Appendix A

Proposed Amendments to the Tables of Maximum Incremental Reactivity (MIR) Values, sections 94700 and 94701, title 17, California Code of Regulations

PROPOSED REGULATION ORDER

PROPOSED AMENDMENTS TO THE TABLES OF MAXIMUM INCREMENTAL REACTIVITY (MIR) VALUES

Amend sections 94700 and 94701, title 17, California Code of Regulations, to read as follows:

Notes:
1) The proposed amendments are shown in underline to indicate additions and ~~strikeout~~ to show deletions. The effective date of the New MIR Values will be 30 days after the amendments are approved by the Office of Administrative Law.
2) In general, the table with underlining for section 94700 includes the same compounds listed in the strikeout version, as well as several new compounds. The new table has been re-ordered to list compounds by chemical class. The 2001 MIR values for existing compounds were not changed. However, a few compounds listed in the old table were found to be listed erroneously.

SUBCHAPTER 8.6 Maximum Incremental Reactivity

Article 1. Tables of Maximum Incremental Reactivity (MIR) Values

§ 94700. MIR Values for Compounds.

~~*Organic Compound*~~	~~*MIR Value (July 18, 2001)*~~	~~*New MIR Value (Effective Date)*~~
~~Carbon Monoxide~~	~~0.06~~	~~0.06~~
~~Methane~~	~~0.01~~	~~0.01~~
~~Ethane~~	~~0.31~~	~~0.31~~
~~Propane~~	~~0.56~~	~~0.56~~
~~n-Butane~~	~~1.33~~	~~1.33~~
~~n-Pentane~~	~~1.54~~	~~1.54~~
~~n-Hexane~~	~~1.45~~	~~1.45~~
~~n-Heptane~~	~~1.28~~	~~1.28~~
~~n-Octane~~	~~1.11~~	~~1.11~~
~~n-Nonane~~	~~0.95~~	~~0.95~~
~~n-Decane~~	~~0.83~~	~~0.83~~
~~n-Undecane~~	~~0.74~~	~~0.74~~
~~n-Dodecane~~	~~0.66~~	~~0.66~~
~~n-Tridecane~~	~~0.62~~	~~0.62~~
~~n-Tetradecane~~	~~0.58~~	~~0.58~~
~~n-Pentadecane~~	~~0.56~~	~~0.53~~
~~n-C16~~	~~0.52~~	~~0.52~~
~~n-C17~~	~~0.49~~	~~0.49~~

n-C18	0.47	0.44
n-C19	0.44	0.44
n-C20	0.42	0.42
n-C21	0.40	0.40
n-C22	0.38	0.38
Isobutane	1.35	1.35
Isopentane	1.68	1.68
Neopentane	0.69	0.69
Branched C5 Alkanes	1.68	1.68
2,2-Dimethyl Butane	1.33	1.33
2,3-Dimethyl Butane	1.14	1.14
2-Methyl Pentane (Isohexane)	1.80	1.80
3-Methyl Pentane	2.07	2.07
Branched C6 Alkanes	1.53	1.53
2,2,3-Trimethyl Butane	1.32	1.32
2,2-Dimethyl Pentane	1.22	1.22
2,3-Dimethyl Pentane	1.55	1.55
2,4-Dimethyl Pentane	1.65	1.65
2-Methyl Hexane	1.37	1.37
3,3-Dimethyl Pentane	1.32	1.32
3-Methyl Hexane	1.86	1.86
Branched C7 Alkanes	1.63	1.63
2,2,3,3-Tetramethyl Butane	0.44	0.44
2,2,4-Trimethyl Pentane (Isooctane)	1.44	1.44
2,2-Dimethyl Hexane	1.13	1.13
2,3,4-Trimethyl Pentane	1.23	1.23
2,3-Dimethyl Hexane	1.34	1.34
2,4-Dimethyl Hexane	1.80	1.80
2,5-Dimethyl Hexane	1.68	1.68
2-Methyl Heptane	1.20	1.20
3-Methyl Heptane	1.35	1.35
4-Methyl Heptane	1.48	1.48
Branched C8 Alkanes	1.57	1.57
2,2,5-Trimethyl Hexane	1.33	1.33
2,3,5-Trimethyl Hexane	1.33	1.33
2,4-Dimethyl Heptane	1.48	1.48
2-Methyl Octane	0.96	0.96
3,3-Diethyl Pentane	1.35	1.35
3,5-Dimethyl Heptane	1.63	1.63
4-Ethyl Heptane	1.44	1.44
4-Methyl Octane	1.08	1.08
Branched C9 Alkanes	1.25	1.25
2,4-Dimethyl Octane	1.09	1.09
2,6-Dimethyl Octane	1.27	1.27
2-Methyl Nonane	0.86	0.86
3,4-Diethyl Hexane	1.20	1.20
3-Methyl Nonane	0.89	0.89
4-Methyl Nonane	0.99	0.99

4-Propyl Heptane	1.24	1.24
Branched C10 Alkanes	1.09	1.09
2,6-Dimethyl Nonane	0.95	0.95
3,5-Diethyl Heptane	1.21	1.21
3-Methyl Decane	0.77	0.77
4-Methyl Decane	0.80	0.80
Branched C11 Alkanes	0.87	0.87
2,3,4,6-Tetramethyl Heptane	1.26	1.26
2,6-Diethyl Octane	1.09	1.09
3,6-Dimethyl Decane	0.88	0.88
3-Methyl Undecane	0.70	0.70
5-Methyl Undecane	0.72	0.72
Branched C12 Alkanes	0.80	0.80
2,3,5,7-Tetramethyl Octane	1.06	1.06
3,6-Dimethyl Undecane	0.82	0.82
3,7-Diethyl Nonane	1.08	1.08
3-Methyl Dodecane	0.64	0.64
5-Methyl Dodecane	0.64	0.64
Branched C13 Alkanes	0.73	0.73
2,4,6,8-Tetramethyl Nonane	0.94	0.94
2,3,6-Trimethyl 4-Isopropyl Heptane	1.24	1.24
3,7-Dimethyl Dodecane	0.74	0.74
3,8-Diethyl Decane	0.68	0.68
3-Methyl Tridecane	0.57	0.57
6-Methyl Tridecane	0.62	0.62
Branched C14 Alkanes	0.67	0.67
2,4,5,6,8-Pentamethyl Nonane	1.11	1.11
2-Methyl 3,5-Diisopropyl Heptane	0.78	0.78
3,7-Dimethyl Tridecane	0.64	0.64
3,9-Diethyl Undecane	0.62	0.62
3-Methyl Tetradecane	0.53	0.53
6-Methyl Tetradecane	0.57	0.57
Branched C15 Alkanes	0.60	0.60
2,6,8-Trimethyl 4-Isopropyl Nonane	0.76	0.76
3-Methyl Pentadecane	0.50	0.50
4,8-Dimethyl Tetradecane	0.58	0.55
7-Methyl Pentadecane	0.51	0.51
Branched C16 Alkanes	0.54	0.54
2,7-Dimethyl 3,5-Diisopropyl Heptane	0.69	0.69
Branched C17 Alkanes	0.51	0.51
Branched C18 Alkanes	0.48	0.48
Cyclopropane	0.10	0.10
Cyclobutane	1.05	1.05
Cyclopentane	2.69	2.69
Cyclohexane	1.46	1.46
Isopropyl Cyclopropane	1.52	1.52
Methylcyclopentane	2.42	2.42
C6 Cycloalkanes	1.46	1.46

1,3-Dimethyl Cyclopentane	2.15	2.15
Cycloheptane	2.26	2.26
Ethyl Cyclopentane	2.27	2.27
Methylcyclohexane	1.99	1.99
C7 Cycloalkanes	1.99	1.99
C8 Bicycloalkanes*	1.75	1.75
1,3-Dimethyl Cyclohexane	1.72	1.72
Cyclooctane	1.73	1.73
Ethylcyclohexane	1.75	1.75
Propyl Cyclopentane	1.91	1.91
C8 Cycloalkanes	1.75	1.75
C9 Bicycloalkanes	1.57	1.57
1,1,3-Trimethyl Cyclohexane	1.37	1.37
1-Ethyl-4-Methyl Cyclohexane	1.62	1.62
Propyl Cyclohexane	1.47	1.47
C9 Cycloalkanes	1.55	1.55
C10 Bicycloalkanes	1.29	1.29
1,3-Diethyl Cyclohexane	1.34	1.34
1,4-Diethyl Cyclohexane	1.49	1.49
1-Methyl-3-Isopropyl Cyclohexane	1.26	1.26
Butyl Cyclohexane	1.07	1.07
C10 Cycloalkanes	1.27	1.27
C11 Bicycloalkanes	1.01	1.01
1,3-Diethyl-5-Methyl Cyclohexane	1.11	1.11
1-Ethyl-2-Propyl Cyclohexane	0.95	0.95
Pentyl Cyclohexane	0.91	0.91
C11 Cycloalkanes	0.99	0.99
C12 Bicycloalkanes	0.88	0.88
C12 Cycloalkanes	0.87	0.87
1,3,5-Triethyl Cyclohexane	1.06	1.06
1-Methyl-4-Pentyl Cyclohexane	0.81	0.81
Hexyl Cyclohexane	0.75	0.75
C13 Bicycloalkanes	0.79	0.79
1,3-Diethyl-5-Pentyl Cyclohexane	0.99	0.99
1,3-Diethyl-5-Propyl Cyclohexane*	0.96	0.96
1-Methyl-2-Hexyl Cyclohexane	0.70	0.70
Heptyl Cyclohexane	0.66	0.66
C13 Cycloalkanes	0.78	0.78
C14 Bicycloalkanes	0.71	0.71
1,3-Dipropyl-5-Ethyl Cyclohexane	0.94	0.94
1-Methyl-4-Heptyl Cyclohexane	0.58	0.58
Octyl Cyclohexane	0.60	0.60
C14 Cycloalkanes	0.71	0.71
C15 Bicycloalkanes	0.69	0.69
1,3,5-Tripropyl Cyclohexane	0.90	0.90
1-Methyl-2-Octyl Cyclohexane	0.60	0.60
Nonyl Cyclohexane	0.54	0.54
C15 Cycloalkanes	0.68	0.68

1,3-Dipropyl-5-Butyl Cyclohexane	0.77	0.77
1-Methyl-4-Nonyl Cyclohexane	0.55	0.55
Decyl Cyclohexane	0.50	0.50
C16 Cycloalkanes	0.61	0.61
Ethene	9.08	9.08
Propene (Propylene)	11.58	11.58
1-Butene	10.29	10.29
C4 Terminal Alkenes	10.29	10.29
1-Pentene	7.79	7.79
3-Methyl-1-Butene	6.99	6.99
C5 Terminal Alkenes	7.79	7.79
1-Hexene	6.17	6.17
3,3-Dimethyl-1-Butene	6.06	6.06
3-Methyl-1-Pentene	6.22	6.22
4-Methyl-1-Pentene	6.26	6.26
C6 Terminal Alkenes	6.17	6.17
1-Heptene	4.56	4.20
1-Octene	3.45	3.45
C8 Terminal Alkenes	3.45	3.45
1-Nonene	2.76	2.76
C9 Terminal Alkenes	2.76	2.76
1-Decene	2.28	2.28
C10 Terminal Alkenes	2.28	2.28
1-Undecene	1.95	1.95
C11 Terminal Alkenes	1.95	1.95
C12 Terminal Alkenes	1.72	1.72
1-Dodecene	1.72	1.72
1-Tridecene	1.55	1.55
C13 Terminal Alkenes	1.55	1.55
1-Tetradecene	1.41	1.41
C14 Terminal Alkenes	1.41	1.41
1-Pentadecene	1.37	1.27
C15 Terminal Alkenes	1.37	1.27
2-Methyl Pentene (Isobutene)	6.35	6.35
2-Methyl-1-Butene	6.51	6.51
2,3-Dimethyl-1-Butene	4.77	4.77
2-Ethyl-1-Butene	5.04	5.04
2-Methyl-1-Pentene	5.18	5.18
2,3,3-Trimethyl-1-Butene	4.62	4.62
C7 Terminal Alkenes	4.56	4.20
3-Methyl-2-Isopropyl-1-Butene	3.29	3.29
cis-2-Butene	13.22	13.22
trans-2-Butene	13.91	13.91
C4 Internal Alkenes	13.57	13.57
2-Methyl-2-Butene	14.45	14.45
cis-2-Pentene	10.24	10.24
trans-2-Pentene	10.23	10.23
2-Pentenes	10.23	10.23

C5 Internal Alkenes	10.23	10.23
2,3-Dimethyl-2-Butene	13.32	13.32
2-Methyl-2-Pentene	12.28	12.28
cis-2-Hexene	8.44	8.44
cis-3-Hexene	8.22	8.22
cis-3-Methyl-2-Pentene*	12.84	12.84
cis-3-Methyl-2-Hexene	13.38	13.38
trans-3-Methyl-2-Hexene	14.17	14.17
trans-4-Methyl-2-Hexene	7.88	7.88
trans-2-Hexene	8.44	8.44
trans-3-Hexene	8.16	8.16
2-Hexenes	8.44	8.44
C6 Internal Alkenes	8.44	8.44
2,3-Dimethyl-2-Hexene	10.41	10.41
cis-3-Heptene	6.96	6.96
trans-4,4-Dimethyl-2-Pentene	6.99	6.99
trans-2-Heptene	7.33	7.33
trans-3-Heptene	6.96	6.96
2-Heptenes	6.96	6.96
C7 Internal Alkenes	6.96	6.96
cis-4-Octene	5.94	5.94
trans-2,2-Dimethyl-3-Hexene	5.97	5.97
trans-2,5-Dimethyl-3-Hexene	5.44	5.44
trans-3-Octene	6.13	6.13
trans-4-Octene	5.90	5.90
3-Octenes	6.13	6.13
C8 Internal Alkenes	5.90	5.90
2,4,4-Trimethyl-2-Pentene	5.85	8.52
3-Nonenes	5.31	5.31
C9 Internal Alkenes	5.31	5.31
trans-4-Nonene	5.23	5.23
3,4-Diethyl-2-Hexene	3.95	3.95
cis-5-Decene	4.89	4.89
trans-4-Decene	4.50	4.50
C10 3-Alkenes	4.50	4.50
C10 Internal Alkenes	4.50	4.50
trans-5-Undecene	4.23	4.23
C11 3-Alkenes	4.23	4.23
C11 Internal Alkenes	4.23	4.23
C12 2-Alkenes	3.75	3.75
C12 3-Alkenes	3.75	3.75
C12 Internal Alkenes	3.75	3.75
trans-5-Dodecene	3.74	3.74
trans-5-Tridecene	3.38	3.38
C13 3-Alkenes	3.38	3.38
C13 Internal Alkenes	3.38	3.38
trans-5-Tetradecene	3.08	3.08
C14 3-Alkenes	3.08	3.08

