sub> Cl	Butyl Chloride	671–672
		C <sub>4</sub> H <sub>9</sub> Cl	Tert-Butyl Chloride	673
		C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	674–675
		C <sub>4</sub> H <sub>9</sub> Cl	Butyl Chloride	676–677
C <sub>8</sub> H <sub>18</sub>	Octane	CCl <sub>4</sub>	Tetrachloromethane	679–680
		C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	1,2-Dichloroethane	681
		C <sub>3</sub> H <sub>5</sub> N	Propionitrile	682
		C <sub>3</sub> H <sub>7</sub> NO	N-Methylacetamide	683–684
		C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> S	Sulfolane	685
		C <sub>5</sub> H <sub>5</sub> N	Pyridine	686–687
		C <sub>6</sub> H <sub>6</sub>	Benzene	688
		C <sub>6</sub> H <sub>7</sub> N	2-Methylpyridine	689–680
		C <sub>6</sub> H <sub>7</sub> N	3-Methylpyridine	691
		C <sub>6</sub> H <sub>7</sub> N	4-Methylpyridine	692
		C <sub>7</sub> H <sub>7</sub> Cl	Benzyl Chloride	693–694
		C <sub>7</sub> H <sub>8</sub>	Toluene	695–698
				698*
		C <sub>7</sub> H <sub>13</sub> NO	N-Methyl-6-Caprolactam	699
		C <sub>8</sub> H <sub>10</sub>	Ethylbenzene	700–701

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		C <sub>8</sub> H <sub>10</sub>	O-Xylene	702
		C <sub>8</sub> H <sub>10</sub>	P-Xylene	703
		C <sub>8</sub> H <sub>18</sub>	2,2,4-Trimethylpentane	704–706
		C <sub>9</sub> H <sub>12</sub>	Propylbenzene	707
		C <sub>12</sub> H <sub>26</sub>	Dodecane	708
		C <sub>16</sub> H <sub>34</sub>	Hexadecane	709
		C <sub>30</sub> H <sub>62</sub>	Squalane	710
		Cl <sub>2</sub> OS	Thionyl Chloride	678
C <sub>8</sub> H <sub>18</sub>	2,2,4-Trimethylpentane	CCl <sub>4</sub>	Tetrachloromethane	712
		C <sub>2</sub> Cl <sub>4</sub>	Tetrachloroethylene	713–714
		C <sub>2</sub> H <sub>2</sub> Cl <sub>4</sub>	1,1,2,2-Tetrachloro Ethane	715
		C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub>	1,1,1-Trichloroethane (R140A)	716
		C <sub>2</sub> H <sub>3</sub> N	Acetonitrile	717–718
		C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	1,2-Dichloroethane	719
		C <sub>4</sub> H <sub>9</sub> Cl	Butyl Chloride	720–722
		C <sub>4</sub> H <sub>9</sub> Cl	Tert-Butyl Chloride	723–724
		C <sub>6</sub> F <sub>6</sub>	Hexafluorobenzene	725–727
		C <sub>6</sub> H <sub>5</sub> Cl	Chlorobenzene	728–729
		C <sub>6</sub> H <sub>6</sub>	Benzene	730
		C <sub>7</sub> H <sub>8</sub>	Toluene	731–741
		C <sub>8</sub> H <sub>10</sub>	Ethylbenzene	742
		C <sub>8</sub> H <sub>10</sub>	O-Xylene	743
		C <sub>8</sub> H <sub>10</sub>	P-Xylene	744
		C <sub>9</sub> H <sub>12</sub>	Propylbenzene	745
		O <sub>2</sub> S	Sulfur Dioxide	711
C <sub>9</sub> H <sub>12</sub>	5-Vinyl-Bicyclo(2.2.1)Hept-2-Ene	C <sub>9</sub> H <sub>12</sub>	5-Ethylidene-2-Norbornene	746

$C_9H_{16}$	3-Nonyne	$C_9H_{20}$	Nonane	747
$C_9H_{18}$	1-Nonene	$C_6H_5NO_2$	Nitrobenzene	748–751
				751*
$C_9H_{20}$	Nonane	$CCl_4$	Tetrachloromethane	752
		$C_3H_6BR_2$	1,3-Dibromopropane	753
		$C_5H_5N$	Pyridine	754–755
		$C_6H_7N$	2-Methylpyridine	756–757
		$C_6H_7N$	3-Methylpyridine	758
		$C_6H_7N$	4-Methylpyridine	759
		$C_6H_{13}Cl$	1-Chlorohexane	760
		$C_7H_{13}NO$	N-Methyl-6-Caprolactam	761
		$C_8H_{10}$	Ethylbenzene	762–765
				765*
		$C_8H_{10}$	O-Xylene	766
		$C_9H_{12}$	Propylbenzene	767–768
$C_{10}H_{16}$	2,6,6-Trimethylbicyclo(3.1.1)Hept-2-Ene	$C_{10}H_{14}$	P-Methyl Cumene	769
		$C_{10}H_{16}$	Delta-3-Carene	770–771
		$C_{10}H_{16}$	Limonene	772–774
		$C_{10}H_{16}$	Beta-Pinene	775–780
		$C_{10}H_{16}$	(S)-4-Isopropenyl-1-Methylcyclohexene	781–786
$C_{10}H_{16}$	Beta-Pinene	$C_{10}H_{14}$	P-Methyl Cumene	787
		$C_{10}H_{16}$	Limonene	788
		$C_{10}H_{16}$	(S)-4-Isopropenyl-1-Methylcyclohexene	789–791
$C_{10}H_{18}$	Cis-Decahydro Naphthalene	$C_{10}H_8$	Naphthalene	792–793
		$C_{12}H_{10}$	Acenaphthylene-1,2-Dihydro	794–795
		$C_{12}H_{10}$	Biphenyl	796–797

