APPENDIX B
METHANE & PROPANE K-FACTORS FOR CATALYTIC SENSORS

Catalytic Bead Combustible Sensor

The table below shows the variation in response for the Combustible Gas Sensor as K-factors (multipliers). These figures are experimentally derived and are expressed relative to Methane Propane.

Using the K-factor: Multiply the Methane or Propane %LEL challenge concentration by the respective K-factor to obtain the span value. Note that SensAlert® Sensors will not operate above 100 %LEL span.

Combustible Gas/Vapor	Methane K-factor	Propane K-factor
Methane	1.00	0.53
Acetaldehyde	1.80	0.95
Acetic acid	3.43	1.81
Acetic anhydride	1.97	1.04
Acetone	2.23	1.16
Acetonitrile	1.67	0.88
Acetylene	1.67	0.88
Ammonia	0.80	0.42
Aniline	2.93	2.93
Benzene	2.50	1.32
1,3-Butadiene	2.57	1.35
n-Butane	2.03	1.07
iso-Butane	1.83	0.96
1-Butene	2.13	1.12
cis-Butene-2	2.07	1.09
trans-Butene-2	1.90	1.00
n-Butyl alcohol	3.03	1.60
n-Butyric acid	2.43	1.28
Carbon disulphide	7.13	3.75
Carbon monoxide	1.27	0.67
Carbonyl sulphide	1.03	0.54
Chlorobenzene	2.93	1.54
Cyanogen	1.07	0.56
Cyclohexane	2.50	1.32
Cyclopropane	1.50	0.79

(table continued on next page)

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Combustible Gas/Vapor	Methane K-factor	Propane K-factor
Methane	1.00	0.53
n-Decane	3.43	1.81
Diethyl ether	2.27	1.19
Diiso-propyl ether	2.33	1.23
Dimethyl ether	1.73	0.91
Dimethyl sulphide	2.33	1.23
Dimethylbutane	2.70	1.42
Dimethylhydrazine	1.43	0.75
Dimethylpentane	2.33	1.23
1,4 Dioxane	2.50	1.32
Ethane	1.40	0.74
Ethyl acetate	2.57	1.35
Ethyl alcohol	1.70	0.89
Ethyl bromide	0.93	0.49
Ethyl chloride	1.77	0.93
Ethyl formate	2.37	1.25
Ethyl mercaptan	1.77	0.93
Ethyl methyl ether	2.33	1.23
Ethylamine	1.40	0.74
Ethylbenzene	2.77	1.46
Ethylene	1.53	0.81
Ethylene dichloride	1.50	0.79
Ethylene oxide	2.33	1.23
Ethylpentane	2.37	1.25
Gasoline	2.23	1.18
n-Heptane	2.70	1.42

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Combustible Gas/Vapor	Methane K-factor	Propane K-factor
Methane	1.00	0.53
1,4-Hexadiene	1.50	0.79
n-Hexane	2.33	1.23
Hydrazine	1.97	1.04
Hydrogen	1.23	0.65
Hydrogen cyanide	2.00	1.05
Hydrogen sufide	2.33	1.23
iso-Butyl alcohol	2.57	1.35
iso-Propyl alcohol	2.57	1.35
Isobutylene	1.97	1.04
Methyl acetate	2.17	1.14
Methyl alcohol	1.43	0.75
Methyl bromide	1.07	0.56
Methyl chloride	1.30	0.68
Methyl ethyl ketone	2.63	1.39
Methyl formate	1.87	0.98
Methyl mercaptan	1.60	0.84
Methyl propionate	2.07	1.09
Methyl propyl ketone	2.70	1.42
Methylamine	1.27	0.67
Methylcyclohexane	2.57	1.35
Methylene chloride	1.03	0.54
Methylhexane	2.37	1.25
Methylhydrazine	2.37	1.25
Methylpentane	2.70	1.42

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Combustible Gas/Vapor	Methane K-factor	Propane K-factor
Methane	1.00	0.53
Nitromethane	2.13	1.12
n-Nonane	4.00	2.11
n-Octane	2.87	1.51
n-Pentane	2.23	1.18
iso-Pentane	2.33	1.23
neo-Pentane	2.37	1.25
1-Pentene	2.33	1.23
Propane	1.90	1.00
Propene	1.87	0.98
n-Propyl alcohol	1.97	1.04
n-Propyl chloride	1.83	0.96
n-Propylamine	2.07	1.09
1,2-Propylene oxide	2.57	1.35
Propyne	2.33	1.23
tert-Butyl alcohol	1.80	0.95
Tetrahydrofuran	1.83	0.96
Toluene	2.50	1.32
Triethylamine	2.50	1.32
Trimethylamine	1.97	1.04
Trimethylbutane	2.27	1.19
Vinyl chloride	1.83	0.96
o-Xylene	3.03	1.59
m-Xylene	2.70	1.42
p-Xylene	2.77	1.46

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