C14 Internal Alkenes	3.08	3.08
trans-5-Pentadecene	2.82	2.82
C15 3-Alkenes	2.82	2.82
C15 Internal Alkenes	2.82	2.82
C4 Alkenes	11.93	11.93
C5 Alkenes	9.01	9.01
C6 Alkenes	6.88	6.88
C7 Alkenes	5.76	5.76
C8 Alkenes	4.68	4.68
C9 Alkenes	4.03	4.03
C10 Alkenes	3.39	3.39
C11 Alkenes	3.09	3.09
C12 Alkenes	2.73	2.73
C13 Alkenes	2.46	2.46
C14 Alkenes	2.28	2.28
C15 Alkenes	2.06	2.06
Cyclopentene	7.38	7.38
1-Methyl Cyclopentene	13.95	13.95
Cyclohexene	5.45	5.45
1 Methyl Cyclohexene	7.81	7.81
4-Methyl Cyclohexene	4.48	4.48
1,2-Dimethyl Cyclohexene	6.77	6.77
1,3-Butadiene	13.58	13.58
Isoprene	10.69	10.69
C6 Cyclic or Di-olefins	8.65	8.65
C7 Cyclic or Di-olefins	7.49	7.49
C8 Cyclic or Di-olefins	6.01	6.01
C9 Cyclic or Di-olefins	5.40	5.40
C10 Cyclic or Di-olefins	4.56	4.56
C11 Cyclic or Di-olefins	4.29	4.29
C12 Cyclic or Di-olefins	3.79	3.79
C13 Cyclic or Di-olefins	3.42	3.42
C14 Cyclic or Di-olefins	3.11	3.11
C15 Cyclic or Di-olefins	2.85	2.85
Cyclopentadiene	7.61	7.61
3-Carene	3.21	3.21
a-Pinene (Pine Oil)	4.29	4.29
b-Pinene	3.28	3.28
d-Limonene (Dipentene or Orange Terpene)	3.99	3.99
Sabinene	3.67	3.67
Terpene	3.79	3.79
Styrene	1.95	1.95
a-Methyl Styrene	1.72	1.72
C9 Styrenes	1.72	1.72
C10 Styrenes	1.53	1.53
Benzene	0.81	0.81
Toluene	3.97	3.97
Ethyl Benzene	2.79	2.79

Cumene (Isopropyl Benzene)	2.32	2.32
n-Propyl Benzene	2.20	2.20
C9 Monosubstituted Benzenes	2.20	2.20
s-Butyl Benzene	1.97	1.97
C10 Monosubstituted Benzenes	1.97	1.97
n-Butyl Benzene	1.97	1.97
C11 Monosubstituted Benzenes	1.78	1.78
C12 Monosubstituted Benzenes	1.63	1.63
C13 Monosubstituted Benzenes	1.50	1.50
m-Xylene	10.61	10.61
o-Xylene	7.49	7.49
p-Xylene	4.25	4.25
C8 Disubstituted Benzenes	7.48	7.48
m-Ethyl Toluene*	9.37	9.37
p-Ethyl Toluene*	3.75	3.75
o-Ethyl Toluene*	6.61	6.61
C9 Disubstituted Benzenes	6.61	6.61
o-Diethyl Benzene*	5.92	5.92
m-Diethyl Benzene*	8.39	8.39
p-Diethyl Benzene*	3.36	3.36
C10 Disubstituted Benzenes	5.92	5.92
C11 Disubstituted Benzenes	5.35	5.35
C12 Disubstituted Benzenes	4.90	4.90
C13 Disubstituted Benzenes	4.50	4.50
Isomers of Ethylbenzene	5.16	5.16
1,2,3-Trimethyl Benzene	11.26	11.26
1,2,4-Trimethyl Benzene	7.18	7.18
1,3,5-Trimethyl Benzene	11.22	11.22
C9 Trisubstituted Benzenes	9.90	9.90
Isomers of Propylbenzene	6.12	6.12
1,2,3,5-Tetramethyl Benzene*	8.25	8.25
C10 Tetrasubstituted Benzenes	8.86	8.86
C10 Trisubstituted Benzenes	8.86	8.86
Isomers of Butylbenzene	5.48	5.48
C11 Pentasubstituted Benzenes	8.03	8.03
C11 Tetrasubstituted Benzenes	8.03	8.03
C11 Trisubstituted Benzenes	8.03	8.03
Isomers of Pentylbenzene	4.96	4.96
C12 Pentasubstituted Benzenes	7.33	7.33
C12 Hexasubstituted Benzenes	7.33	7.33
C12 Tetrasubstituted Benzenes	7.33	7.33
C12 Trisubstituted Benzenes	7.33	7.33
Isomers of Hexylbenzene	4.53	4.53
C13 Trisubstituted Benzenes	6.75	6.75
Indene*	3.21	3.21
Indane	3.17	3.17
Naphthalene	3.26	3.26
Tetralin	2.83	2.83

Methyl Indans*	2.83	2.83
Methyl Naphthalenes	4.61	4.61
1-Methyl Naphthalene	4.61	4.61
2-Methyl Naphthalene	4.61	4.61
C11 Tetralin or Indane	2.56	2.56
2,3-Dimethyl Naphthalene	5.54	5.54
C12 Disubstituted Naphthalenes	5.54	5.54
Dimethyl Naphthalenes	5.54	5.54
C12 Monosubstituted Naphthalenes	4.20	4.20
C12 Tetralin or Indane*	2.33	2.33
C13 Disubstituted Naphthalenes	5.08	5.08
C13 Trisubstituted Naphthalenes	5.08	5.08
C13 Monosubstituted Naphthalenes	3.86	3.86
Acetylene	1.25	1.25
Methyl Acetylene	6.45	6.45
2-Butyne	16.33	16.33
Ethyl Acetylene	6.20	6.20
Methanol	0.71	0.71
Ethanol	1.69	1.69
Isopropanol (2-Propanol or Isopropyl Alcohol)	0.71	0.71
n-Propanol (n-Propyl Alcohol)	2.74	2.74
Isobutanol (Isobutyl Alcohol)	2.24	2.24
1-Butanol (n-Butyl Alcohol)	3.34	3.34
2-Butanol (s-Butyl Alcohol)	1.60	1.60
t-Butyl Alcohol	0.45	0.45
Cyclopentanol	1.96	1.96
2-Pentanol	1.74	1.74
3-Pentanol	1.73	1.73
n-Pentanol (Amyl Alcohol)	3.35	3.35
Isoamyl Alcohol (3-Methyl-1-Butanol)*	2.73	2.73
2-Methyl-1-Butanol*	2.60	2.60
Cyclohexanol	2.25	2.25
1-Hexanol	2.74	2.74
2-Hexanol	2.46	2.46
4-Methyl-2-Pentanol (Methyl Isobutyl Carbinol)*	2.89	2.89
1-Heptanol	2.21	2.21
Dimethylpentanol (2,3-Dimethyl-1-Pentanol)*	2.51	2.51
1-Octanol	2.01	2.01
2-Ethyl-1-Hexanol (Ethyl Hexyl Alcohol)	2.20	2.20
2-Octanol	2.16	2.16
3-Octanol	2.57	2.57
4-Octanol	3.07	3.07
5-Methyl-1-Heptanol*	1.95	1.95
Trimethylcyclohexanol*	2.17	2.17
Dimethylheptanol (2,6-Dimethyl-2-Heptanol)*	1.07	1.07
2,6-Dimethyl-4-Heptanol*	2.37	2.37
Menthol*	1.70	1.70
Isodecyl Alcohol (8-Methyl-1-Nonanol)	1.23	1.23

1-Decanol*	1.22	1.22
3,7-Dimethyl-1-Octanol*	1.42	1.42
Trimethylnonanolthreoerythro; 2,6,8-Trimethyl-4-Nonanol*	1.55	1.55
Ethylene Glycol	3.36	3.36
Propylene Glycol	2.75	2.75
1,2-Butanediol	2.21	2.21
Glycerol (1,2,3-Propanetriol)	3.27	3.27
1,4-Butanediol*	3.22	3.22
Pentaerythritol*	2.42	2.42
1,2-Dihydroxy Hexane	2.75	2.75
2-Methyl-2,4-Pentanediol	1.04	1.04
2-Ethyl-1,3-Hexanediol*	2.62	2.62
Dimethyl Ether	0.93	0.93
Trimethylene Oxide	5.22	5.22
1,3-Dioxolane*	5.47	5.47
Dimethoxymethane	1.04	1.04
Tetrahydrofuran	4.95	4.95
Diethyl Ether	4.01	4.01
1,4-Dioxane*	2.71	2.71
Alpha-Methyltetrahydrofuran	4.62	4.62
Tetrahydropyran	3.81	3.81
Ethyl Isopropyl Ether	3.86	3.86
Methyl n-Butyl Ether	3.66	3.66
Methyl t-Butyl Ether	0.78	0.78
2,2-Dimethoxypropane	0.52	0.52
Di n-Propyl Ether	3.24	3.24
Ethyl n-Butyl Ether	3.86	3.86
Ethyl t-Butyl Ether	2.11	2.11
Methyl t-Amyl Ether	2.14	2.14
Di isopropyl Ether*	3.56	3.56
Ethylene Glycol Diethyl Ether; 1,2-Diethoxyethane*	2.84	2.84
Acetal (1,1-Diethoxyethane)*	3.68	3.68
4,4-Dimethyl-3-Oxahexane*	2.03	2.03
2-Butyl Tetrahydrofuran	2.53	2.53
Di Isobutyl Ether	1.29	1.29
Di-n-butyl Ether	3.17	3.17
2-Methoxy-1-(2-Methoxy-1-Methylethoxy)-Propane*	2.09	2.09
Di-n-Pentyl Ether	2.64	2.64
Ethylene Glycol Monomethyl Ether (2-Methoxyethanol)	2.98	2.98
Propylene Glycol Monomethyl Ether (1-Methoxy-2-Propanol)	2.62	2.62
2-Ethoxyethanol	3.78	3.78
2-Methoxy-1-Propanol	3.01	3.01
3-Methoxy-1-Propanol*	4.01	4.01
Diethylene Glycol	3.55	3.55
Tetrahydro-2-Furanmethanol*	3.54	3.54
Propylene Glycol Monoethyl Ether (1-Ethoxy-2-Propanol)	3.25	3.25
Ethylene Glycol Monopropyl Ether (2-Propoxyethanol)	3.52	3.52
3-Ethoxy-1-Propanol	4.24	4.24

3-Methoxy-1-Butanol	0.97	0.97
Diethylene Glycol Methyl Ether [2-(2-Methoxyethoxy) Ethanol]	2.90	2.90
Propylene Glycol Monopropyl Ether (1-Propoxy-2-Propanol)	2.86	2.86
Ethylene Glycol Monobutyl Ether [2-Butoxyethanol]	2.90	2.90
3-Methoxy-3-Methyl Butanol	1.74	1.74
n-Propoxypropanol*	3.84	3.84
2-(2-Ethoxyethoxy) Ethanol	3.19	3.19
Dipropylene Glycol	2.48	2.48
Triethylene Glycol*	3.41	3.41
Propylene Glycol t-Butyl Ether (1-tert-Butoxy-2-Propanol)	1.71	1.71
2-tert-Butoxy-1-Propanol	1.81	1.81
n-Butoxy-2-Propanol	2.70	2.70
Dipropylene Glycol Methyl Ether Isomer (1-Methoxy-2-[2-Hydroxypropoxy] Propane)	2.21	2.21
Dipropylene Glycol Methyl Ether Isomer (2-[2-Methoxypropoxy]-1-Propanol)	3.02	2.70
2-Hexyloxyethanol	2.45	2.45
2-(2-Propoxyethoxy) Ethanol	3.00	3.00
2,2,4-Trimethyl-1,3-Pentanediol	1.74	1.74
2-(2-Butoxyethoxy)-Ethanol	2.70	2.87
2-[2-(2-Methoxyethoxy) Ethoxy] Ethanol	2.62	2.62
Dipropylene Glycol Ethyl Ether*	2.75	2.75
Ethylene Glycol 2-Ethylhexyl Ether [2-(2-Ethylhexyloxy) Ethanol]	1.71	1.71
2-[2-(2-Ethoxyethoxy) Ethoxy] Ethanol	2.66	2.66
Tetraethylene Glycol*	2.84	2.84
1-(Butoxyethoxy)-2-Propanol*	2.08	2.08
2-(2-Hexyloxyethoxy) Ethanol	2.03	2.03
Glycol Ether dpnb (1-(2-Butoxy-1-Methylethoxy)-2-Propanol)*	1.96	1.96
2-[2-(2-Propoxyethoxy) Ethoxy] Ethanol	2.46	2.46
2-[2-(2-Butoxyethoxy) Ethoxy] Ethanol	2.24	2.24
Tripropylene Glycol Monomethyl Ether	1.90	1.90
2,5,8,11-Tetraoxatridecan-13-ol	2.15	2.15
3,6,9,12-Tetraoxahexadecan-1-ol	1.90	1.90
Cumene Hydroperoxide (1-Methyl-1-Phenylethylhydroperoxide)**	12.61	12.61
Methyl Formate	0.06	0.06
Ethyl Formate	0.52	0.52
Methyl Acetate	0.07	0.07
gamma- Butyrolactone*	1.15	1.15
Ethyl Acetate	0.64	0.64
Methyl Propionate	0.71	0.71
n-Propyl Formate	0.93	0.93
Isopropyl Formate*	0.42	0.42
Ethyl Propionate	0.79	0.79
Isopropyl Acetate	1.12	1.12
Methyl Butyrate	1.18	1.18
Methyl Isobutyrate	0.70	0.70
n-Butyl Formate	0.95	0.95
Propyl Acetate	0.87	0.87
Ethyl Butyrate	1.25	1.25