		$C_{14}H_{10}$	Phenanthrene	798–799
$C_{10}H_{18}$	Trans-Decahydronaphthalene	$C_7H_{13}NO$	N-Methyl-6-Caprolactam	800
		$C_9H_7N$	Quinoline	801
		$C_9H_{12}$	1,2,3-Trimethylbenzene	802–806
				806*
$C_{11}H_{24}$	Undecane	$C_7H_9N$	2,4-Dimethylpyridine	807
$C_{12}H_{16}$	Phenyl Cyclohexane	$C_2H_3N$	Acetonitrile	808
$C_{12}H_{26}$	Dodecane	$C_6H_6$	Benzene	809–810
		$C_7H_9N$	N-Methylaniline	811
		$C_8H_{11}N$	N,N-Dimethylaniline	812
		$C_{16}H_{32}$	1-Hexadecene	813
$C_{14}H_{30}$	Tetradecane	$C_6F_6$	Hexafluorobenzene	814–815
		$C_6H_6$	Benzene	816–829
		$C_7H_{13}NO$	N-Methyl-6-Caprolactam	830
$C_{15}H_{32}$	Pentadecane	$C_6H_6$	Benzene	831
$C_{16}H_{34}$	Hexadecane	$C_2H_4Cl_2$	1,2-Dichloroethane	832–833
		$C_3H_6Cl_2$	1,3-Dichloropropane	834
		$C_6F_6$	Hexafluorobenzene	835–836
		$C_6H_6$	Benzene	837–838
$C_{30}H_{62}$	Squalane	$C_6H_6$	Benzene	839–848





\* Recommended values

1,3-Butadiene	C <sub>4</sub> H <sub>6</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	4
		Butane	C <sub>4</sub> H <sub>10</sub>	11–13
		Cis-2-Butene	C <sub>4</sub> H <sub>8</sub>	7–8
		Trans-2-Butene	C <sub>4</sub> H <sub>8</sub>	9
		N, N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	5
		Cis-2-Butene	C <sub>4</sub> H <sub>8</sub>	6
		Trans-2-Butene	C <sub>4</sub> H <sub>8</sub>	10
Butane	C <sub>4</sub> H <sub>10</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	40
		Benzene	C <sub>6</sub> H <sub>6</sub>	42
		Methylamine	CH <sub>5</sub> N	37–38
		2-Methylpropane	C <sub>4</sub> H <sub>10</sub>	41
		Vinyl Chloride	C <sub>2</sub> H <sub>3</sub> Cl	39
Cis-2-Butene	C <sub>4</sub> H <sub>8</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	26
		Butane	C <sub>4</sub> H <sub>10</sub>	30–32
		Trans-2-Butene	C <sub>4</sub> H <sub>8</sub>	27–29
Trans-2-Butene	C <sub>4</sub> H <sub>8</sub>	Butane	C <sub>4</sub> H <sub>10</sub>	33–35
1-Butene	C <sub>4</sub> H <sub>8</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	25
1-Butyne	C <sub>4</sub> H <sub>6</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	14–15
2-Butyne	C <sub>4</sub> H <sub>6</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	16–19
		Isoprene	C <sub>5</sub> H <sub>8</sub>	20–23
		2-Methylbutane	C <sub>5</sub> H <sub>12</sub>	24
1,4-Cyclohexadiene	C <sub>6</sub> H <sub>8</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	159–160
		Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	161–162
Cyclohexane	C <sub>6</sub> H <sub>12</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	201–202
		Acrylonitrile	C <sub>3</sub> H <sub>3</sub> N	214

Aniline	$C_6H_7N$	276
Benzene	$C_6H_6$	250–275 273–275*
Bromochloromethane (R30B1)	$CH_2BrCl$	198–200 200*
Butyl Chloride	$C_4H_9Cl$	224–226
Sec-Butyl Chloride	$C_4H_9Cl$	227
Butylamine	$C_4H_{11}N$	231–232
Chlorocyclohexane	$C_6H_{11}Cl$	277–278
1,2-Dibromoethane	$C_2H_4Br_2$	203–206 206*
1,2-Dichloropropane	$C_3H_6Cl_2$	216–217
Diethylamine	$C_4H_{11}N$	233–235
N,N-Dimethylformamide (DMF)	$C_3H_7NO$	220–222 222*
2,2-Dimethylpentane	$C_7H_{16}$	308–309
2,4-Dimethylpentane	$C_7H_{16}$	310
Heptane	$C_7H_{16}$	311–315 315*
Hexadecane	$C_{16}H_{34}$	325
Hexane	$C_6H_{14}$	280–289 289*
Methyl Borate	$C_3H_9BO_3$	223
N-Methyl-6-Caprolactam	$C_7H_{13}NO$	304–305
Methylcyclohexane	$C_7H_{14}$	306–307
N-Methylpiperidine	$C_6H_{13}N$	279

Nitroethane	$C_2H_5NO_2$	207–213
P-Nitrotoluene	$C_7H_7NO_2$	290
Octane	$C_8H_{18}$	316
Perfluorocyclohexane	$C_6F_{12}$	249
Beta-Pinene	$C_{10}H_{16}$	323
Propionitrile	$C_3H_5N$	215
Propyl Bromide	$C_3H_7Br$	218–219
Propylbenzene	$C_9H_{12}$	317–321
Pyridine	$C_5H_5N$	236–242
Pyrrolidine	$C_4H_9N$	228–230
		230*
Squalane	$C_{30}H_{62}$	326
Tetrachloromethane	$CCl_4$	196–197
Tetradecane	$C_{14}H_{30}$	324
1,2,3,4-Tetrahydronaphthalene	$C_{10}H_{12}$	322
N,N,N',N'-Tetramethyldiaminomethane	$C_5H_{14}N_2$	245–248
Thionyl Chloride	$Cl_2OS$	195
Toluene	$C_7H_8$	291–303
		303*
Valeronitrile	$C_5H_9N$	243
N,N,N',N'-Tetramethyldiaminomethane	$C_5H_{14}N_2$	244
Acetonitrile	$C_2H_3N$	163–164
Benzene	$C_6H_6$	176–178
		178*
Butyl Chloride	$C_4H_9Cl$	168–169
1,2-Dichloroethane	$C_2H_4Cl_2$	165–167

