GAS DETECTOR SELECTION GUIDE

Gas Name			Lower Explosive Limit (VOL%)	Specific Gravity (AIR=1)	CAS No.	Suitable Measuring Ranges
1	Acetaldehyde	CH3CHO (C2H4O)	4	1.5	75-07-0	Ex : 100%LEL
2	Acetic acid	CH3COOH	5.4	2.07	64-19-7	Tx : 20ppm
3	Acetone	CH3COCH3(C3H6O)	2.2	2	67-64-1	Ex : 100%LEL IR : 100%LEL
4	Acetylene	C2H2	2.5	0.91	74-86-2	Ex : 100%LEL
5	Acrylic acid(AA)	C3H4O2	2.4	2.5	79-10-7	IR : 100%LEL SC : 1000ppm Tx : 300ppm, 100ppm
6	Acrylonitrile(AN)	C3H3N	3	1.8	107-13-1	Ex : 100%LEL Tx : 1000ppm
8	Allyl chloride	CH_2=CHCH2Cl	2.9	2.6	107-05-1	Ex : 100%LEL Tx : 25ppm
9	Ammonia	NH3	15	0.59	7664-41-7	Ex : 100%LEL Tx : 75ppm
10	Aniline	C6H5NH2	1.3	3.2	62-53-3	Tx : 100ppm
11	Anisole	CH3OC6H5	0.3	3.7	100-66-3	Ex : 100%LEL IR : 100%LEL
12	Antimony pentachloride	SbCl5	-	10.32	7647-18-9	Tx : 15ppm
13	Arsenic hydride (Arsine)	AsH3	-	4.31	7784-42-1	Tx : 0.3ppm
14	Arsenic pentafluoride	AsF5	-	-	7784-36-3	Tx : 9ppm
15	Arsenic trichloride	AsCl3	-	6.3	7784-34-1	Tx : 15ppm
16	Benzene	C6H6	1.2	2.8	71-43-2	Ex : 100%LEL IR : 100%LEL PID : 20ppm/100ppm
17	Boron tribromide	BBr3	-	8.6	10294-33-4	Tx : 9ppm, 15ppm
18	Boron trichloride	BCl3	-	4.03	10294-34-5	Tx : 15ppm
19	Boron trifluoride	BF3	-	2.4	7637-07-2	Tx : 9ppm
20	Bromine	Br2	-	3.12	7726-95-6	Tx : 3ppm
21	1,3-Butadiene	C4H6	-	-	106-99-0	Ex : 100%LEL
22	Butene(butylene)	C4H8	-	-	-	Ex : 100%LEL
23	i-Butane	C4H10	1.8	2.01	75-28-5	Ex : 100%LEL IR : 100%LEL SC : 2000 ppm
24	Butyl acetate	C6H12O2	1.2	4	123-86-4	IR : 100%LEL
25	i-Butyl acetate	C6H12O2	1.3	4	110-19-0	Ex : 100%LEL IR : 100%LEL SC : 1000 ppm
27	n-Butyl alcohol	CH3(CH2)2CH3OH	1.4	2.6	71-36-3	Ex : 100%LEL IR : 100%LEL Tx : 100ppm
28	tert-Butyl mercaptan	C4H10S	1.4	3.1	109-79-5	Tx: 50ppm
29	Carbon dioxide	CO2	-	1.522	124-38-9	IR : 5vol%, 20vol%
30	Carbon disulfide	CS2	1	2.63	75-15-0	Tx : 100ppm
31	Carbon monoxide	CO	12.5	0.97	630-08-0	IR : 1vol% , 20vol% Tx : 150ppm , 300ppm
32	Carbonyl sulfide	COS	-	2.1	463-58-1	Tx: 100ppm, 2000ppm
33	Chloride	Cl2	-	2.5	7782-50-5	Tx : 3ppm
34	Chlorine dioxide	ClO2	>10	2.3	10049-04-4	Tx : 1ppm
35	Chlorine trifluoride	ClF3	-	3.18	7790-91-2	Tx : 1ppm
36	Chlorobenzene	C6H5Cl	1.3	3.88	108-90-7	Ex : 100%LEL
37	Chloroform	CHCl3	-	4.12	67-66-3	Tx : 30ppm, 200ppm
38	Chlorosulfonic acid	HSO3Cl	-	4.02	7790-94-5	Tx : 9ppm
39	cumene	C9H12	0.9	4.2	98-82-8	IR : 100%LEL
41	Cyclohexanone	C6H10O	1.1	3.4	108-94-1	Tx : 200ppm IR : 100%LEL
42	Cyclopentane	C5H10	1.1	2.4	287-92-3	Ex : 100%LEL IR : 100%LEL
43	Cyclopropane	C3H6	2.4	1.88	75-19-4	Ex : 100%LEL