Isobutyl Acetate	0.67	0.67
Methyl Pivalate (2,2-Dimethyl Propanoic Acid Methyl Ester)	0.39	0.39
n-Butyl Acetate	0.89	0.89
n-Propyl Propionate	0.93	0.93
s-Butyl Acetate	1.43	1.43
t-Butyl Acetate	0.20	0.20
Butyl Propionate	0.89	0.89
Amyl Acetate	0.96	0.96
n-Propyl Butyrate	1.17	1.17
Isoamyl Acetate (3-Methylbutyl Acetate)*	1.18	1.18
2-Methyl-1-Butyl Acetate*	1.17	1.17
EEP Solvent (Ethyl 3-Ethoxy Propionate)	3.61	3.61
2,3-Dimethylbutyl Acetate	0.84	0.84
2-Methylpentyl Acetate	1.11	1.11
3-Methylpentyl Acetate	1.31	1.31
4-Methylpentyl Acetate	0.92	0.92
Isobutyl Isobutyrate	0.61	0.61
n-Butyl Butyrate	1.12	1.12
n-Hexyl Acetate (Hexyl Acetate)	0.87	0.87
Methyl Amyl Acetate (4-Methyl-2-Pentanol Acetate)*	1.46	1.46
n-Pentyl Propionate*	0.79	0.79
2,4-Dimethylpentyl Acetate	0.98	0.98
2-Methylhexyl Acetate	0.89	0.89
3-Ethylpentyl Acetate	1.24	1.24
3-Methylhexyl Acetate	1.01	1.01
4-Methylhexyl Acetate	0.91	0.91
5-Methylhexyl Acetate	0.79	0.79
Isoamyl Isobutyrate	0.89	0.89
n-Heptyl Acetate (Heptyl Acetate)	0.73	0.73
2,4-Dimethylhexyl Acetate	0.93	0.93
2-Ethyl-Hexyl Acetate	0.79	0.79
3,4-Dimethylhexyl Acetate	1.16	1.16
3,5-Dimethylhexyl Acetate	1.09	1.09
3-Ethylhexyl Acetate	1.03	1.03
3-Methylheptyl Acetate	0.76	0.76
4,5-Dimethylhexyl Acetate	0.86	0.86
4-Methylheptyl Acetate	0.72	0.72
5-Methylheptyl Acetate	0.73	0.73
n-Octyl Acetate	0.64	0.64
2,3,5-Trimethylhexyl Acetate	0.86	0.86
2,3-Dimethylheptyl Acetate	0.84	0.84
2,4-Dimethylheptyl Acetate	0.88	0.88
2,5-Dimethylheptyl Acetate	0.86	0.86
2-Methyloctyl Acetate	0.63	0.63
3,5-Dimethylheptyl Acetate	1.01	1.01
3,6-Dimethylheptyl Acetate	0.87	0.87
3-Ethylheptyl Acetate	0.71	0.71
4,5-Dimethylheptyl Acetate	0.96	0.96

4,6-Dimethylheptyl Acetate	0.83	0.83
4-Methyloctyl Acetate	0.68	0.68
5-Methyloctyl Acetate	0.67	0.67
n-Nonyl Acetate	0.58	0.58
3,6-Dimethyloctyl Acetate	0.88	0.88
3-Isopropylheptyl Acetate	0.71	0.71
4,6-Dimethyloctyl Acetate	0.85	0.85
3,5,7-Trimethyloctyl Acetate	0.83	0.83
3-Ethyl-6-Methyloctyl Acetate	0.80	0.80
4,7-Dimethylnonyl Acetate	0.64	0.64
Methyl Dodecanoate (Methyl Laurate)*	0.53	0.53
2,3,5,7-Tetramethyloctyl Acetate	0.74	0.74
3,5,7-Trimethylnonyl Acetate	0.76	0.76
3,6,8-Trimethylnonyl Acetate	0.72	0.72
2,4,6,8-Tetramethylnonyl Acetate	0.63	0.63
3-Ethyl-6,7-Dimethylnonyl Acetate	0.76	0.76
4,7,9-Trimethyldecyl Acetate	0.55	0.55
Methyl Myristate (Methyl Tetradecanoate)*	0.47	0.47
2,3,5,6,8-Pentaamethylnonyl Acetate	0.74	0.74
3,5,7,9-Tetramethyldecyl Acetate	0.58	0.58
5-Ethyl-3,6,8-Trimethylnonyl Acetate	0.77	0.77
Dimethyl Carbonate	0.06	0.06
Propylene Carbonate (4-Methyl-1,3-Dioxolan-2-one)	0.25	0.25
Methyl Lactate	2.75	2.75
2-Methoxyethyl Acetate	1.18	1.18
Ethyl Lactate	2.71	2.71
Methyl Isopropyl Carbonate	0.69	0.69
Propylene Glycol Monomethyl Ether Acetate (1-Methoxy-2-Propyl Acetate)	1.71	1.71
2-Ethoxyethyl Acetate	1.90	1.90
2-Methoxy-1-Propyl Acetate	1.12	1.12
Methoxypropanol Acetate*	1.97	1.97
Dimethyl Succinate	0.23	0.23
Ethylene Glycol Diacetate	0.72	0.72
1,2-Propylene Glycol Diacetate*	0.94	0.94
Diisopropyl Carbonate	1.04	1.04
Dimethyl Glutarate	0.51	0.51
Ethylene Glycol Monobutyl Ether Acetate (2-Butoxyethyl Acetate)	1.67	1.67
Dimethyl Adipate	1.95	1.95
2-(2-Ethoxyethoxy) Ethyl Acetate	1.50	1.50
Dipropylene Glycol n-Propyl Ether Isomer #1*	2.13	2.13
Dipropylene Glycol Methyl Ether Acetate Isomer #1*	1.41	1.41
Dipropylene Glycol Methyl Ether Acetate Isomer #2*	1.58	1.58
Dipropylene Glycol Methyl Ether Acetate*	1.49	1.49
Glyceryl Triacetate*	0.57	0.57
2-(2-Butoxyethoxy) Ethyl Acetate	1.38	1.38
Substituted C7 Ester (C12)	0.92	0.92
1-Hydroxy-2,2,4-Trimethylpentyl-3-Isobutyrate	0.92	0.92

3-Hydroxy-2,2,4-Trimethylpentyl-1-Isobutyrate	0.88	0.88
Hydroxy-2,2,4-Trimethylpentyl Isobutyrate Isomers (2,2,4-Trimethyl-1,3-Pentanediol Monoisobutyrate)	0.89	0.89
Substituted C9 Ester (C12)	0.89	0.89
Dimethyl Sebacate	0.48	0.48
Diisopropyl Adipate*	1.42	1.42
Ethylene Oxide	0.05	0.04
Propylene Oxide	0.32	0.32
1,2-Epoxybutane (Ethyl Oxirane)	1.02	1.02
Formic Acid	0.08	0.08
Acetic Acid	0.71	0.50
Glycolic Acid (Hydroxyacetic Acid)	2.67	2.67
Peracetic Acid (Peroxyacetic Acid)**	12.62	12.62
Acrylic Acid	11.66	11.66
Propionic Acid	1.16	0.79
Methacrylic Acid	18.78	18.78
Isobutyric Acid*	1.22	1.22
Butanoic Acid*	1.78	1.78
Malic Acid*	7.51	7.51
3-Methylbutanoic Acid*	4.26	4.26
Adipic Acid*	3.37	3.37
2-Ethyl Hexanoic Acid	4.41	3.49
Methyl Acrylate	12.24	12.24
Vinyl Acetate	3.26	3.26
2-Methyl-2-Butene-3-ol (1,2-Dimethylpropyl-1-en-1-ol)	5.12	5.12
Ethyl Acrylate	8.78	8.78
Methyl Methacrylate	15.84	15.84
Hydroxypropyl Acrylate*	5.56	5.56
n-Butyl Acrylate*	5.52	5.52
Isobutyl Acrylate*	5.05	5.05
Butyl Methacrylate	9.09	9.09
Isobutyl Methacrylate	8.99	8.99
Isobornyl Methacrylate**	8.64	8.64
a-Terpineol*	5.16	5.16
2-Ethyl Hexyl Acrylate	2.42	2.42
Furan	16.54	16.54
Formaldehyde	8.97	8.97
Acetaldehyde	6.84	6.84
Propionaldehyde	7.89	7.89
2-Methylpropanal	5.87	5.87
Butanal	6.74	6.74
C4 Aldehydes	6.74	6.74
2,2-Dimethylpropanal (Pivaldehyde)	5.40	5.40
3-Methylbutanal (Isovaleraldehyde)	5.52	5.52
Pentanal (Valeraldehyde)	5.76	5.76
C5 Aldehydes	5.76	5.76
Glutaraldehyde	4.79	4.79
Hexanal	4.98	4.98

C6 Aldehydes	4.98	4.98
Heptanal	4.23	4.23
C7 Aldehydes	4.23	4.23
2-Methyl-Hexanal*	3.97	3.97
Octanal	3.65	3.65
C8 Aldehydes	3.65	3.65
Glyoxal	14.22	14.22
Methyl Glyoxal	16.21	16.21
Acrolein	7.60	7.60
Crotonaldehyde	10.07	10.07
Methacrolein	6.23	6.23
Hydroxy Methacrolein	6.61	6.61
Benzaldehyde	0.00	0.00
Tolualdehyde	0.00	0.00
Acetone	0.43	0.43
Cyclobutanone	0.68	0.68
Methyl Ethyl Ketone (2-Butanone)	1.49	1.49
Cyclopentanone	1.43	1.43
C5 Cyclic Ketones	1.43	1.43
Methyl Propyl Ketone (2-Pentanone)	3.07	3.07
3-Pentanone	1.45	1.45
C5 Ketones	3.07	3.07
Methyl Isopropyl Ketone*	1.64	1.64
2,4-Pentanedione*	1.02	1.02
Cyclohexanone	1.61	1.61
C6 Cyclic Ketones	1.61	1.61
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	4.31	4.31
Methyl n-Butyl Ketone (2-Hexanone)	3.55	3.55
Methyl t-Butyl Ketone	0.78	0.78
C6 Ketones	3.55	3.55
C7 Cyclic Ketones	1.41	1.41
Methyl Amyl Ketone (2-Heptanone)	2.80	2.80
2-Methyl-3-Hexanone	1.79	1.79
Di-Isopropyl Ketone	1.63	1.63
C7 Ketones	2.80	2.80
3-Methyl-2-Hexanone	2.81	2.81
Methyl Isoamyl Ketone (5-Methyl-2-Hexanone)	2.10	2.10
C8 Cyclic Ketones	1.25	1.25
2-Octanone	1.66	1.66
C8 Ketones	1.66	1.66
C9 Cyclic Ketones	1.13	1.13
2-Propyl Cyclohexanone*	1.71	1.71
4-Propyl Cyclohexanone*	2.08	2.08
2-Nonanone	1.30	1.30
Di Isobutyl Ketone (2,6-Dimethyl-4-Heptanone)	2.94	2.94
C9 Ketones	1.30	1.30
C10 Cyclic Ketones	1.02	1.02
2-Decanone	1.06	1.06

C10 Ketones	1.06	1.06
2,6,8-Trimethyl-4-Nonanone; Isobutyl Heptyl Ketone*	1.86	1.86
Biacetyl	20.73	20.73
Methylvinyl ketone	8.73	8.73
Mesityl Oxide (2-Methyl-2-Penten-4-one)*	17.37	17.37
Isophorone (3,5,5-Trimethyl-2-Cyclohexenone)*	10.58	10.58
1-Nonene-4-one*	3.39	3.39
Hydroxy Acetone	3.08	3.08
Dihydroxyacetone*	4.02	4.02
Methoxy Acetone	2.14	2.14
Diacetone Alcohol (4-Hydroxy-4-Methyl-2-Pentanone)	0.68	0.68
Phenol	1.82	1.82
C7 Alkyl Phenols	2.34	2.34
m-Cresol	2.34	2.34
p-Cresol	2.34	2.34
o-Cresol	2.34	2.34
C8 Alkyl Phenols*	2.07	2.07
C9 Alkyl Phenols*	1.86	1.86
C10 Alkyl Phenols*	1.68	1.68
C11 Alkyl Phenols*	1.54	1.54
C12 Alkyl Phenols*	1.42	1.42
2-Phenoxyethanol; Ethylene Glycol Phenyl Ether*	3.61	3.61
1-Phenoxy-2-Propanol	1.73	1.73
Nitrobenzene	0.07	0.07
Para Toluene Isocyanate	0.93	0.93
Toluene Diisocyanate (Mixed Isomers)	0.00	0.00
Methylene Diphenylene Diisocyanate	0.79	0.79
N-Methyl Acetamide**	19.70	19.70
Dimethyl Amine	9.37	9.37
Ethyl Amine	7.80	7.80
Trimethyl Amine	7.06	7.06
Triethyl Amine**	16.60	16.60
Diethylenetriamine**	13.03	13.03
Ethanolamine	5.97	5.97
Dimethylaminoethanol	4.76	4.76
Monoisopropanol Amine (1-Amino-2-Propanol)**	13.42	13.42
2-Amino-2-Methyl-1-Propanol**	15.08	15.08
Diethanol Amine	4.05	4.05
Triethanolamine	2.76	2.76
Methyl Pyrrolidone (N-Methyl-2-Pyrrolidone)	2.56	2.56
Morpholine**	15.43	15.43
Nitroethane**	12.79	12.79
Nitromethane**	7.86	7.86
1-Nitropropane**	16.16	16.16
2-Nitropropane**	16.16	16.16
Dexpanthenol (Pantothenylol)**	9.35	9.35
Methyl Ethyl Ketoxime (Ethyl Methyl Ketone Oxime)**	22.04	22.04
Hydroxyethylethylene Urea**	14.75	14.75

Methyl Chloride	0.03	0.03
Methylene Chloride (Dichloromethane)	0.07	0.07
Methyl Bromide	0.02	0.02
Chloroform	0.03	0.03
Carbon Tetrachloride*	0.00	0.00
Methylene Bromide*	0.00	0.00
Vinyl Chloride	2.92	2.92
Ethyl Chloride	0.25	0.25
1,1-Dichloroethane	0.10	0.10
1,2-Dichloroethane	0.10	0.10
Ethyl Bromide	0.11	0.11
1,1,1-Trichloroethane	0.00	0.00
1,1,2-Trichloroethane	0.06	0.06
1,2-Dibromoethane	0.05	0.05
n-Propyl Bromide	0.35	0.35
n-Butyl Bromide	0.60	0.60
trans-1,2-Dichloroethene	0.81	0.81
Trichloroethylene	0.60	0.60
Perchloroethylene	0.04	0.04
2 (Chloro-Methyl) 3-Chloro Propene	1.13	1.13
Monochlorobenzene	0.36	0.36
p-Dichlorobenzene	0.20	0.20
Benzotrifluoride	0.26	0.26
PCBTF (p-Trifluoromethyl-Cl-Benzene)	0.11	0.11
HFC-134a (1,1,1,2-Tetrafluoroethane)**	0.00	0.00
HFC-152a (1,1-Difluoroethane)**	0.00	0.00
Dimethyl Sulfoxide	6.90	6.90
Unspeciated C6 Alkanes*	1.48	1.48
Unspeciated C7 Alkanes*	1.79	1.79
Unspeciated C8 Alkanes*	1.64	1.64
Unspeciated C9 Alkanes*	2.13	2.13
Unspeciated C10 Alkanes*	1.16	1.16
Unspeciated C11 Alkanes*	0.90	0.90
Unspeciated C12 Alkanes*	0.81	0.81
Unspeciated C13 Alkanes*	0.73	0.73
Unspeciated C14 Alkanes*	0.67	0.67
Unspeciated C15 Alkanes*	0.61	0.61
Unspeciated C16 Alkanes*	0.55	0.55
Unspeciated C17 Alkanes*	0.52	0.52
Unspeciated C18 Alkanes*	0.49	0.49
Unspeciated C10 Aromatics*	5.48	5.48
Unspeciated C11 Aromatics*	4.96	4.96
Unspeciated C12 Aromatics*	4.53	4.53
Base ROG Mixture	3.71	3.71
Alkane, Mixed – Predominantly (Minimally 94%) C13-14	0.67	0.67
Oxo-Hexyl Acetate	1.03	1.03
Oxo-Heptyl Acetate	0.97	0.97
Oxo-Octyl Acetate	0.96	0.96