				167*
		1,4-Difluorobenzene	$C_6H_4F_2$	170–172
				172*
		Fluorobenzene	$C_6H_5F$	173–175
				175*
		1',1',1'-Trifluorotoluene	$C_7H_5F_3$	179–180
		2,6,6-Trimethylbicyclo(3.1.1)Hept-2-Ene	$C_{10}H_{16}$	185–186
		M-Xylene	$C_8H_{10}$	181–182
		P-Xylene	$C_8H_{10}$	183–184
1,5-Cyclooctadiene	$C_8H_{12}$	Cyclooctane	$C_8H_{16}$	632
Cyclopentadiene	$C_5H_6$	Benzene	$C_6H_6$	48
		Cyclopentane	$C_5H_{10}$	46
		Cyclopentene	$C_5H_8$	43
		Hexane	$C_6H_{14}$	49
		Isoprene	$C_5H_8$	44–45
		2-Methyl-2-Butene	$C_5H_{10}$	47
Cyclopentane	$C_5H_{10}$	Cycloheptane	$C_7H_{14}$	103
		Cyclohexene	$C_6H_{10}$	102
		1,2-Dichloroethane	$C_2H_4Cl_2$	100
		Piperidine	$C_5H_{11}N$	101
		Trans-1,2-Dichloroethylene	$C_2H_2Cl_2$	99
Cyclopentene	$C_5H_8$	Cyclopentane	$C_5H_{10}$	50
Cis-Decahydro Naphthalene	$C_{10}H_{18}$	Acenaphthylene-1,2-Dihydro	$C_{12}H_{10}$	794–795
		Biphenyl	$C_{12}H_{10}$	796–797
		Naphthalene	$C_{10}H_8$	792–793
		Phenanthrene	$C_{14}H_{10}$	798–799

Trans-Decahydronaphthalene	C <sub>10</sub> H <sub>18</sub>	N-Methyl-6-Caprolactam	C <sub>7</sub> H <sub>13</sub> NO	800
		Quinoline	C <sub>9</sub> H <sub>7</sub> N	801
		1,2,3-Trimethylbenzene	C <sub>9</sub> H <sub>12</sub>	802–806
				806*
1,1-Dimethylcyclopentane	C <sub>7</sub> H <sub>14</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	494
		N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	493
2,3-Dimethylpentane	C <sub>7</sub> H <sub>16</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	523
		N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	522
Dodecane	C <sub>12</sub> H <sub>26</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	809–810
		N,N-Dimethylaniline	C <sub>8</sub> H <sub>11</sub> N	812
		1-Hexadecene	C <sub>16</sub> H <sub>32</sub>	813
		N-Methylaniline	C <sub>7</sub> H <sub>9</sub> N	811
4-Ethenylcyclohexene	C <sub>8</sub> H <sub>12</sub>	Dicyclopentadiene	C <sub>10</sub> H <sub>12</sub>	635–636
		4,7,8,9-Tetrahydroindene	C <sub>9</sub> H <sub>12</sub>	633
		5-Vinyl-Bicyclo (2.2.1)Hept-2-Ene	C <sub>9</sub> H <sub>12</sub>	634
Ethyl Cyclohexane	C <sub>8</sub> H <sub>16</sub>	N-Methyl-6-Caprolactam	C <sub>7</sub> H <sub>13</sub> NO	662
1-Ethyl Cyclopentene	C <sub>7</sub> H <sub>12</sub>	Dimethyl Sulfoxide	C <sub>2</sub> H <sub>6</sub> OS	482–484
		Heptane	C <sub>7</sub> H <sub>16</sub>	489–492
		Toluene	C <sub>7</sub> H <sub>8</sub>	485–488
Heptane	C <sub>7</sub> H <sub>16</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	574–591
				590–591*
		Bromochloromethane (R30B1)	CH <sub>2</sub> BrCl	531–533
				533*
		Butyl Bromide	C <sub>4</sub> H <sub>9</sub> Br	547–548
		Sec-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	549–550
		Tert-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	551

Butyronitrile	C <sub>4</sub> H <sub>7</sub> N	545–546
Chlorobenzene	C <sub>6</sub> H <sub>5</sub> Cl	570–573
		573*
Cyclooctane	C <sub>8</sub> H <sub>16</sub>	618–619
1,2-Dichloroethane	C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	535–537
		537*
Dimethyldichlorosilane	C <sub>2</sub> H <sub>6</sub> Cl <sub>2</sub> Si	538
N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	543
Ethylbenzene	C <sub>8</sub> H <sub>10</sub>	610–615
		615*
Methyl Borate	C <sub>3</sub> H <sub>9</sub> BO <sub>3</sub>	544
Methyl Ethyl Ketoxime	C <sub>4</sub> H <sub>9</sub> NO	552–556
		556*
N-Methyl-6-Caprolactam	C <sub>7</sub> H <sub>13</sub> NO	609
2-Methylpyridine	C <sub>6</sub> H <sub>7</sub> N	592
Octane	C <sub>8</sub> H <sub>18</sub>	620–625
		625*
Perfluoroheptane	C <sub>7</sub> F <sub>16</sub>	593–595
Beta-Pinene	C <sub>10</sub> H <sub>16</sub>	627–628
Propionitrile	C <sub>3</sub> H <sub>5</sub> N	539–541
Propyl Bromide	C <sub>3</sub> H <sub>7</sub> Br	542
Pyridine	C <sub>5</sub> H <sub>5</sub> N	557–563
Silicon Tetrachloride	Cl <sub>4</sub> Si	525–528
Squalane	C <sub>30</sub> H <sub>62</sub>	629
Tetrachloroethylene	C <sub>2</sub> Cl <sub>4</sub>	534
Tetrachloromethane	CCl <sub>4</sub>	529–530

		N,N,N',N'-Tetramethyldiaminomethane	$C_5H_{14}N_2$	565–569
		Thionyl Chloride	$Cl_2OS$	524
		Toluene	$C_7H_8$	596–608
				607–608*
		2,6,6-Trimethylbicyclo (3.1.1)Hept-2-Ene	$C_{10}H_{16}$	626
		Valeronitrile	$C_5H_9N$	564
		P-Xylene	$C_8H_{10}$	616–617
Hexadecane	$C_{16}H_{34}$	Benzene	$C_6H_6$	837–838
		1,2-Dichloroethane	$C_2H_4Cl_2$	832
		1,2-Dichloropropane	$C_3H_6Cl_2$	833–834
		Hexafluorobenzene	$C_6F_6$	835–836
Hexane	$C_6H_{14}$	Acrylonitrile	$C_3H_3N$	381
		Aniline	$C_6H_7N$	440
		Benzene	$C_6H_6$	434–439
				438–439*
		1-Bromo-1-Chloro-2,2,2-Trifluoroethane	$C_2HBrClF_3$	372
		Butyl Bromide	$C_4H_9Br$	414–416
				416*
		Butylamine	$C_4H_{11}N$	417
		Chlorobenzene	$C_6H_5Cl$	433
		Chloroform	$CHCl_3$	346
		O-Chlorotoluene	$C_7H_7Cl$	445
		P-Chlorotoluene	$C_7H_7Cl$	446
		1,4-Dichlorobutane	$C_4H_8Cl_2$	413
		1,2-Dichloroethane	$C_2H_4Cl_2$	377–380
				380*