~~Oxo-Nonyl Acetate~~	~~0.85~~	~~0.85~~
~~Oxo-Decyl Acetate~~	~~0.83~~	~~0.83~~
~~Oxo-Dodecyl Acetate~~	~~0.72~~	~~0.72~~
~~Oxo-Tridecyl Acetate~~	~~0.67~~	~~0.67~~

	Organic Compound	*MIR Value (July 18, 2001)*	*New MIR Value (Effective Date)*
	Alkanes		
1	methane	0.01	0.014
2	ethane	0.31	0.26
3	propane	0.56	0.46
4	cyclopropane	0.10	0.08
5	n-butane	1.33	1.08
6	isobutane	1.35	1.17
7	cyclobutane	1.05	1.12
8	n-pentane	1.54	1.23
9	branched C5 alkane(s)	1.68	1.36
10	neopentane	0.69	0.64
11	isopentane	1.68	1.36
12	cyclopentane	2.69	2.25
13	n-hexane	1.45	1.15
14	branched C6 alkane(s)	1.53	1.23
15	2,2-dimethyl butane	1.33	1.11
16	2,3-dimethyl butane	1.14	0.91
17	2-methyl pentane	1.80	1.41
18	3-methyl pentane	2.07	1.70
19	C6 cycloalkane(s)	1.46	1.16
20	cyclohexane	1.46	1.16
21	isopropyl cyclopropane	1.52	1.15
22	methyl cyclopentane	2.42	2.06
23	unspeciated C6 alkane(s)	1.48	1.27
24	n-heptane	1.28	0.99
25	2,2,3-trimethyl butane	1.32	1.06
26	2,2-dimethyl pentane	1.22	1.05
27	2,3-dimethyl pentane	1.55	1.26
28	2,4-dimethyl pentane	1.65	1.46
29	2-methyl hexane	1.37	1.10
30	3,3-dimethyl pentane	1.32	1.13
31	3-methyl hexane	1.86	1.51
32	3-ethyl pentane*	1.79	1.79
33	branched C7 alkane(s)	1.63	1.39
34	1,1-dimethyl cyclopentane*	1.01	1.01
35	1,2-dimethyl cyclopentane*	1.87	1.87
36	C7 cycloalkane(s)	1.99	1.58
37	1,3-dimethyl cyclopentane	2.15	1.82
38	cycloheptane	2.26	1.83
39	ethyl cyclopentane	2.27	1.89
40	methyl cyclohexane	1.99	1.58
41	unspeciated C7 alkane(s)	1.79	1.28
42	n-octane	1.11	0.82
43	branched C8 alkane(s)	1.57	1.35
44	2,2,3,3-tetramethyl butane	0.44	0.31
45	2,2,4-trimethyl pentane	1.44	1.20
46	2,2-dimethyl hexane	1.13	0.95

47	2,3,4-trimethyl pentane	1.23	0.96
48	2,3-dimethyl hexane	1.34	1.11
49	2,4-dimethyl hexane	1.80	1.62
50	2,5-dimethyl hexane	1.68	1.36
51	2-methyl heptane	1.20	0.99
52	3-methyl heptane	1.35	1.15
53	4-methyl heptane	1.48	1.16
54	2,3,3-trimethyl pentane*	0.95	0.95
55	3,3-dimethyl hexane*	1.16	1.16
56	2,2,3-trimethyl pentane*	1.15	1.15
57	3,4-dimethyl hexane*	1.41	1.41
58	3-ethyl 2-methyl pentane*	1.25	1.25
59	C8 bicycloalkane(s)	1.75	1.41
60	1,1,2-trimethyl cyclopentane*	1.04	1.04
61	1,1,3-trimethyl cyclopentane*	0.94	0.94
62	1,1-dimethyl cyclohexane*	1.13	1.13
63	1,2,3-trimethyl cyclopentane*	1.52	1.52
64	1,2,4-trimethyl cyclopentane*	1.43	1.43
65	1-methyl-3-ethyl cyclopentane*	1.53	1.53
66	1,2-dimethyl cyclohexane*	1.30	1.30
67	1,4-dimethyl cyclohexane*	1.51	1.51
68	C8 cycloalkane(s)	1.75	1.37
69	1,3-dimethyl cyclohexane	1.72	1.41
70	cyclooctane	1.73	1.35
71	ethyl cyclohexane	1.75	1.37
72	propyl cyclopentane	1.91	1.57
73	unspeciated C8 alkane(s)	1.64	1.19
74	n-nonane	0.95	0.71
75	branched C9 alkane(s)	1.25	1.05
76	2,2,5-trimethyl hexane	1.33	1.06
77	2,3,5-trimethyl hexane	1.33	1.14
78	2,4-dimethyl heptane	1.48	1.29
79	2-methyl octane	0.96	0.75
80	3,3-diethyl pentane	1.35	1.14
81	3,5-dimethyl heptane	1.63	1.45
82	4-ethyl heptane	1.44	1.13
83	4-methyl octane	1.08	0.87
84	2,4,4-trimethyl hexane*	1.26	1.26
85	3,3-dimethyl heptane*	1.05	1.05
86	4,4-dimethyl heptane*	1.19	1.19
87	2,2-dimethyl heptane*	0.93	0.93
88	2,2,4-trimethyl hexane*	1.19	1.19
89	2,6-dimethyl heptane*	0.96	0.96
90	2,3-dimethyl heptane*	1.01	1.01
91	2,5-dimethyl heptane*	1.25	1.25
92	3-methyl octane*	0.91	0.91
93	3,4-dimethyl heptane*	1.15	1.15
94	3-ethyl heptane*	1.01	1.01
95	*cis*-hydrindane; bicyclo[4.3.0]nonane*	1.20	1.20
96	C9 bicycloalkane(s)	1.57	1.28

97	1,2,3-trimethyl cyclohexane*	1.12	1.12
98	1,3,5-trimethyl cyclohexane*	1.06	1.06
99	1,1,3-trimethyl cyclohexane	1.37	1.11
100	1-ethyl-4-methyl cyclohexane	1.62	1.33
101	propyl cyclohexane	1.47	1.19
102	C9 cycloalkane(s)	1.55	1.26
103	unspeciated C9 alkane(s)	2.13	0.99
104	n-decane; n-C10	0.83	0.62
105	branched C10 alkane(s)	1.09	0.86
106	2,4,6-trimethyl heptane*	1.20	1.20
107	2,4-dimethyl octane	1.09	0.95
108	2,6-dimethyl octane	1.27	1.00
109	2-methyl nonane	0.86	0.65
110	3,4-diethyl hexane	1.20	0.83
111	3-methyl nonane	0.89	0.68
112	4-methyl nonane	0.99	0.78
113	4-propyl heptane	1.24	0.94
114	2,4,4-trimethyl heptane*	1.23	1.23
115	2,5,5-trimethyl heptane*	1.17	1.17
116	3,3-dimethyl octane*	1.01	1.01
117	4,4-dimethyl octane*	1.06	1.06
118	2,2-dimethyl octane*	0.77	0.77
119	2,2,4-trimethyl heptane*	1.09	1.09
120	2,2,5-trimethyl heptane*	1.18	1.18
121	2,3,6-trimethyl heptane*	0.82	0.82
122	2,3-dimethyl octane*	0.79	0.79
123	2,5-dimethyl octane*	0.94	0.94
124	2-methyl-3-ethyl heptane*	0.91	0.91
125	4-ethyl octane*	0.71	0.71
126	C10 bicycloalkane(s)	1.29	1.00
127	isobutyl cyclohexane; (2-methylpropyl) cyclohexane*	0.90	0.90
128	sec-butyl cyclohexane*	0.90	0.90
129	C10 cycloalkane(s)	1.27	0.99
130	1,3-diethyl cyclohexane	1.34	1.16
131	1,4-diethyl cyclohexane	1.49	1.14
132	1-methyl-3-isopropyl cyclohexane	1.26	0.92
133	butyl cyclohexane	1.07	0.90
134	unspeciated C10 alkane(s)	1.16	0.82
135	n-undecane; n-C11	0.74	0.55
136	branched C11 alkane(s)	0.87	0.66
137	2,3,4,6-tetramethyl heptane	1.26	1.03
138	2,6-dimethyl nonane	0.95	0.72
139	3,5-diethyl heptane	1.21	1.02
140	3-methyl decane	0.77	0.58
141	4-methyl decane	0.80	0.61
142	C11 bicycloalkane(s)	1.01	0.83
143	C11 cycloalkane(s)	0.99	0.82
144	1,3-diethyl-5-methyl cyclohexane	1.11	0.96
145	1-ethyl-2-propyl cyclohexane	0.95	0.73
146	pentyl cyclohexane	0.91	0.77

147	unspeciated C11 alkane(s)	0.90	0.67
148	n-dodecane; n-C12	0.66	0.50
149	branched C12 alkane(s)	0.80	0.56
150	2,3,5,7-tetramethyl octane	1.06	0.84
151	2,6-diethyl octane	1.09	0.89
152	3,6-dimethyl decane	0.88	0.62
153	3-methyl undecane	0.70	0.53
154	5-methyl undecane	0.72	0.49
155	C12 tricycloalkane(s)*	0.74	0.74
156	C12 bicycloalkane(s)	0.88	0.73
157	C12 cycloalkane(s)	0.87	0.72
158	1,3,5-triethyl cyclohexane	1.06	0.94
159	1-methyl-4-pentyl cyclohexane	0.81	0.65
160	hexyl cyclohexane	0.75	0.57
161	unspeciated C12 alkane(s)	0.81	0.61
162	n-tridecane; n-C-13	0.62	0.47
163	branched C13 alkane(s)	0.73	0.54
164	2,3,6-trimethyl 4-isopropyl heptane	1.24	0.85
165	2,4,6,8-tetramethyl nonane	0.94	0.69
166	3,6-dimethyl undecane	0.82	0.62
167	3,7-diethyl nonane	1.08	0.81
168	3-methyl dodecane	0.64	0.49
169	5-methyl dodecane	0.64	0.41
170	C13 tricycloalkane(s)*	0.64	0.64
171	C13 bicycloalkane(s)	0.79	0.64
172	C13 cycloalkane(s)	0.78	0.63
173	1,3-diethyl-5-propyl cyclohexane	0.96	0.89
174	1-methyl-2-hexyl cyclohexane	0.70	0.52
175	heptyl cyclohexane	0.66	0.49
176	unspeciated C13 alkane(s)	0.73	0.56
177	n-tetradecane; n-C14	0.58	0.46
178	branched C14 alkane(s)	0.67	0.49
179	2,4,5,6,8-pentamethyl nonane	1.11	0.87
180	2-methyl 3,5-diisopropyl heptane	0.78	0.49
181	3,7-dimethyl dodecane	0.74	0.56
182	3,8-diethyl decane	0.68	0.53
183	3-methyl tridecane	0.57	0.45
184	6-methyl tridecane	0.62	0.40
185	C14 tricycloalkane(s)*	0.60	0.60
186	C14 bicycloalkane(s)	0.71	0.59
187	C14 cycloalkane(s)	0.71	0.59
188	1,3-dipropyl-5-ethyl cyclohexane	0.94	0.84
189	*trans*-1-methyl-4-heptyl cyclohexane	0.58	0.47
190	octyl cyclohexane	0.60	0.45
191	unspeciated C14 alkane(s)	0.67	0.52
192	n-pentadecane; n-C15	0.53	0.44
193	branched C15 alkane(s)	0.60	0.45
194	2,6,8-trimethyl 4-isopropyl nonane	0.76	0.57
195	3,7-dimethyl tridecane	0.64	0.50
196	3,9-diethyl undecane	0.62	0.46

197	3-methyl tetradecane	0.53	0.43
198	6-methyl tetradecane	0.57	0.37
199	C15 tricycloalkane(s)*	0.56	0.56
200	C15 bicycloalkane(s)	0.69	0.56
201	C15 cycloalkane(s)	0.68	0.55
202	1,3,5-tripropyl cyclohexane	0.90	0.81
203	1-methyl-2-octyl cyclohexane	0.60	0.45
204	nonyl cyclohexane	0.54	0.41
205	1,3-diethyl-5-pentyl cyclohexane	0.99	0.61
206	unspeciated C15 alkane(s)	0.61	0.49
207	n-hexadecane; n-C16	0.52	0.39
208	branched C16 alkane(s)	0.54	0.42
209	2,7-dimethyl 3,5-diisopropyl heptane	0.69	0.47
210	3-methyl pentadecane	0.50	0.41
211	4,8-dimethyl tetradecane	0.55	0.44
212	7-methyl pentadecane	0.51	0.40
213	C16 tricycloalkane(s)*	0.53	0.53
214	C16 bicycloalkane(s)*	0.52	0.52
215	C16 cycloalkane(s)	0.61	0.49
216	1,3-propyl-5-butyl cyclohexane	0.77	0.69
217	1-methyl-4-nonyl cyclohexane	0.55	0.41
218	decyl cyclohexane	0.50	0.38
219	unspeciated C16 alkane(s)	0.55	0.45
220	n-heptadecane; n-C17	0.49	0.37
221	branched C17 alkane(s)	0.51	0.40
222	C17 tricycloalkane(s)*	0.50	0.50
223	C17 bicycloalkane(s)*	0.49	0.49
224	C17 cycloalkane(s)*	0.46	0.46
225	unspeciated C17 alkane(s)	0.52	0.43
226	n-octodecane; n-C18	0.44	0.35
227	branched C18 alkane(s)	0.48	0.37
228	C18 tricycloalkane(s)*	0.47	0.47
229	C18 bicycloalkane(s)*	0.46	0.46
230	C18 cycloalkane(s)*	0.44	0.44
231	unspeciated C18 alkane(s)	0.49	0.40
232	n-nonadecane; n-C19	0.44	0.33
233	branched C19 alkane(s)*	0.35	0.35
234	C19 tricycloalkane(s)*	0.44	0.44
235	C19 bicycloalkane(s)*	0.44	0.44
236	C19 cycloalkane(s)*	0.42	0.42
237	n-eicosane; icosane; n-C20	0.42	0.31
238	branched C20 alkane(s)*	0.34	0.34
239	C20 tricycloalkane(s)*	0.42	0.42
240	C20 bicycloalkane(s)*	0.42	0.42
241	C20 cycloalkane(s)*	0.39	0.39
242	n-henicosane; n-C21	0.40	0.30
243	branched C21 alkane(s)*	0.32	0.32
244	C21 tricycloalkane(s)*	0.40	0.40
245	C21 bicycloalkane(s)*	0.40	0.40
246	C21 cycloalkane(s)*	0.38	0.38