Dichloromethane	$\text{CH}_2\text{Cl}_2$	355–357
1,2-Dichloropropane	$\text{C}_3\text{H}_6\text{Cl}_2$	383–385
N-Dideuterioisopropylamine	$\text{C}_3\text{H}_7\text{D}_2\text{N}$	386–391
N-Dideuteropropylamine	$\text{C}_3\text{H}_7\text{D}_2\text{N}$	393–398
Diethylamine	$\text{C}_4\text{H}_{11}\text{N}$	418–422
N,N-Dimethylformamide (DMF)	$\text{C}_3\text{H}_7\text{NO}$	392
Ethylbenzene	$\text{C}_8\text{H}_{10}$	461–462
Heptane	$\text{C}_7\text{H}_{16}$	454–460
Hexadecane	$\text{C}_{16}\text{H}_{34}$	466
Hexadecane	$\text{C}_{16}\text{H}_{34}$	467–468
Isopropylamine	$\text{C}_3\text{H}_9\text{N}$	399–404
Methanedeuteriothiol	$\text{CH}_3\text{DS}$	358–365
Methanethiol	$\text{CH}_4\text{S}$	366
Methyl Diethyl Amine	$\text{C}_5\text{H}_{13}\text{N}$	429–431
N-Methyl-6-Caprolactam	$\text{C}_7\text{H}_{13}\text{NO}$	453
2-Methylpyridine	$\text{C}_6\text{H}_7\text{N}$	441–442
Octane	$\text{C}_8\text{H}_{18}$	464
Perfluoromethylcyclohexane	$\text{C}_7\text{F}_{14}$	443–444
Propionitrile	$\text{C}_3\text{H}_5\text{N}$	382
Propylamine	$\text{C}_3\text{H}_9\text{N}$	405–410
Pyridine	$\text{C}_5\text{H}_5\text{N}$	423–428
Squalane	$\text{C}_{30}\text{H}_{62}$	469
1,1,2,2-Tetrachloro Ethane	$\text{C}_2\text{H}_2\text{Cl}_4$	373–374
Tetrachloromethane	$\text{CCl}_4$	337
Tetradeteromethanethiol	$\text{CD}_4\text{S}$	338345
1,2,3,4-Tetrahydronaphthalene	$\text{C}_{10}\text{H}_{12}$	465

		Toluene	$C_7H_8$	447–452
				452*
		1,2,4-Trichlorobenzene	$C_6H_3Cl_3$	432
		1,1,2-Trichloro-1,2,2-Trifluoroethane (R113)	$C_2Cl_3F_3$	367–371
		Trideuteromethanethiol	$CHD_3S$	347–354
		Trimethylamine	$C_3H_9N$	411–412
		Vinyl Chloride	$C_2H_3Cl$	375–376
		P-Xylene	$C_8H_{10}$	463
1-Hexene	$C_6H_{12}$	Benzene	$C_6H_6$	328–329
		Dichloromethane	$CH_2Cl_2$	327
		Heptane	$C_7H_{16}$	336
		Hexane	$C_6H_{14}$	330
		Perfluoromethylcyclohexane	$C_7F_{14}$	331–335
				335*
		Heptane	$C_7H_{16}$	187
		Octane	$C_8H_{18}$	188–192
Isobutylene	$C_4H_8$	N,N-Dimethylformamide (DMF)	$C_3H_7NO$	36
Isoprene	$C_5H_8$	Acetonitrile	$C_2H_3N$	51–53
		Dicyclopentadiene	$C_{10}H_{12}$	83–84
		Hexane	$C_6H_{14}$	80–81
		2-Methyl-1-Butene	$C_5H_{10}$	60–65
				65*
		2-Methyl-2-Butene	$C_5H_{10}$	66–73
				73*
		3-Methyl-1-Butyne	$C_5H_8$	54–57
		Methylene Cyclobutane	$C_5H_8$	58–59

		Pentane	$C_5H_{12}$	74–79
		Toluene	$C_7H_8$	82
3-Methyl Cyclopentene	$C_6H_{10}$	1-Hexene	$C_6H_{12}$	193–194
2-Methylbutane	$C_5H_{12}$	Dimethyl Sulfide	$C_6H_6S$	110–112
		Ethanethiol	$C_6H_6S$	113–114
		Pentane	$C_5H_{12}$	115–118
				118*
		1-Pentene	$C_5H_{10}$	109
2-Methyl-1-Butene	$C_5H_{10}$	Hexane	$C_6H_{14}$	105
		2-Methyl-2-Butene	$C_5H_{10}$	104
		Toluene	$C_7H_8$	106
2-Methyl-2-Butene	$C_5H_{10}$	Hexane	$C_6H_{14}$	107
		Toluene	$C_7H_8$	108
3-Methyl-1-Butyne	$C_5H_8$	Acetonitrile	$C_2H_3N$	85–87
		2-Methylbutane	$C_5H_{12}$	89–91
		2-Methyl-1-Butene	$C_5H_{10}$	88
Methylcyclohexane	$C_7H_{14}$	Aniline	$C_6H_7N$	514
		Benzene	$C_6H_6$	512–513
		Butyl Chloride	$C_4H_9Cl$	502
		Sec-Butyl Chloride	$C_4H_9Cl$	503–505
				505*
		Tert-Butyl Chloride	$C_4H_9Cl$	506
		Chlorobenzene	$C_6H_5Cl$	507
		1,2-Dichloroethane	$C_2H_4Cl_2$	497
		N,N-Dimethylformamide (DMF)	$C_3H_7NO$	498
		Ethylbenzene	$C_8H_{10}$	521

		Fluorobenzene	$C_6H_5F$	508–511
				511*
		Heptane	$C_7H_{16}$	519–520
		N-Methyl-6-Caprolactam	$C_7H_{13}NO$	518
		1-Propanethiol	$C_3H_8S$	499–501
		1,1,2,2-Tetrachloro Ethane	$C_2H_2Cl_4$	496
		Thionyl Chloride	$Cl_2OS$	495
		Toluene	$C_7H_8$	515–517
				517*
Methylene Cyclobutane	$C_5H_8$	1-Hexene	$C_6H_{12}$	95
		2-Methyl-2-Butyne	$C_5H_{10}$	92–93
		Pentane	$C_5H_{12}$	94
3-Methylhexane	$C_7H_{16}$	Benzene	$C_6H_6$	631
		N,N-Dimethylformamide (DMF)	$C_3H_7NO$	630
2-Methylpentane	$C_6H_{14}$	Heptane	$C_7H_{16}$	470–472
				472*
		Octane	$C_8H_{18}$	473–474
3-Methylpentane	$C_6H_{14}$	Heptane	$C_7H_{16}$	475–479
				479*
		Octane	$C_8H_{18}$	480–481
Neopentane	$C_5H_{12}$	Neopentyl Bromide	$C_5H_{11}Br$	120–123
Nonane	$C_9H_{20}$	1-Chlorohexane	$C_6H_{13}Cl$	760
		1,3-Dibromopropane	$C_3H_6Br_2$	753
		Ethylbenzene	$C_8H_{10}$	762–765
				765*
		N-Methyl-6-Caprolactam	$C_7H_{13}NO$	761

		2-Methylpyridine	$C_6H_7N$	756–757
		3-Methylpyridine	$C_6H_7N$	758
		4-Methylpyridine	$C_6H_7N$	759
		Propylbenzene	$C_9H_{12}$	767–768
		Pyridine	$C_5H_5N$	754–755
		Tetrachloromethane	$CCl_4$	752
		O-Xylene	$C_8H_{10}$	766
1-Nonene	$C_9H_{18}$	Nitrobenzene	$C_6H_5NO_2$	748–751
				751*
3-Nonyne	$C_9H_{16}$	Nonane	$C_9H_{20}$	747
1,7-Octadiene	$C_8H_{14}$	Isopropylbenzene	$C_9H_{12}$	637
Octane	$C_8H_{18}$	Benzene	$C_6H_6$	688
		Benzyl Chloride	$C_7H_7Cl$	693–694
		1,2-Dichloroethane	$C_2H_4Cl_2$	681
		Dodecane	$C_{12}H_{26}$	708
		Ethylbenzene	$C_8H_{10}$	700–701
		Hexadecane	$C_{16}H_{34}$	709
		N-Methylacetamide	$C_3H_7NO$	683–684
		N-Methyl-6-Caprolactam	$C_7H_{13}NO$	699
		2-Methylpyridine	$C_6H_7N$	689–690
		3-Methylpyridine	$C_6H_7N$	691
		4-Methylpyridine	$C_6H_7N$	692
		Propionitrile	$C_3H_5N$	682
		Propylbenzene	$C_9H_{12}$	707
		Pyridine	$C_5H_5N$	686–687
		Squalane	$C_{30}H_{62}$	710

		Sulfolane	$C_4H_8O_2S$	685
		Tetrachloromethane	$CCl_4$	679–680
		Thionyl Chloride	$Cl_2OS$	678
		Toluene	$C_7H_8$	695–698
				698*
		2,2,4-Trimethylpentane	$C_8H_{18}$	704–706
		O-Xylene	$C_8H_{10}$	702
		P-Xylene	$C_8H_{10}$	703
1-Octene	$C_8H_{16}$	N-Methylacetamide	$C_3H_7NO$	663–664
		3-Octyne	$C_8H_{14}$	660
		Beta-Pinene	$C_{10}H_{16}$	667–668
		2,6,6-Trimethylbicyclo (3.1.1) Hept-2-Ene	$C_{10}H_{16}$	665–666
1-Octyne	$C_8H_{14}$	Acetonitrile	$C_2H_3N$	638–641
		Ethylbenzene	$C_8H_{10}$	642–645
		1-Octene	$C_8H_{16}$	650–653
		3-Octyne	$C_8H_{14}$	646–649
3-Octyne	$C_8H_{14}$	Acetonitrile	$C_2H_3N$	654–657
		1-Octene	$C_8H_{16}$	658–661
Pentadecane	$C_{15}H_{32}$	Benzene	$C_6H_6$	831
		Benzene	$C_6H_6$	144–149
		3-Bromopentane	$C_5H_{11}Br$	136–143
		Butyl Chloride	$C_4H_9Cl$	133
		Dichloromethane	$CH_2Cl_2$	124–126
		Dicyclopentadiene	$C_{10}H_{12}$	156–157
		Dimethyl Sulfide	$C_2H_6S$	127–129
		Ethanethiol	$C_2H_6S$	130–131

		Hexane	$C_6H_{14}$	150–153
				153*
		Octane	$C_8H_{18}$	154–155
		Perfluoropentane	$C_5F_{12}$	134–135
		Propionitrile	$C_3H_5N$	132
		Squalane	$C_{30}H_{62}$	158
2-Pentyne	$C_5H_8$	2-Methylbutane	$C_5H_{12}$	98
		2-Methyl-2-Butene	$C_5H_{10}$	97
1-Pentyne	$C_5H_8$	2-Pentyne	$C_5H_8$	96
Phenyl Cyclohexane	$C_{12}H_{16}$	Acetonitrile	$C_2H_3N$	808
Beta-Pinene	$C_{10}H_{16}$	(S)-4-Isopropenyl-1-Methylcyclohexene	$C_{10}H_{16}$	789–791
		Limonene	$C_{10}H_{16}$	788
		P-Methyl Cumene	$C_{10}H_{14}$	787
Squalane	$C_{30}H_{62}$	Benzene	$C_6H_6$	839–848
Tetradecane	$C_{14}H_{30}$	Benzene	$C_6H_6$	816–829
		Hexafluorobenzene	$C_6F_6$	814–815
		N-Methyl-6-Caprolactam	$C_7H_{13}NO$	830
2,6,6-Trimethylbicyclo(3.1.1)Hept-2-Ene	$C_{10}H_{16}$	Delta-3-Carene	$C_{10}H_{16}$	770–771
		(S)-4-Isopropenyl-1-Methylcyclohexene	$C_{10}H_{16}$	781–786
		Limonene	$C_{10}H_{16}$	772–774
		P-Methyl Cumene	$C_{10}H_{14}$	769
		Beta-Pinene	$C_{10}H_{16}$	775–780
2,2,4-Trimethylpentane	$C_8H_{18}$	Acetonitrile	$C_2H_3N$	717–718
		Benzene	$C_6H_6$	730
		Butyl Chloride	$C_4H_9Cl$	720–722
		Chlorobenzene	$C_6H_5Cl$	728–729