247	n-docosane, n-C22	0.38	0.29
248	branched C22 alkane(s)*	0.31	0.31
249	C22 tricycloalkane(s)*	0.38	0.38
250	C22 bicycloalkane(s)*	0.38	0.38
251	C22 cycloalkane(s)*	0.36	0.36
	Alkenes		
252	ethene	9.08	8.76
253	propene	11.58	11.37
254	1,2-propadiene; allene*	8.11	8.11
255	1-butene	10.29	9.42
256	C4 terminal alkenes	10.29	9.42
257	isobutene	6.35	6.14
258	*cis*-2-butene	13.22	13.89
259	*trans*-2-butene	13.91	14.79
260	C4 internal alkenes	13.57	14.34
261	1,2-butadiene*	9.03	9.03
262	1,3-butadiene	13.58	12.21
263	C4 alkenes	11.93	11.88
264	1-pentene	7.79	6.97
265	3-methyl-1-butene	6.99	6.76
266	C5 terminal alkenes	7.79	6.97
267	2-methyl-1-butene	6.51	6.23
268	2-methyl-2-butene	14.45	13.72
269	*cis*-2-pentene	10.24	10.07
270	*trans*-2-pentene	10.23	10.25
271	2-pentenes	10.23	10.16
272	C5 internal alkenes	10.23	10.16
273	cyclopentene	7.38	6.55
274	*trans*-1,3-pentadiene*	12.10	12.10
275	*cis*-1,3-pentadiene*	12.10	12.10
276	1,4-pentadiene*	8.92	8.92
277	1,2-pentadiene*	7.59	7.59
278	3-methyl-1,2-butadiene*	9.95	9.95
279	isoprene; 2-methyl-1,3-butadiene	10.69	10.28
280	cyclopentadiene	7.61	6.75
281	C5 alkenes	9.01	8.57
282	1-hexene	6.17	5.28
283	3,3-dimethyl-1-butene	6.06	5.61
284	3-methyl-1-pentene	6.22	5.93
285	4-methyl-1-pentene	6.26	5.48
286	C6 terminal alkenes	6.17	5.28
287	2,3-dimethyl-1-butene	4.77	4.61
288	2-ethyl-1-butene	5.04	4.93
289	2-methyl-1-pentene	5.18	5.12
290	2,3-dimethyl-2-butene	13.32	12.13
291	2-methyl-2-pentene	12.28	10.70
292	*cis* 4-methyl-2-pentene*	7.88	7.88
293	*cis*-2-hexene	8.44	8.06
294	*cis*-3-hexene	8.22	7.33
295	*cis*-3-methyl-2-pentene	12.84	12.15

296	*trans*-3-methyl-2-pentene*	14.17	12.81
297	*trans*-4-methyl-2-pentene*	7.88	7.88
298	*trans*-2-hexene	8.44	8.37
299	*trans*-3-hexene	8.16	7.30
300	2-hexenes	8.44	8.21
301	C6 internal alkenes	8.44	8.21
302	3-methyl cyclopentene*	4.92	4.92
303	1-methyl cyclopentene	13.95	12.11
304	cyclohexene	5.45	4.81
305	*trans*,*trans*-2,4-hexadiene*	8.57	8.57
306	*trans*-1,3-hexadiene*	10.03	10.03
307	*trans*-1,4-hexadiene*	8.36	8.36
308	C6 cyclic olefins or di-olefins	8.65	8.41
309	C6 alkenes	6.88	6.75
310	*trans*-4-methyl-2-hexene	7.88	6.96
311	*trans*-3-methyl-2-hexene	14.17	9.80
312	2,3-dimethyl-2-hexene	10.41	8.28
313	1-heptene	4.20	4.25
314	3,4-dimethyl-1-pentene*	4.66	4.66
315	3-methyl-1-hexene*	4.24	4.24
316	2,4-dimethyl-1-pentene*	5.81	5.81
317	2,3-dimethyl-1-pentene*	4.97	4.97
318	3,3-dimethyl-1-pentene*	4.71	4.71
319	2-methyl-1-hexene*	4.92	4.92
320	2,3,3-trimethyl-1-butene	4.62	4.33
321	C7 terminal alkenes	4.20	4.25
322	4,4-dimethyl-cis-2-pentene*	6.45	6.45
323	2,4-dimethyl-2-pentene*	9.03	9.03
324	2-methyl-2-hexene*	9.22	9.22
325	3-ethyl-2-pentene*	9.49	9.49
326	3-methyl-*trans*-3-hexene*	9.44	9.44
327	*cis*-2-heptene*	6.94	6.94
328	2-methyl-*trans*-3-hexene*	6.03	6.03
329	3-methyl-*cis*-3-hexene*	9.44	9.44
330	3,4-dimethyl-*cis*-2-pentene*	8.91	8.91
331	2,3-dimethyl-2-pentene*	10.41	9.45
332	*cis*-3-heptene	6.96	6.10
333	*trans*-4,4-dimethyl-2-pentene	6.99	6.45
334	*trans*-2-heptene	7.33	6.92
335	*trans*-3-heptene	6.96	6.09
336	*cis*-3-methyl-2-hexene	13.38	9.80
337	2-heptenes	6.96	6.09
338	C7 internal alkenes	6.96	6.09
339	1-methyl cyclohexene	7.81	6.41
340	4-methyl cyclohexene	4.48	4.02
341	C7 cyclic olefins or di-olefins	7.49	7.07
342	C7 alkenes	5.76	5.17
343	1-octene	3.45	3.12
344	C8 terminal alkenes	3.45	3.12
345	2,4,4-trimethyl-1-pentene*	3.24	3.24

346	3-methyl-2-isopropyl-1-butene	3.29	3.17
347	*trans*-2-octene*	5.81	5.81
348	2-methyl-2-heptene*	8.10	8.10
349	*cis*-4-octene	5.94	4.55
350	*trans*-2,2-dimethyl 3-hexene	5.97	4.81
351	*trans*-2,5-dimethyl 3-hexene	5.44	4.63
352	*trans*-3-octene	6.13	5.14
353	*trans*-4-octene	5.90	4.63
354	3-octenes	6.13	5.14
355	C8 internal alkenes	5.90	4.63
356	2,4,4-trimethyl-2-pentene	8.52	6.13
357	1,2-dimethyl cyclohexene	6.77	5.43
358	C8 cyclic olefins or di-olefins	6.01	4.71
359	C8 alkenes	4.68	3.88
360	1-nonene	2.76	2.48
361	C9 terminal alkenes	2.76	2.48
362	4,4-dimethyl-1-pentene*	3.00	3.00
363	4-nonene*	4.37	4.37
364	3-nonenes	5.31	4.37
365	C9 internal alkenes	5.31	4.37
366	*trans*-4-nonene	5.23	4.37
367	C9 cyclic olefins or di-olefins	5.40	4.44
368	C9 alkenes	4.03	3.43
369	1-decene	2.28	2.07
370	C10 terminal alkenes	2.28	2.07
371	3,4-diethyl-2-hexene	3.95	3.25
372	*cis*-5-decene	4.89	3.52
373	*trans*-4-decene	4.50	3.72
374	C10 3-alkenes	4.50	3.72
375	C10 internal alkenes	4.50	3.72
376	C10 cyclic olefins or di-olefins	4.56	3.78
377	3-carene	3.21	3.13
378	α-pinene	4.29	4.38
379	β-pinene	3.28	3.38
380	*d*-limonene	3.99	4.40
381	sabinene	3.67	4.01
382	terpinolene*	6.16	6.16
383	camphene*	4.38	4.38
384	terpene (monoterpenes)	3.79	3.91
385	C10 alkenes	3.39	3.17
386	1-undecene	1.95	1.78
387	C11 terminal alkenes	1.95	1.78
388	*trans*-5-undecene	4.23	3.46
389	C11 3-alkenes	4.23	3.46
390	C11 internal alkenes	4.23	3.46
391	C11 cyclic olefins or di-olefins	4.29	3.50
392	C11 alkenes	3.09	2.62
393	C12 terminal alkenes	1.72	1.56
394	1-dodecene	1.72	1.56
395	C12 2-alkenes	3.75	3.02

396	C12 3-alkenes	3.75	3.02
397	C12 internal alkenes	3.75	3.02
398	*trans*-5-dodecene	3.74	3.02
399	C12 cyclic olefins or di-olefins	3.79	3.05
400	C12 alkenes	2.73	2.29
401	1-tridecene	1.55	1.41
402	C13 terminal alkenes	1.55	1.41
403	*trans*-5-tridecene	3.38	2.49
404	C13 3-alkenes	3.38	2.49
405	C13 internal alkenes	3.38	2.49
406	C13 cyclic olefins or di-olefins	3.42	2.51
407	C13 alkenes	2.46	1.95
408	1-tetradecene	1.41	1.27
409	C14 terminal alkenes	1.41	1.27
410	*trans*-5-tetradecene	3.08	2.26
411	C14 3-alkenes	3.08	2.26
412	C14 internal alkenes	3.08	2.26
413	C14 cyclic olefins or di-olefins	3.11	2.29
414	C14 alkenes	2.28	1.77
415	1-pentadecene	1.27	1.19
416	C15 terminal alkenes	1.27	1.19
417	*trans*-5-pentadecene	2.82	2.08
418	C15 3-alkenes	2.82	2.08
419	C15 internal alkenes	2.82	2.08
420	C15 cyclic olefins or di-olefins	2.85	2.10
421	C15 alkenes	2.06	1.63
	Aromatic Hydrocarbons		
422	benzene	0.81	0.69
423	toluene	3.97	3.88
424	ethyl benzene	2.79	2.93
425	*m*-xylene	10.61	9.52
426	*o*-xylene	7.49	7.44
427	*p*-xylene	4.25	5.69
428	C8 disubstituted benzenes	7.48	7.57
429	isomers of ethylbenzene	5.16	6.39
430	styrene	1.95	1.65
431	unspeciated C8 aromatics*	7.42	7.42
432	C9 monosubstituted benzenes	2.20	1.95
433	n-propyl benzene	2.20	1.95
434	isopropyl benzene; cumene	2.32	2.43
435	C9 disubstituted benzenes	6.61	5.65
436	*m*-ethyl toluene	9.37	7.21
437	*o*-ethyl toluene	6.61	5.43
438	*p*-ethyl toluene	3.75	4.32
439	C9 trisubstituted benzenes	9.90	10.58
440	1,2,3-trimethyl benzene	11.26	11.66
441	1,2,4-trimethyl benzene	7.18	8.64
442	1,3,5-trimethyl benzene	11.22	11.44
443	isomers of propyl benzene	6.12	6.06
444	indene	3.21	1.48

445	indane	3.17	3.20
446	allylbenzene*	1.45	1.45
447	α-methyl styrene	1.72	1.45
448	C9 styrenes	1.72	1.45
449	β-methyl styrene*	0.95	0.95
450	unspeciated C9 aromatics*	7.92	7.92
451	C10 monosubstituted benzenes	1.97	2.27
452	n-butyl benzene	1.97	2.27
453	sec-butyl benzene	1.97	2.27
454	tert-butyl benzene*	1.89	1.89
455	*o*-cymene; 1-methyl-2-(1-methylethyl) benzene*	5.34	5.34
456	1-methyl-2-n-propyl benzene*	5.34	5.34
457	*m*-cymene; 1-methyl-3-(1-methylethyl) benzene*	6.92	6.92
458	1-methyl-3-n-propyl benzene*	6.92	6.92
459	1-methyl-4-n-propyl benzene*	4.31	4.31
460	C10 disubstituted benzenes	5.92	5.53
461	*m*-C10 disubstituted benzenes*	6.92	6.92
462	*o*-C10 disubstituted benzenes*	5.34	5.34
463	*p*-C10 disubstituted benzenes*	4.31	4.31
464	*m*-diethyl benzene	8.39	6.92
465	*o*-diethyl benzene	5.92	5.34
466	1-methyl-4-isopropyl benzene; *p*-cymene*	4.32	4.32
467	*p*-diethyl benzene	3.36	4.31
468	1,2,3-C10 trisubstituted benzenes*	9.89	9.89
469	1,2,4-C10 trisubstituted benzenes*	7.35	7.35
470	1,3,5-C10 trisubstituted benzenes*	9.80	9.80
471	1,2,3,4-tetramethyl benzene*	9.01	9.01
472	1,2,4,5-tetramethyl benzene*	9.01	9.01
473	1,2-dimethyl-3-ethyl benzene*	9.89	9.89
474	1,2-dimethyl-4-ethyl benzene *	7.35	7.35
475	1,3-dimethyl-2-ethyl benzene *	9.89	9.89
476	1,3-dimethyl-4-ethyl benzene*	7.35	7.35
477	1,3-dimethyl-5-ethyl benzene*	9.80	9.80
478	1,4-dimethyl-2-ethyl benzene*	7.35	7.35
479	1,2,3,5-tetramethyl benzene	8.25	9.01
480	C10 trisubstituted benzenes	8.86	9.01
481	C10 tetrasubstituted benzenes	8.86	9.01
482	butylbenzenes	5.48	5.60
483	methyl indanes	2.83	2.86
484	tetralin; 1,2,3,4-tetrahydronaphthalene	2.83	2.86
485	naphthalene	3.26	3.24
486	C10 styrenes	1.53	1.30
487	unspeciated C10 aromatics	5.48	7.03
488	n-pentyl benzene*	2.04	2.04
489	C11 monosubstituted benzenes	1.78	2.04
490	*m*-C11 disubstituted benzenes*	5.98	5.98
491	*o*-C11 disubstituted benzenes*	4.60	4.60
492	*p*-C11 disubstituted benzenes*	3.77	3.77
493	1-butyl-2-methyl benzene*	4.60	4.60
494	1-ethyl-2-n-propyl benzene*	4.60	4.60