		1,2-Dichloroethane	$C_2H_4Cl_2$	719
		Ethylbenzene	$C_8H_{10}$	742
		Hexafluorobenzene	$C_6F_6$	725–727
		Propylbenzene	$C_9H_{12}$	745
		Sulfur Dioxide	$O_2S$	711
		Tert-Butyl Chloride	$C_4H_9Cl$	723–724
		1,1,2,2-Tetrachloro Ethane	$C_2H_2Cl_4$	715
		Tetrachloroethylene	$C_2Cl_4$	713
		Tetrachloromethane	$CCl_4$	712
		Toluene	$C_7H_8$	731–741
		1,1,1-Trichloroethane (R140A)	$C_2H_3Cl_3$	716
		Trichloroethylene	$C_2HCl_3$	714
		O-Xylene	$C_8H_{10}$	743
		P-Xylene	$C_8H_{10}$	744
2,4,4-Trimethyl-1-Pentene	$C_8H_{16}$	Acetonitrile	$C_2H_3N$	669–670
		Tert-Butyl Chloride	$C_4H_9Cl$	673
		Butyl Chloride	$C_4H_9Cl$	671–672
2,4,4-Trimethyl-2-Pentene	$C_8H_{16}$	Acetonitrile	$C_2H_3N$	674–675
		Butyl Chloride	$C_4H_9Cl$	676–677
Undecane	$C_{11}H_{24}$	2,4-Dimethylpyridine	$C_7H_9N$	807
Vinylacetylene	$C_4H_4$	Acetonitrile	$C_2H_3N$	1–3
5-Vinyl-Bicyclo(2.2.1)Hept-2-Ene	$C_9H_{12}$	5-Ethylidene-2-Norbornene<Isomer not Spe.>	$C_9H_{12}$	746





Butane	C <sub>4</sub> H <sub>10</sub>	1-Butene	C <sub>4</sub> H <sub>8</sub>	1,3-Butadiene	C <sub>4</sub> H <sub>6</sub>	849–850
Isoprene	C <sub>5</sub> H <sub>8</sub>	Nitromethane	CH <sub>3</sub> NO <sub>2</sub>	2-Methyl-2-Butene	C <sub>5</sub> H <sub>10</sub>	856
		N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Dicyclopentadiene	C <sub>10</sub> H <sub>12</sub>	860
		2-Butyne	C <sub>4</sub> H <sub>6</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	851–853
		Cyclopentadiene	C <sub>5</sub> H <sub>6</sub>	Dicyclopentadiene	C <sub>10</sub> H <sub>12</sub>	855
		3-Methyl-1-Butyne	C <sub>5</sub> H <sub>8</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	857–859
		3-Methyl-1-Butyne	C <sub>5</sub> H <sub>8</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	859
		2-Methyl-2-Butene	C <sub>5</sub> H <sub>10</sub>	Cyclopentadiene	C <sub>5</sub> H <sub>6</sub>	854
		2-Methyl-2-Butene	C <sub>5</sub> H <sub>10</sub>	1-Pentyne	C <sub>5</sub> H <sub>8</sub>	861
2-Methyl-1-Butene	C <sub>5</sub> H <sub>10</sub>	Hexane	C <sub>6</sub> H <sub>14</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	862–863
2-Methylbutane	C <sub>5</sub> H <sub>12</sub>	Ethanethiol	C <sub>2</sub> H <sub>6</sub> S	Dimethyl Sulfide	C <sub>2</sub> H <sub>6</sub> S	864
		Ethanethiol	C <sub>2</sub> H <sub>6</sub> S	Pentane	C <sub>5</sub> H <sub>12</sub>	866
		Pentane	C <sub>5</sub> H <sub>12</sub>	Dimethyl Sulfide	C <sub>2</sub> H <sub>6</sub> S	865
		Hexane	C <sub>6</sub> H <sub>14</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	867
Pentane	C <sub>5</sub> H <sub>12</sub>	Ethanethiol	C <sub>2</sub> H <sub>6</sub> S	Dimethyl Sulfide	C <sub>2</sub> H <sub>6</sub> S	868
Cyclohexane	C <sub>6</sub> H <sub>12</sub>	Sec-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	876–878
		Pyridine	C <sub>5</sub> H <sub>5</sub> N	Benzene	C <sub>6</sub> H <sub>6</sub>	879–880
		Hexane	C <sub>6</sub> H <sub>14</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	881–882
		Hexane	C <sub>6</sub> H <sub>14</sub>	Heptane	C <sub>7</sub> H <sub>16</sub>	884
		Hexane	C <sub>6</sub> H <sub>14</sub>	1,2,3,4-Tetrahydronaphthalene	C <sub>10</sub> H <sub>12</sub>	885
		Benzene	C <sub>6</sub> H <sub>6</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	872
		Benzene	C <sub>6</sub> H <sub>6</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	883
		Tetrachloromethane	CCL <sub>4</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	869
Hexane	C <sub>6</sub> H <sub>14</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	886
		Benzene	C <sub>6</sub> H <sub>6</sub>	Aniline	C <sub>6</sub> H <sub>7</sub> N	887
		Octane	C <sub>8</sub> H <sub>18</sub>	Hexadecane	C <sub>16</sub> H <sub>34</sub>	888–889