495	*o*-tert-butyl toluene; 1-(1,1-dimethylethyl)-2-methyl benzene*	4.60	4.60
496	1-methyl-3-n-butyl benzene*	5.98	5.98
497	*p*-isobutyl toluene; 1-methyl-4-(2-methylpropyl) benzene*	3.77	3.77
498	C11 disubstituted benzenes	5.35	4.79
499	1,2,3-C11 trisubstituted benzenes*	8.64	8.64
500	1,2,4-C11 trisubstituted benzenes*	6.44	6.44
501	1,3,5-C11 trisubstituted benzenes*	8.65	8.65
502	pentamethyl benzene*	7.91	7.91
503	1-methyl-3,5-diethyl benzene*	8.65	8.65
504	C11 trisubstituted benzenes	8.03	7.91
505	C11 tetrasubstituted benzenes	8.03	7.91
506	C11 pentasubstituted benzenes	8.03	7.91
507	pentyl benzenes	4.96	4.75
508	C11 tetralins or indanes	2.56	2.58
509	methyl naphthalenes	4.61	2.96
510	1-methyl naphthalene	4.61	2.96
511	2-methyl naphthalene	4.61	2.96
512	unspeciated C11 aromatics	4.96	6.82
513	C12 monosubstituted benzenes	1.63	1.83
514	*m*-C12 disubstituted benzenes*	5.35	5.35
515	*o*-C12 disubstituted benzenes*	4.11	4.11
516	*p*-C12 disubstituted benzenes*	3.38	3.38
517	1,3-di-n-propyl benzene*	4.11	4.11
518	1,4 di-isopropyl benzene*	3.38	3.38
519	3-isopropyl cumene; 1,3-di-isopropyl benzene*	5.35	5.35
520	C12 disubstituted benzenes	4.90	4.28
521	1,2,3-C12 trisubstituted benzenes*	7.74	7.74
522	1,2,4-C12 trisubstituted benzenes*	5.78	5.78
523	1,3,5-C12 trisubstituted benzenes*	7.79	7.79
524	1-(1,1-dimethylethyl)-3,5-dimethylbenzene*	7.79	7.79
525	C12 trisubstituted benzenes	7.33	7.10
526	C12 tetrasubstituted benzenes	7.33	7.10
527	C12 pentasubstituted benzenes	7.33	7.10
528	C12 hexasubstituted benzenes	7.33	7.10
529	hexyl benzenes	4.53	4.26
530	C12 tetralins or indanes	2.33	2.36
531	1-ethyl naphthalene*	2.69	2.69
532	C12 naphthalenes*	3.76	3.76
533	C12 monosubstituted naphthalene	4.20	2.69
534	C12 disubstituted naphthalenes	5.54	4.84
535	2,3-dimethyl naphthalene	5.54	4.84
536	dimethyl naphthalenes	5.54	4.84
537	unspeciated C12 aromatics	4.53	6.02
538	C13 monosubstituted benzenes	1.50	1.67
539	*m*-C13 disubstituted benzenes*	4.80	4.80
540	*o*-C13 disubstituted benzenes*	3.67	3.67
541	*p*-C13 disubstituted benzenes*	3.03	3.03
542	C13 disubstituted benzenes	4.50	3.84
543	1,2,3-C13 trisubstituted benzenes*	6.94	6.94
544	1,2,4-C13 trisubstituted benzenes*	5.20	5.20

545	1,3,5-C13 trisubstituted benzenes*	7.04	7.04
546	C13 trisubstituted benzenes	6.75	6.39
547	C13 tetralins or indanes*	2.17	2.17
548	C13 naphthalenes*	3.45	3.45
549	C13 monosubstituted naphthalene	3.86	2.47
550	C13 disubstituted naphthalenes	5.08	4.44
551	C13 trisubstituted naphthalenes	5.08	4.44
552	unspeciated C13 aromatics*	4.88	4.88
553	C14 monosubstituted benzenes*	1.53	1.53
554	*m*-C14 disubstituted benzenes*	4.32	4.32
555	*o*-C14 disubstituted benzenes*	3.30	3.30
556	*p*-C14 disubstituted benzenes*	2.75	2.75
557	C14 disubstituted benzenes*	3.46	3.46
558	1,2,3-C14 trisubstituted benzenes*	6.31	6.31
559	1,2,4-C14 trisubstituted benzenes*	4.75	4.75
560	1,3,5-C14 trisubstituted benzenes*	6.44	6.44
561	C14 trisubstituted benzenes*	5.84	5.84
562	C14 tetralins or indanes*	2.01	2.01
563	C14 naphthalenes*	3.19	3.19
564	unspeciated C14 aromatics*	3.93	3.93
565	C15 monosubstituted benzenes*	1.42	1.42
566	C15 disubstituted benzenes*	3.15	3.15
567	*m*-C15 disubstituted benzenes*	3.93	3.93
568	*o*-C15 disubstituted benzenes*	3.00	3.00
569	*p*-C15 disubstituted benzenes*	2.51	2.51
570	C15 trisubstituted benzenes*	5.35	5.35
571	1,2,3-C15 trisubstituted benzenes*	5.77	5.77
572	1,2,4-C15 trisubstituted benzenes*	4.35	4.35
573	1,3,5-C15 trisubstituted benzenes*	5.92	5.92
574	C15 tetralins or indanes*	1.87	1.87
575	C15 naphthalenes*	2.97	2.97
576	unspeciated C15 aromatics*	3.35	3.35
577	C16 monosubstituted benzenes*	1.32	1.32
578	*m*-C16 disubstituted benzenes*	3.60	3.60
579	*o*-C16 disubstituted benzenes*	2.74	2.74
580	*p*-C16 disubstituted benzenes*	2.30	2.30
581	C16 disubstituted benzenes*	2.88	2.88
582	1,2,3-C16 trisubstituted benzenes*	5.31	5.31
583	1,2,4-C16 trisubstituted benzenes*	4.01	4.01
584	1,3,5-C16 trisubstituted benzenes*	5.47	5.47
585	C16 trisubstituted benzenes*	4.93	4.93
586	C16 tetralins or indanes*	1.75	1.75
587	C16 naphthalenes*	2.77	2.77
588	unspeciated C16 aromatics*	2.96	2.96
589	C17 monosubstituted benzenes*	1.24	1.24
590	C17 disubstituted benzenes*	2.71	2.71
591	C17 trisubstituted benzenes*	4.63	4.63
592	C17 tetralins or indanes*	1.64	1.64
593	C17 naphthalenes*	2.60	2.60
594	C18 monosubstituted benzenes*	1.17	1.17

595	C18 disubstituted benzenes*	2.55	2.55
596	C18 trisubstituted benzenes*	4.37	4.37
597	C18 tetralins or indanes*	1.55	1.55
598	C18 naphthalenes*	2.45	2.45
599	C19 monosubstituted benzenes*	1.11	1.11
600	C19 disubstituted benzenes*	2.42	2.42
601	C19 trisubstituted benzenes*	4.13	4.13
602	C19 tetralins or indanes*	1.46	1.46
603	C19 naphthalenes*	2.31	2.31
604	C20 monosubstituted benzenes*	1.05	1.05
605	C20 disubstituted benzenes*	2.29	2.29
606	C20 trisubstituted benzenes*	3.92	3.92
607	C20 tetralins or indanes*	1.39	1.39
608	C20 naphthalenes*	2.19	2.19
609	C21 monosubstituted benzenes*	1.00	1.00
610	C21 disubstituted benzenes*	2.18	2.18
611	C21 trisubstituted benzenes*	3.73	3.73
612	C21 tetralins or indanes*	1.32	1.32
613	C21 naphthalenes*	2.08	2.08
614	C22 monosubstituted benzenes*	0.96	0.96
615	C22 disubstituted benzenes*	2.08	2.08
616	C22 trisubstituted benzenes*	3.56	3.56
617	C22 tetralins or indanes*	1.26	1.26
618	C22 naphthalenes*	1.98	1.98
	Oxygenated Organics		
619	carbon monoxide	0.06	0.053
620	formaldehyde	8.97	9.24
621	methanol	0.71	0.65
622	formic acid	0.08	0.06
623	ethylene oxide	0.04	0.04
624	acetaldehyde	6.84	6.34
625	ethanol	1.69	1.45
626	dimethyl ether	0.93	0.76
627	glyoxal	14.22	12.13
628	methyl formate	0.06	0.05
629	acetic acid	0.50	0.66
630	glycolaldehyde*	4.96	4.96
631	ethylene glycol	3.36	3.01
632	glycolic acid	2.67	2.32
633	peroxyacetic acid	12.62	0.52
634	acrolein	7.60	7.24
635	trimethylene oxide	5.22	4.32
636	propylene oxide	0.32	0.28
637	propionaldehyde	7.89	6.83
638	acetone	0.43	0.35
639	isopropyl alcohol	0.71	0.59
640	n-propyl alcohol	2.74	2.38
641	acrylic acid	11.66	11.10
642	methyl glyoxal	16.21	16.02
643	1,3-dioxolane	5.47	4.73

644	ethyl formate	0.52	0.45
645	methyl acetate	0.07	0.07
646	propionic acid	0.79	1.17
647	hydroxy acetone	3.08	3.15
648	propylene glycol	2.75	2.48
649	dimethoxy methane	1.04	0.89
650	2-methoxy ethanol	2.98	2.83
651	dimethyl carbonate	0.06	0.06
652	dihydroxy acetone	4.02	3.89
653	glycerol	3.27	3.05
654	furan	16.54	8.86
655	crotonaldehyde	10.07	9.14
656	methacrolein	6.23	5.84
657	cyclobutanone	0.68	0.59
658	methylvinyl ketone	8.73	9.39
659	tetrahydrofuran	4.95	4.10
660	1,2-epoxy butane	1.02	0.86
661	2-methyl propanal	5.87	5.05
662	butanal	6.74	5.75
663	C4 aldehydes	6.74	5.75
664	methyl ethyl ketone	1.49	1.43
665	isobutyl alcohol	2.24	2.41
666	n-butyl alcohol	3.34	2.76
667	sec-butyl alcohol	1.60	1.30
668	tert-butyl alcohol	0.45	0.39
669	diethyl ether	4.01	3.61
670	gamma-butyrolactone	1.15	0.90
671	methacrylic acid	18.78	18.04
672	methyl acrylate	12.24	11.21
673	vinyl acetate	3.26	3.11
674	hydroxyl-methacrolein	6.61	6.04
675	biacetyl	20.73	19.43
676	1,4-dioxane	2.71	2.48
677	ethyl acetate	0.64	0.59
678	methyl propionate	0.71	0.63
679	n-propyl formate	0.93	0.73
680	isopropyl formate	0.42	0.35
681	isobutyric acid	1.22	1.15
682	butanoic acid	1.78	1.75
683	methoxy-acetone	2.14	1.94
684	1,3-butanediol*	3.21	3.21
685	1,2-butandiol	2.21	2.43
686	1,4-butanediol	3.22	2.61
687	2,3-butanediol*	4.23	4.23
688	1-methoxy-2-propanol	2.62	2.33
689	2-ethoxy-ethanol	3.78	3.57
690	2-methoxy-1-propanol	3.01	2.92
691	3-methoxy-1-propanol	4.01	3.71
692	propylene carbonate	0.25	0.27
693	methyl lactate	2.75	2.59

694	diethylene glycol	3.55	3.23
695	malic acid	7.51	6.77
696	2-methyl furan*	8.02	8.02
697	3-methyl furan*	6.64	6.64
698	cyclopentanone	1.43	1.08
699	C5 cyclic ketones	1.43	1.08
700	cyclopentanol	1.96	1.65
701	α-methyl tetrahydrofuran	4.62	3.78
702	tetrahydropyran	3.81	3.05
703	2-methyl-3-butene-2-ol	5.12	4.73
704	2,2-dimethylpropanal; pivaldehyde	5.40	4.71
705	3-methylbutanal; isovaleraldehyde	5.52	4.79
706	pentanal; valeraldehyde	5.76	4.89
707	C5 aldehydes	5.76	4.89
708	2-pentanone	3.07	2.70
709	3-pentanone	1.45	1.18
710	C5 ketones	3.07	2.70
711	methyl isopropyl ketone	1.64	1.58
712	2-pentanol	1.74	1.54
713	3-pentanol	1.73	1.56
714	pentyl alcohol	3.35	2.71
715	isoamyl alcohol; 3-methyl-1-butanol	2.73	3.04
716	2-methyl-1-butanol	2.60	2.30
717	ethyl isopropyl ether	3.86	3.61
718	methyl n-butyl ether	3.66	2.99
719	methyl t-butyl ether	0.78	0.70
720	ethyl acrylate	8.78	7.55
721	methyl methacrylate	15.84	15.22
722	glutaraldehyde	4.79	4.14
723	lumped C5+ unsaturated carbonyl species*	6.18	6.18
724	2,4-pentanedione	1.02	0.98
725	tetrahydro-2-furanmethanol; tetrahydrofurfuryl alcohol	3.54	3.19
726	ethyl propionate	0.79	0.73
727	isopropyl acetate	1.12	1.03
728	methyl butyrate	1.18	1.04
729	methyl isobutyrate	0.70	0.58
730	n-butyl formate	0.95	0.77
731	propyl acetate	0.87	0.73
732	3-methyl butanoic acid	4.26	4.11
733	2,2-dimethoxy-propane	0.52	0.46
734	1-ethoxy-2-propanol	3.25	2.96
735	2-propoxy-ethanol	3.52	3.17
736	3-ethoxy-1-propanol	4.24	3.94
737	3-methoxy-1-butanol	0.97	3.75
738	2-methoxyethyl acetate	1.18	1.08
739	ethyl lactate	2.71	2.39
740	methyl isopropyl carbonate	0.69	0.59
741	2-(2-methoxyethoxy) ethanol	2.90	2.54
742	pentaerythritol	2.42	2.09
743	phenol	1.82	2.69

744	2-ethyl furan*	6.85	6.85
745	2,5-dimethyl furan*	7.60	7.60
746	cyclohexanone	1.61	1.26
747	C6 cyclic ketones	1.61	1.26
748	mesityl oxide; 2-methyl-2-penten-4-one	17.37	6.31
749	cyclohexanol	2.25	1.84
750	hexanal	4.98	4.18
751	C6 aldehydes	4.98	4.18
752	4-methyl-2-pentanone	4.31	3.74
753	methyl n-butyl ketone	3.55	3.00
754	methyl tert-butyl ketone	0.78	0.62
755	C6 ketones	3.55	3.00
756	1-hexanol	2.74	2.56
757	2-hexanol	2.46	1.97
758	4-methyl-2-pentanol; methyl isobutyl carbinol	2.89	2.52
759	di-n-propyl ether	3.24	2.93
760	ethyl n-butyl ether	3.86	3.33
761	ethyl tert-butyl ether	2.11	1.93
762	methyl tert-amyl ether; TAME	2.14	1.61
763	diisopropyl ether	3.56	3.39
764	ethyl methacrylate*	12.15	12.15
765	ethyl butyrate	1.25	1.11
766	isobutyl acetate	0.67	0.58
767	methyl pivalate	0.39	0.33
768	n-butyl acetate	0.89	0.78
769	n-propyl propionate	0.93	0.79
770	sec-butyl acetate	1.43	1.25
771	tert-butyl acetate	0.20	0.17
772	diacetone alcohol	0.68	0.57
773	methyl pentanoate; methyl valerate*	1.00	1.00
774	1,2-dihydroxyhexane	2.75	2.45
775	2-methyl-2,4-pentanediol	1.04	1.39
776	ethylene glycol diethyl ether; 1,2-diethoxyethane	2.84	2.81
777	acetal (1,1-diethoxyethane)	3.68	3.43
778	1-propoxy-2-propanol; propylene glycol n-propyl ether	2.86	2.56
779	2-butoxy-ethanol	2.90	2.78
780	3 methoxy-3 methyl-butanol	1.74	1.46
781	n-propoxy-propanol	3.84	3.62
782	hydroxypropyl acrylate	5.56	4.74
783	1-methoxy-2-propyl acetate	1.71	1.62
784	2-ethoxyethyl acetate	1.90	1.75
785	2-methyoxy-1-propyl acetate	1.12	1.06
786	methoxypropanol acetate	1.97	1.76
787	2-(2-ethoxyethoxy) ethanol	3.19	3.11
788	dipropylene glycol isomer (1-[2-hydroxypropyl]-2-propanol)	2.48	2.20
789	dimethyl succinate	0.23	0.21
790	ethylene glycol diacetate	0.72	0.62
791	adipic acid; hexanedioic acid	3.37	2.94
792	triethylene glycol	3.41	3.11
793	benzaldehyde	0.00	0.00

794	C7 alkyl phenols	2.34	2.34
795	*m*-cresol	2.34	2.34
796	*p*-cresol	2.34	2.34
797	*o*-cresol	2.34	2.34
798	benzyl alcohol*	4.98	4.98
799	methoxybenzene; anisole*	6.49	6.49
800	C7 cyclic ketones	1.41	1.10
801	heptanal	4.23	3.54
802	C7 aldehydes	4.23	3.54
803	2-methyl-hexanal	3.97	3.40
804	2-heptanone	2.80	2.24
805	2-methyl-3-hexanone	1.79	1.45
806	di-isopropyl ketone	1.63	1.23
807	C7 ketones	2.80	2.24
808	5-methyl-2-hexanone	2.10	2.28
809	3-methyl-2-hexanone	2.81	2.43
810	1-heptanol	2.21	1.75
811	dimethylpentanol; 2,3-dimethyl-1-pentanol	2.51	2.13
812	4,4-diethyl-3-oxahexane	2.03	1.86
813	n-butyl acrylate	5.52	4.87
814	isobutyl acrylate	5.05	4.57
815	butyl propionate	0.89	0.79
816	amyl acetate; n-pentyl acetate	0.96	0.78
817	n-propyl butyrate	1.17	0.99
818	isoamyl acetate; 3-methyl-butyl acetate	1.18	1.02
819	2-methyl-1-butyl acetate	1.17	1.01
820	methyl hexanoate*	0.96	0.96
821	1-tert-butoxy-2-propanol	1.71	1.53
822	2-tert-butoxy-1-propanol	1.81	1.75
823	n-butoxy-2-propanol; propylene glycol n-butyl ether	2.70	2.59
824	ethyl 3-ethoxy propionate	3.61	3.46
825	diisopropyl carbonate	1.04	0.94
826	2-(2-propoxyethoxy) ethanol	3.00	2.71
827	dipropylene glycol methyl ether: 1-methoxy-2-(2-hydroxypropoxy)-propane	2.21	1.87
828	dipropylene glycol methyl ether: 2-(2-methoxypropoxy)-1-propanol	2.70	2.46
829	1,2-propylene glycol diacetate	0.94	0.58
830	dimethyl glutarate	0.51	0.39
831	2-[2-(2-methoxyethoxy) ethoxy] ethanol	2.62	2.44
832	tolualdehyde	0.00	0.00
833	4-vinyl phenol*	1.43	1.43
834	2,4-dimethyl phenol*	2.07	2.07
835	2,5-dimethyl phenol*	2.07	2.07
836	3,4-dimethyl phenol*	2.07	2.07
837	2,3-dimethyl phenol*	2.07	2.07
838	2,6-dimethyl phenol*	2.07	2.07
839	C8 alkyl phenols	2.07	2.07
840	β-phenethyl alcohol; 2-phenyl ethyl alcohol*	4.41	4.41
841	C8 cyclic ketones	1.25	0.98
842	2-butyl tetrahydrofuran	2.53	2.00

843	octanal	3.65	3.03
844	C8 aldehydes	3.65	3.03
845	2-octanone	1.66	1.31
846	C8 ketones	1.66	1.31
847	1-octanol	2.01	1.35
848	2-ethyl-1-hexanol	2.20	1.90
849	2-octanol	2.16	1.86
850	3-octanol	2.57	2.16
851	4-octanol	3.07	2.10
852	5-methyl-1-heptanol	1.95	1.70
853	di-isobutyl ether	1.29	1.12
854	di-n-butyl ether	3.17	2.70
855	2-phenoxyethanol; ethylene glycol phenyl ether	3.61	4.35
856	butyl methacrylate	9.09	8.47
857	isobutyl methacrylate	8.99	8.39
858	hexyl acetates*	0.74	0.74
859	2,3-dimethylbutyl acetate	0.84	0.70
860	2-methylpentyl acetate	1.11	0.91
861	3-methylpentyl acetate	1.31	1.00
862	4-methylpentyl acetate	0.92	0.76
863	isobutyl isobutyrate	0.61	0.55
864	n-butyl butyrate	1.12	1.02
865	n-hexyl acetate	0.87	0.63
866	methyl amyl acetate; 4-methyl-2-pentanol acetate	1.46	1.28
867	n-pentyl propionate	0.79	0.66
868	2-ethyl hexanoic acid	3.49	3.19
869	methyl heptanoate*	0.76	0.76
870	2-ethyl-1,3-hexanediol	2.62	1.95
871	2-n-hexyloxyethanol	2.45	1.98
872	2,2,4-trimethyl-1,3-pentanediol	1.74	1.46
873	phthalic anhydride*	2.50	2.50
874	methylparaben; 4-hydroxybenzoic acid, methyl ester*	1.66	1.66
875	2-butoxyethyl acetate	1.67	1.53
876	2-methoxy-1-(2-methoxy-1-methylethoxy)-propane; dipropylene glycol dimethyl ether	2.09	1.91
877	2-(2-butoxyethoxy)-ethanol	2.87	2.26
878	dipropylene glycol ethyl ether	2.75	2.60
879	dimethyl adipate	1.95	1.72
880	2-(2-ethoxyethoxy) ethyl acetate	1.50	1.39
881	2-[2-(2-ethoxyethoxy) ethoxy] ethanol	2.66	2.33
882	tetraethylene glycol	2.84	2.38
883	cinnamic aldehyde*	4.68	4.68
884	cinnamic alcohol*	0.84	0.84
885	2,3,5-trimethyl phenol*	1.86	1.86
886	2,3,6-trimethyl phenol*	1.86	1.86
887	C9 alkyl phenols	1.86	1.86
888	isophorone; 3,5,5-trimethyl-2-cyclohexenone	10.58	4.48
889	C9 cyclic ketones	1.13	0.88
890	2-propyl cyclohexanone	1.71	1.43
891	4-propyl cyclohexanone	2.08	1.74
892	1-nonene-4-one	3.39	3.03

893	trimethyl cyclohexanol	2.17	1.75
894	2-nonanone	1.30	1.00
895	di-isobutyl ketone; 2,6-dimethyl-4-heptanone	2.94	2.56
896	C9 ketones	1.30	1.00
897	dimethyl heptanol; 2,6-dimethyl-2-heptanol	1.07	0.88
898	2,6-dimethyl-4-heptanol	2.37	1.98
899	1-phenoxy-2-propanol	1.73	1.54
900	2,4-dimethylpentyl acetate	0.98	0.85
901	2-methylhexyl acetate	0.89	0.64
902	3-ethylpentyl acetate	1.24	1.03
903	3-methylhexyl acetate	1.01	0.83
904	4-methylhexyl acetate	0.91	0.76
905	5-methylhexyl acetate	0.79	0.54
906	isoamyl isobutyrate	0.89	0.76
907	n-heptyl acetate	0.73	0.59
908	methyl octanoate*	0.64	0.64
909	1-(butoxyethoxy)-2-propanol	2.08	1.82
910	dipropylene glycol n-propyl ether isomer #1	2.13	1.89
911	dipropylene glycol methyl ether acetate isomer #1	1.41	1.30
912	dipropylene glycol methyl ether acetate isomer #2	1.58	1.43
913	dipropylene glycol methyl ether acetate isomers	1.49	1.37
914	2-[2-(2-propoxyethoxy) ethoxy] ethanol	2.46	2.05
915	tripropylene glycol*	2.07	2.07
916	2,5,8,11-tetraoxatridecan-13-ol	2.15	1.86
917	glyceryl triacetate	0.57	0.51
918	anethol; *p*-propenyl-anisole*	0.76	0.76
919	C10 alkyl phenols	1.68	1.68
920	camphor*	0.45	0.45
921	α-terpineol	5.16	4.50
922	citronellol; 3,7-dimethyl-6-octen-1-ol*	5.63	5.63
923	hydroxycitronella*	2.50	2.50
924	C10 cyclic ketones	1.02	0.80
925	menthol	1.70	1.35
926	linalool*	5.28	5.28
927	2-decanone	1.06	0.82
928	C10 ketones	1.06	0.82
929	8-methyl-1-nonanol; isodecyl alcohol	1.23	0.99
930	1-decanol	1.22	1.00
931	3,7-dimethyl-1-octanol	1.42	1.13
932	di-n-pentyl ether	2.64	2.02
933	1,2-diacetyl benzene*	2.17	2.17
934	2,4-dimethylhexyl acetate	0.93	0.70
935	2-ethyl-hexyl acetate	0.79	0.60
936	3,4-dimethyl-hexyl acetate	1.16	0.81
937	3,5-dimethyl-hexyl acetate	1.09	0.92
938	3-ethyl-hexyl acetate	1.03	0.84
939	3-methyl-heptyl acetate	0.76	0.61
940	4,5-dimethyl-hexyl acetate	0.86	0.63
941	4-methyl-heptyl acetate	0.72	0.60
942	5-methyl-heptyl acetate	0.73	0.55

943	n-octyl acetate	0.64	0.52
944	geraniol*	4.97	4.97
945	methyl nonanoate*	0.54	0.54
946	2-(2-ethylhexyloxy) ethanol	1.71	1.45
947	propylparaben*	1.40	1.40
948	2-(2-hexyloxyethoxy) ethanol	2.03	1.73
949	glycol ether DPnB; dipropylene glycol n-butyl ether; 1-(2-butoxy-1-methylethoxy)-2-propanol)	1.96	1.73
950	2-(2-butoxyethoxy) ethyl acetate	1.38	1.30
951	2-[2-(2-butoxyethoxy) ethoxy] ethanol	2.24	1.85
952	tripropylene glycol monomethyl ether	1.90	1.81
953	C11 alkyl phenols	1.54	1.54
954	2-ethyl-hexyl acrylate	2.42	2.43
955	2,3,5-trimethyl-hexyl acetate	0.86	0.79
956	2,3-dimethyl-heptyl acetate	0.84	0.65
957	2,4-dimethyl-heptyl acetate	0.88	0.62
958	2,5-dimethyl-heptyl acetate	0.86	0.72
959	2-methyloctyl acetate	0.63	0.47
960	3,5-dimethyl-heptyl acetate	1.01	0.74
961	3,6-dimethyl-heptyl acetate	0.87	0.71
962	3-ethyl-heptyl acetate	0.71	0.57
963	4,5-dimethyl-heptyl acetate	0.96	0.63
964	4,6-dimethyl-heptyl acetate	0.83	0.72
965	4-methyloctyl acetate	0.68	0.56
966	5-methyloctyl acetate	0.67	0.5
967	n-nonyl acetate	0.58	0.47
968	methyl decanoate*	0.48	0.48
969	C12 alkyl phenols	1.42	1.42
970	2,6,8-trimethyl-4-nonanone; isobutyl heptyl ketone	1.86	1.57
971	trimethylnonanolthreoerythro; 2,6,8-trimethyl-4-nonanol	1.55	1.24
972	3,6-dimethyl-octyl acetate	0.88	0.72
973	3-isopropyl-heptyl acetate	0.71	0.49
974	4,6-dimethyl-octyl acetate	0.85	0.70
975	methyl undecanoate*	0.45	0.45
976	1-hydroxy-2,2,4-trimethylpentyl-3-isobutyrate	0.92	0.84
977	3-hydroxy-2,2,4-trimethylpentyl-1-isobutyrate	0.88	0.72
978	2,2,4-trimethyl-1,3-pentanediol monoisobutyrate and isomers (texanol®)	0.89	0.76
979	substituted C7 ester (C12)	0.92	0.76
980	substituted C9 ester (C12)	0.89	0.76
981	diethylene glycol mono-(2-ethylhexyl) ether*	1.46	1.46
982	diethyl phthalate*	1.56	1.56
983	dimethyl sebacate	0.48	0.40
984	diisopropyl adipate	1.42	1.22
985	3,6,9,12-tetraoxa-hexadecan-1-ol	1.90	1.62
986	triethyl citrate*	0.66	0.66
987	3,5,7-trimethyl-octyl acetate	0.83	0.60
988	3-ethyl-6-methyl-octyl acetate	0.80	0.57
989	4,7-dimethyl-nonyl acetate	0.64	0.45
990	methyl dodecanoate; methyl laurate	0.53	0.42
991	tripropylene glycol n-butyl ether*	1.55	1.55