1,1-Dimethylcyclopentane	C <sub>7</sub> H <sub>14</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	890
Methylcyclohexane	C <sub>7</sub> H <sub>14</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	893
		Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Toluene	C <sub>7</sub> H <sub>8</sub>	894
		Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Heptane	C <sub>7</sub> H <sub>16</sub>	895
		Sec-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Toluene	C <sub>7</sub> H <sub>8</sub>	896
		Sec-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Heptane	C <sub>7</sub> H <sub>16</sub>	897
		Tert-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Toluene	C <sub>7</sub> H <sub>8</sub>	898
		Tert-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Heptane	C <sub>7</sub> H <sub>16</sub>	899
1-Heptene	C <sub>7</sub> H <sub>14</sub>	Heptane	C <sub>7</sub> H <sub>16</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	900–901
		Benzene	C <sub>6</sub> H <sub>6</sub>	Heptane	C <sub>7</sub> H <sub>16</sub>	891
2,3-Dimethylpentane	C <sub>7</sub> H <sub>16</sub>	Heptane	C <sub>7</sub> H <sub>16</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	892
		N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	902
Heptane	C <sub>7</sub> H <sub>16</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	903–904
3-Methylhexane	C <sub>7</sub> H <sub>16</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	911
Heptane	C <sub>7</sub> H <sub>16</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	905–906
		2-Methylhexane	C <sub>7</sub> H <sub>16</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	907–909
		Toluene	C <sub>7</sub> H <sub>8</sub>	P-Xylene	C <sub>8</sub> H <sub>10</sub>	910
2,2,4-Trimethylpentane	C <sub>8</sub> H <sub>18</sub>	Hexafluorobenzene	C <sub>6</sub> F <sub>6</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	916–917
Octane	C <sub>8</sub> H <sub>18</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	913
		Benzene	C <sub>6</sub> H <sub>6</sub>	P-Xylene	C <sub>8</sub> H <sub>10</sub>	914–915
		P-Xylene	C <sub>8</sub> H <sub>10</sub>	Sulfolane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> S	912
Nonane	C <sub>9</sub> H <sub>20</sub>	1-Chlorohexane	C <sub>6</sub> H <sub>13</sub> Cl	Ethylbenzene	C <sub>8</sub> H <sub>10</sub>	921
		Ethylbenzene	C <sub>8</sub> H <sub>10</sub>	Sulfolane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> S	918
		P-Xylene	C <sub>8</sub> H <sub>10</sub>	Sulfolane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> S	919
		O-Xylene	C <sub>8</sub> H <sub>10</sub>	Sulfolane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> S	920
(S)-4-Isopropenyl-1-Methylcyclohexene	C <sub>10</sub> H <sub>16</sub>	2,6,6-Trimethylbicyclo(3.1.1)Hept-2-Ene	C <sub>10</sub> H <sub>16</sub>	Beta-Pinene	C <sub>10</sub> H <sub>16</sub>	922–927

Cis-Decahydro Naphthalene	C <sub>10</sub> H <sub>18</sub>	1,2,3,4-Tetrahydronaphthalene	C <sub>10</sub> H <sub>12</sub>	Naphthalene	C <sub>10</sub> H <sub>8</sub>	928
		1,2,3,4-Tetrahydronaphthalene	C <sub>10</sub> H <sub>12</sub>	Biphenyl	C <sub>12</sub> H <sub>10</sub>	929
		1,2,3,4-Tetrahydronaphthalene	C <sub>10</sub> H <sub>12</sub>	Phenanthrene	C <sub>14</sub> H <sub>10</sub>	930
Tetradecane	C <sub>14</sub> H <sub>30</sub>	Hexafluorobenzene	C <sub>6</sub> F <sub>6</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	931–932
Hexadecane	C <sub>16</sub> H <sub>34</sub>	Hexafluorobenzene	C <sub>6</sub> F <sub>6</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	933–934



Butane	C <sub>4</sub> H <sub>10</sub>	1-Butene	C <sub>4</sub> H <sub>8</sub>	1,3-Butadiene	C <sub>4</sub> H <sub>6</sub>	849–850
Cyclohexane	C <sub>6</sub> H <sub>12</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	872
		Benzene	C <sub>6</sub> H <sub>6</sub>	Hexane	C <sub>6</sub> H <sub>14</sub>	881–882
		Benzene	C <sub>6</sub> H <sub>6</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	883
		Sec-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	876–878
		Hexane	C <sub>6</sub> H <sub>14</sub>	Heptane	C <sub>7</sub> H <sub>16</sub>	884
		Hexane	C <sub>6</sub> H <sub>14</sub>	1,2,3,4-Tetrahydronaphthalene	C <sub>10</sub> H <sub>12</sub>	885
		Propyl Bromide	C <sub>3</sub> H <sub>7</sub> Br	Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	870–871
		Pyridine	C <sub>5</sub> H <sub>5</sub> N	Benzene	C <sub>6</sub> H <sub>6</sub>	879–880
		Pyrrole	C <sub>4</sub> H <sub>5</sub> N	Benzene	C <sub>6</sub> H <sub>6</sub>	875
		Tetrachloromethane	CCL <sub>4</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	869
		Thiophene	C <sub>4</sub> H <sub>4</sub> S	Benzene	C <sub>6</sub> H <sub>6</sub>	873–874
1,1-Dimethylcyclopentane	C <sub>7</sub> H <sub>14</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	890
2,3-Dimethylpentane	C <sub>7</sub> H <sub>16</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	902
Heptane	C <sub>7</sub> H <sub>16</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	905–906
		Benzene	C <sub>6</sub> H <sub>6</sub>	1-Heptene	C <sub>7</sub> H <sub>14</sub>	891
		N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	903–904
Heptane	C <sub>7</sub> H <sub>16</sub>	1-Heptene	C <sub>7</sub> H <sub>14</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	892
		Toluene	C <sub>7</sub> H <sub>8</sub>	P-Xylene	C <sub>8</sub> H <sub>10</sub>	910
Hexadecane	C <sub>16</sub> H <sub>34</sub>	Hexafluorobenzene	C <sub>6</sub> F <sub>6</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	933–934
Hexane	C <sub>6</sub> H <sub>14</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	Aniline	C <sub>6</sub> H <sub>7</sub> N	887
		N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	886
		Octane	C <sub>8</sub> H <sub>18</sub>	Hexadecane	C <sub>16</sub> H <sub>34</sub>	888–889
Isoprene	C <sub>5</sub> H <sub>8</sub>	2-Butyne	C <sub>4</sub> H <sub>6</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	851–853