992	amyl cinnamal*	3.06	3.06
993	isobornyl methacrylate	8.64	5.37
994	2,3,5,7-tetramethyl-octyl acetate	0.74	0.57
995	3,5,7-trimethyl-nonyl acetate	0.76	0.56
996	3,6,8-trimethyl-nonyl acetate	0.72	0.53
997	methyl tridecanoate*	0.40	0.40
998	hexyl cinnamal*	2.86	2.86
999	2,6-di-tert-butyl-*p*-cresol *	1.15	1.15
1000	2-ethyl-hexyl benzoate*	0.93	0.93
1001	2,4,6,8-tetramethyl-nonyl acetate	0.63	0.46
1002	3-ethyl-6,7-dimethyl-nonyl acetate	0.76	0.55
1003	4,7,9-trimethyl-decyl acetate	0.55	0.37
1004	methyl myristate; methyl tetradecanoate	0.47	0.39
1005	methyl *cis*-9-pentadecenoate*	1.63	1.73
1006	methyl *cis*-9-hexadecenoate; methyl palmitoleate*	1.63	1.64
1007	methyl pentadecanoate*	0.42	0.42
1008	2,3,5,6,8-pentamethyl-nonyl acetate	0.74	0.59
1009	3,5,7,9-tetramethyl-decyl acetate	0.58	0.43
1010	5-ethyl-3,6,8-trimethyl-nonyl acetate	0.77	0.71
1011	dibutyl phthalate*	1.20	1.20
1012	2,2,4-trimethyl-1,3-pentanediol diisobutyrate*	0.34	0.34
1013	methyl hexadecanoate; methyl palmitate*	0.40	0.40
1014	methyl *cis*-9-heptadecenoate*	1.56	1.56
1015	methyl heptadecanoate; methyl margarate*	0.38	0.38
1016	methyl linolenate; methyl *cis*,*cis*,*cis*-9,12,15-octadecatrienoate*	1.77	2.23
1017	methyl linoelate; methyl *cis*,*cis*-9,12-octadecadienoate*	1.48	1.77
1018	methyl *cis*-9-octadecenoate; methyl oleate*	1.48	1.48
1019	methyl octadecanoate; methyl stearate*	0.36	0.36
	Other Organic Compounds		
1020	methylamine*	7.29	7.29
1021	methyl chloride	0.03	0.04
1022	methyl nitrite*	10.50	10.50
1023	nitromethane	7.86	0.07
1024	carbon disulfide*	0.23	0.23
1025	dichloromethane	0.07	0.04
1026	methyl bromide	0.02	0.02
1027	chloroform	0.03	0.02
1028	methyl iodide*	0.00	0.00
1029	carbon tetrachloride	0.00	0.00
1030	chloropicrin; trichloro-nitro-methane*	1.80	1.80
1031	methylene bromide	0.00	0.00
1032	acetylene	1.25	0.93
1033	dimethyl amine	9.37	2.95
1034	ethyl amine	7.80	5.48
1035	ethanolamine	5.97	6.53
1036	vinyl chloride	2.92	2.70
1037	ethyl chloride	0.25	0.27
1038	1,1-difluoroethane; HFC-152a	0.00	0.02
1039	methyl isothiocyanate*	0.31	0.31
1040	nitroethane	12.79	0.06

1041	dimethyl sulfoxide; DMSO	6.90	6.46
1042	chloroacetaldehyde*	12.00	12.00
1043	1,1-dichloroethene*	1.69	1.69
1044	*trans*-1,2-dichloroethene	0.81	1.65
1045	*cis*-1,2-dichloroethene*	1.65	1.65
1046	1,1-dichloroethane	0.10	0.07
1047	1,2-dichloroethane	0.10	0.21
1048	1,1,1,2-tetrafluoroethane; HFC-134a	0.00	0.00
1049	ethyl bromide	0.11	0.12
1050	trichloroethylene	0.60	0.61
1051	1,1,1-trichloroethane	0.00	0.01
1052	1,1,2-trichloroethane	0.06	0.08
1053	perchloroethylene	0.04	0.03
1054	1,2-dibromoethane	0.05	0.10
1055	methyl acetylene	6.45	6.57
1056	acrylonitrile*	2.16	2.16
1057	trimethyl amine	7.06	6.03
1058	isopropyl amine*	6.93	6.93
1059	n-methyl acetamide**	19.70	19.63
1060	1-amino-2-propanol	13.42	5.17
1061	3-chloropropene*	11.98	11.98
1062	1-nitropropane	16.16	0.20
1063	2-nitropropane	16.16	0.10
1064	chloroacetone*	9.22	9.22
1065	*trans*-1,3-dichloropropene*	4.92	4.92
1066	*cis*-1,3-dichloropropene*	3.61	3.61
1067	1,3-dichloropropene mixture*	4.19	4.19
1068	1,2-dichloropropane*	0.28	0.28
1069	*trans*-1,3,3,3-tetrafluoropropene*	0.09	0.09
1070	2,3,3,3-tetrafluoropropene*	0.27	0.27
1071	n-propyl bromide	0.35	0.40
1072	1,1,1,3,3-pentafluoropropane*	0.00	0.00
1073	3,3-dichloro-1,1,1,2,2-pentafluoropropane; HCFC-225ca*	0.00	0.00
1074	1,3-dichloro-1,1,2,2,3-pentafluoropropane; HCFC-225cb*	0.00	0.00
1075	1,3-butadiyne*	5.53	5.53
1076	1-buten-3-yne; vinyl acetylene*	10.15	10.15
1077	2-butyne	16.33	15.95
1078	ethyl acetylene	6.20	5.95
1079	tert-butyl amine*	0.00	0.00
1080	morpholine	15.43	1.85
1081	ethyl methyl ketone oxime; methyl ethyl ketoxime*	22.04	1.52
1082	dimethylaminoethanol	4.76	5.41
1083	2-amino-1-butanol*	4.78	4.78
1084	2-amino-2-methyl-1-propanol	15.08	0.00
1085	1-chlorobutane*	1.04	1.04
1086	diethylenetriamine**	13.03	15.10
1087	diethanol-amine	4.05	2.36
1088	2-(chloro-methyl)-3-chloro-propene	1.13	6.85
1089	n-butyl bromide	0.60	0.78
1090	1,1,1,3,3-pentafluorobutane; HFC-365mfc*	0.00	0.00

1091	n-methyl-2-pyrrolidone	2.56	2.28
1092	2-amino-2-ethyl-1,3-propanediol*	0.00	0.00
1093	hydroxyethylethylene urea**	14.75	10.91
1094	methyl-nonafluoro-butyl ether*	0.05	0.05
1095	methyl-nonafluoro-isobutyl ether*	0.05	0.05
1096	methoxy-perfluoro-n-butane*	0.00	0.00
1097	methoxy-perfluoro-isobutene*	0.00	0.00
1098	1,1,1,2,2,3,4,5,5,5-decafluoropentane; HFC-43-10mee*	0.00	0.00
1099	triethyl amine	16.60	3.66
1100	triethylene diamine*	3.31	3.31
1101	monochlorobenzene	0.36	0.31
1102	nitrobenzene	0.07	0.05
1103	*p*-dichlorobenzene	0.20	0.17
1104	*o*-dichlorobenzene*	0.17	0.17
1105	triethanolamine*	2.76	4.08
1106	hexamethyl-disiloxane*	0.00	0.00
1107	hydroxymethyl-disiloxane*	0.00	0.00
1108	hexafluoro-benzene*	0.05	0.05
1109	ethoxy-perfluoro-n-butane*	0.01	0.01
1110	ethoxy-perfluoro-isobutane*	0.01	0.01
1111	ethyl nonafluorobutyl ether*	0.19	0.19
1112	ethyl nonafluoroisobutyl ether*	0.19	0.19
1113	perfluoro-n-hexane*	0.00	0.00
1114	2-chlorotoluene*	2.82	2.82
1115	*m*-nitrotoluene*	0.48	0.48
1116	benzotrifluoride	0.26	0.28
1117	*p*-trifluoromethyl-chloro-benzene	0.11	0.12
1118	*p*-toluene isocyanate	0.93	1.03
1119	3-(chloromethyl)-heptane*	0.88	0.88
1120	cyclosiloxane D4; octamethylcyclotetrasiloxane*	0.00	0.00
1121	cumene hydroperoxide; 1-methyl-1-phenylethylhydroperoxide**	12.61	8.83
1122	2,4-toluene diisocyanate*	0.00	0.00
1123	2,6-toluene diisocyanate*	0.00	0.00
1124	toluene diisocyanate (mixed isomers)*	0.00	0.00
1125	molinate; S-ethyl hexahydro-1*H*-azepine-1-carbothioate*	1.43	1.43
1126	EPTC; S-ethyl dipropyl-thiocarbamate*	1.58	1.58
1127	triisopropanolamine*	2.60	2.60
1128	dexpanthenol; pantothenylol**	9.35	5.98
1129	pebulate; S-propyl butylethylthiocarbamate*	1.58	1.58
1130	cyclosiloxane D5; decamethylcyclopentasiloxane*	0.00	0.00
1131	thiobencarb; S-[4-chlorobenzyl] N,N-diethylthiolcarbamate*	0.65	0.65
1132	methylene diphenylene diisocyanate	0.79	0.87
1133	lauryl pyrrolidone*	0.89	0.89
	Complex Mixtures		
1134	base ROG mixture	3.71	3.50
1135	final LEV – RFA*	3.44	3.44
1136	TLEV exhaust -- RFA*	3.89	3.89
1137	TLEV exhaust – phase 2*	3.85	3.85
1138	final LEV -- phase 2*	3.34	3.34
1139	TLEV exhaust -- LPG*	1.99	1.99

1140	TLEV exhaust -- CNG*	0.70	0.70
1141	TLEV exhaust -- E-85*	2.46	2.46
1142	TLEV exhaust -- M-85*	1.53	1.53
1143	composite mineral spirit (naphthas or lactol spirits) (ARB Profile ID 802)*	1.75	1.75
1144	Safety-Kleen mineral spirits "A" (Type I-B, 91% alkanes)*	1.11	1.11
1145	Safety-Kleen mineral spirits "B" (Type II-C)*	0.65	0.65
1146	Safety-Kleen mineral spirits "C" (Type II-C)*	0.65	0.65
1147	Exxon Exxol® D95 Fluid*	0.55	0.55
1148	Safety-Kleen mineral spirits "D" (Type II-C)*	0.65	0.65
1149	Exxon Isopar® M Fluid*	0.54	0.54
1150	thinning solvent/mineral spirits (Cal Poly SLO 1996)*	1.79	1.79
1151	Aromatic 100®*	7.38	7.38
1152	kerosene*	1.46	1.46
1153	regular mineral spirits*	1.73	1.73
1154	reduced aromatics mineral spirits*	1.08	1.08
1155	dearomatized alkanes, mixed, predominately C10-C12*	0.80	0.80
1156	VMP naphtha*	1.12	1.12
1157	synthetic isoparaffinic alkane mixture, predominately C10-C12*	0.68	0.68
1158	oxo-tridecyl acetate	0.67	0.54
1159	oxo-dodecyl acetate	0.72	0.58
1160	oxo-decyl acetate	0.83	0.66
1161	oxo-nonyl acetate	0.85	0.69
1162	oxo-octyl acetate	0.96	0.78
1163	oxo-heptyl acetate	0.97	0.80
1164	oxo-hexyl acetate	1.03	0.84
1165	turpentine*	4.12	4.12
1166	soy methyl esters; alkyl C16-C18 methyl esters*	1.52	1.52

* This reactive organic compound was added to the Table of MIR Values on [30 days after the amendments are approved by the Office of Administrative Law], and may be used in aerosol coating products after this date, as specified in section 94522(h)(2)(B), title 17, California Code of Regulations

** ULMIR (as defined in section 94521(a)(71), title 17, California Code of Regulations.)

NOTE: Authority cited: Sections 39600, 39601, and 41712, Health and Safety Code. Reference: Sections 39002, 39600, 40000 and 41712, Health and Safety Code.

§ 94701. MIR Values for Hydrocarbon Solvents.

(a) Aliphatic Hydrocarbon Solvents

Bin	*Average Boiling Point* (degrees F)*	*Criteria*	*MIR Value (July 18, 2001)*	*MIR Value (Effective Date)*
1	80-205	Alkanes (< 2% Aromatics)	2.08	1.33
2	80-205	N- & Iso-Alkanes (≥ 90% and < 2% Aromatics)	1.59	1.23
3	80-205	Cyclo-Alkanes (≥ 90% and < 2% Aromatics)	2.52	1.53
4	80-205	Alkanes (2 to < 8% Aromatics)	2.24	1.37
5	80-205	Alkanes (8 to 22% Aromatics)	2.56	1.47
6	>205-340	Alkanes (< 2% Aromatics)	1.41	1.08
7	>205-340	N- & Iso-Alkanes (≥ 90% and < 2% Aromatics)	1.17	0.95
8	>205-340	Cyclo-Alkanes (≥ 90% and < 2% Aromatics)	1.65	1.34
9	>205-340	Alkanes (2 to < 8% Aromatics)	1.62	1.35
10	>205-340	Alkanes (8 to 22% Aromatics)	2.03	1.88
11	>340-460	Alkanes (< 2% Aromatics)	0.91	0.63
12	>340-460	N- & Iso-Alkanes (≥ 90% and < 2% Aromatics)	0.81	0.55
13	>340-460	Cyclo-Alkanes (≥ 90% and < 2% Aromatics)	1.01	0.79
14	>340-460	Alkanes (2 to < 8% Aromatics)	1.21	0.91
15	>340-460	Alkanes (8 to 22% Aromatics)	1.82	1.48
16	>460-580	Alkanes (< 2% Aromatics)	0.57	0.47
17	>460-580	N- & Iso-Alkanes (≥ 90% and < 2% Aromatics)	0.51	0.43
18	>460-580	Cyclo-Alkanes (≥ 90% and < 2% Aromatics)	0.63	0.54
19	>460-580	Alkanes (2 to < 8% Aromatics)	0.88	0.61
20	>460-580	Alkanes (8 to 22% Aromatics)	1.49	0.89

* Average Boiling Point = (Initial Boiling Point + Dry Point) / 2

(b) Aromatic Hydrocarbon Solvents

Bin	*Boiling Range (degrees F)*	*Criteria*	*MIR Value (July 18, 2001)*	*MIR Value (Effective Date)*
21	280-290	Aromatic Content (≥ 98%)	7.37	7.44
22	320-350	Aromatic Content (≥ 98%)	7.51	7.39
23	355-420	Aromatic Content (≥ 98%)	8.07	6.66
24	450-535	Aromatic Content (≥ 98%)	5.00	3.76