		Cyclopentadiene	C <sub>5</sub> H <sub>6</sub>	Dicyclopentadiene	C <sub>10</sub> H <sub>12</sub>	855
		N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Dicyclopentadiene	C <sub>10</sub> H <sub>12</sub>	860
		2-Methyl-2-Butene	C <sub>5</sub> H <sub>10</sub>	Cyclopentadiene	C <sub>5</sub> H <sub>6</sub>	854
		2-Methyl-2-Butene	C <sub>5</sub> H <sub>10</sub>	1-Pentyne	C <sub>5</sub> H <sub>8</sub>	861
		3-Methyl-1-Butyne	C <sub>5</sub> H <sub>8</sub>	Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	857–859
		Nitromethane	CH <sub>3</sub> NO <sub>2</sub>	2-Methyl-2-Butene	C <sub>5</sub> H <sub>10</sub>	856
(S)-4-Isopropenyl-1-Methylcyclohexene	C <sub>10</sub> H <sub>16</sub>	2,6,6-Trimethylbicyclo(3.1.1)Hept-2-Ene	C <sub>10</sub> H <sub>16</sub>	Beta-Pinene	C <sub>10</sub> H <sub>16</sub>	922–927
		Ethanethiol	C <sub>2</sub> H <sub>6</sub> S	Dimethyl Sulfide	C <sub>2</sub> H <sub>6</sub> S	864
		Ethanethiol	C <sub>2</sub> H <sub>6</sub> S	Pentane	C <sub>5</sub> H <sub>12</sub>	866
		Hexane	C <sub>6</sub> H <sub>14</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	867
2-Methylbutane	C <sub>5</sub> H <sub>12</sub>	Pentane	C <sub>5</sub> H <sub>12</sub>	Dimethyl Sulfide	C <sub>2</sub> H <sub>6</sub> S	865
2-Methyl-1-Butene	C <sub>5</sub> H <sub>10</sub>	Hexane	C <sub>6</sub> H <sub>14</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	862
2-Methyl-2-Butene	C <sub>5</sub> H <sub>10</sub>	Hexane	C <sub>6</sub> H <sub>14</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	863
Methylcyclohexane	C <sub>7</sub> H <sub>14</sub>	Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Toluene	C <sub>7</sub> H <sub>8</sub>	894
		Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Heptane	C <sub>7</sub> H <sub>16</sub>	895
		Sec-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Toluene	C <sub>7</sub> H <sub>8</sub>	896
		Sec-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Heptane	C <sub>7</sub> H <sub>16</sub>	897
		Tert-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Toluene	C <sub>7</sub> H <sub>8</sub>	898
		Tert-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	Heptane	C <sub>7</sub> H <sub>16</sub>	899
		N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	893
		Heptane	C <sub>7</sub> H <sub>16</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	900–901
3-Methylhexane	C <sub>7</sub> H <sub>16</sub>	N,N-Dimethylformamide (DMF)	C <sub>3</sub> H <sub>7</sub> NO	Benzene	C <sub>6</sub> H <sub>6</sub>	911
2-Methylhexane	C <sub>7</sub> H <sub>16</sub>	Heptane	C <sub>7</sub> H <sub>16</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	907–909
Nonane	C <sub>9</sub> H <sub>20</sub>	1-Chlorohexane	C <sub>6</sub> H <sub>13</sub> Cl	Ethylbenzene	C <sub>8</sub> H <sub>10</sub>	921
		Ethylbenzene	C <sub>8</sub> H <sub>10</sub>	Sulfolane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> S	918

		O-Xylene	C <sub>8</sub> H <sub>10</sub>	Sulfolane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> S	920
		P-Xylene	C <sub>8</sub> H <sub>10</sub>	Sulfolane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> S	919
Octane	C <sub>8</sub> H <sub>18</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	913
		Benzene	C <sub>6</sub> H <sub>6</sub>	P-Xylene	C <sub>8</sub> H <sub>10</sub>	914
		Toluene	C <sub>7</sub> H <sub>8</sub>	P-Xylene	C <sub>8</sub> H <sub>10</sub>	915
		P-Xylene	C <sub>8</sub> H <sub>10</sub>	Sulfolane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> S	912
Pentane	C <sub>5</sub> H <sub>12</sub>	Ethanethiol	C <sub>2</sub> H <sub>6</sub> S	Dimethyl Sulfide	C <sub>2</sub> H <sub>6</sub> S	868
Tetradecane	C <sub>14</sub> H <sub>30</sub>	Hexafluorobenzene	C <sub>6</sub> F <sub>6</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	931–932
1,2,3,4-Tetrahydronaphthalene	C <sub>10</sub> H <sub>12</sub>	Biphenyl	C <sub>12</sub> H <sub>10</sub>	Cis-Decahydro ne	Naphthale-C <sub>10</sub> H <sub>18</sub>	929
		Naphthalene	C <sub>10</sub> H <sub>8</sub>	Cis-Decahydro ne	Naphthale-C <sub>10</sub> H <sub>18</sub>	928
		Phenanthrene	C <sub>14</sub> H <sub>10</sub>	Cis-Decahydro ne	Naphthale-C <sub>10</sub> H <sub>18</sub>	930
2,2,4-Trimethylpentane	C <sub>8</sub> H <sub>18</sub>	Hexafluorobenzene	C <sub>6</sub> F <sub>6</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	916–917





Pentane	C <sub>5</sub> H <sub>12</sub>	2-Methylbutane	C <sub>5</sub> H <sub>12</sub>	Ethanethiol	C <sub>2</sub> H <sub>6</sub> S	Dimethyl Sulfide	C <sub>2</sub> H <sub>6</sub> S	935
Cyclohexane	C <sub>6</sub> H <sub>12</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	N,N-Dimethylformamide	C <sub>3</sub> H <sub>7</sub> NO	Heptane	C <sub>7</sub> H <sub>16</sub>	936
Cyclohexane	C <sub>6</sub> H <sub>12</sub>	Benzene	C <sub>6</sub> H <sub>6</sub>	N,N-Dimethylformamide	C <sub>3</sub> H <sub>7</sub> NO	Methylcyclohexane	C <sub>7</sub> H <sub>14</sub>	937
Methylcyclohexane	C <sub>7</sub> H <sub>14</sub>	Heptane	C <sub>7</sub> H <sub>16</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	938
Methylcyclohexane	C <sub>7</sub> H <sub>14</sub>	Heptane	C <sub>7</sub> H <sub>16</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	sec-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	939
Methylcyclohexane	C <sub>7</sub> H <sub>14</sub>	Heptane	C <sub>7</sub> H <sub>16</sub>	Toluene	C <sub>7</sub> H <sub>8</sub>	tert-Butyl Chloride	C <sub>4</sub> H <sub>9</sub> Cl	940