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44	Diborane	B2H6	0.8	0.96	19287-45-7	Tx : 0.3ppm
45	1,2-Dichloroethane(EDC)	CH2ClCH2Cl (C2H4Cl2)	6.2	3.42	107-06-2	Ex : 100%LEL IR : 100%LEL Tx : 100ppm
46	1,2-Dichloroethylene cis	C2H2Cl2	9.7	3.34	156-59-2	Tx : 500ppm
47	1,2-Dichloroethylene trans (DCE)	C2H2Cl2	9.7	3.34	156-60-5	Tx : 500ppm
49	Dichloromethane(R-30)	CH2Cl2	13	2.9	75-09-2	IR : 100%LEL Tx : 500ppm
50	Dichlorosilane (DCS)	SiH2Cl2	4.1	3.48	4109-96-0	Tx : 15ppm
51	Di-Ethylamine(DEA)	(C2H5)2NH	1.8	2.5	109-89-7	Tx : 100ppm
52	Diethyl carbonate (DEC)	C5H10O3	1.4	4.1	105-58-8	Ex : 100%LEL IR : 100%LEL
53	Diethyl ether(Ethyl ether)	(C2H5)2O	1.7	2.6	60-29-7	Ex : 100%LEL IR : 100%LEL Tx : 1000ppm
55	Difluoro chloromethane(R22)	CHClF2	-	3	75-45-6	Tx :200ppm, 500ppm 5000ppm, 8000ppm
56	Difluoromethane(R32)	CH2F2	12.7~14	1.8	75-10-5	IR : 100%LEL Tx: 2000ppm SC : 200~2000ppm
57	Di-isopropyamine	C6H15N	0.8	3.5	108-18-9	Ex : 100%LEL IR : 100%LEL Tx : 100ppm
59	Dimethoxymethane	C3H8O2	1.6	2.6	109-87-5	Ex : 100%LEL IR : 100%LEL PID : 200ppm
60	Dimethylacetamide(DMAC)	C4H9NO	1.8	3.01	127-19-5	Ex : 100%LEL PID : 30ppm
61	Di-Methylamine(DMA)	(CH3)2NH	2.8	1.6	124-40-3	Ex : 100%LEL IR : 100%LEL Tx : 100ppm PID: 15ppm/ 300ppm
62	Di-Methyl carbonate(DMC)	C3H6O3	4.2	3.1	616-38-6	Ex : 100%LEL IR : 100%LEL
63	Dimethyl dichlorosilane		1.4	4.4	68611-44-9	Tx : 15ppm
64	Dimethyl disulphide (DMDS)	C2H6S2	1.1	3.24	624-92-0	Tx : 50ppm PID : 3ppm/40ppm
65	N,N-Dimethylformamide	C3H7NO	2.2	2.5	68-12-2	SC : 100ppm PID : 10ppm/150ppm
66	Dimethyl Sulfide(DMS)	C2H6S	2.2	2.1	75-18-3	Tx : 100ppm
68	1,4-Dioxane	C4H8O2	2	3		Ex : 100%LEL IR : 100%LEL
69	Disilane	Si2H6		2.15	1590-87-0	Tx : 15ppm
70	Di-Phenylether	(C6H5)2O	0.8	5.9	101-84-8	PID: 10ppm / 200ppm
71	Epichlorohydrin	C3H5ClO	-	-	106-89-8	Ex : 100%LEL IR : 100%LEL Tx : 100ppm, 50ppm
72	Ethane	C2H6	3	1.05	74-84-0	Ex : 100%LEL
73	Ethanol	C2H5OH	3.3	1.59	64-17-5	Ex : 100%LEL IR : 100%LEL Tx : 50ppm, 100ppm
75	Ethyl acetate	CH3CO2C2H5	2.2	3	141-78-6	Ex : 100%LEL IR : 100%LEL SC : 1000ppm
77	Ethyl amine	C2H5NH2	3.5	1.55	75-04-7	Tx : 100ppm
78	Ethyl benzene	C6H5C2H5	1	3.7	100-41-4	Ex : 100%LEL
81	Ethylene	C2H4	2.7	0.98	74-85-1	Ex : 100%LEL IR : 100%LEL Tx : 2000ppm SC : 2000ppm

GAS DETECTOR SELECTION GUIDE

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83	Ethyl formate	C3H6O2	2.7	2.55	109-94-4	Ex : 100%LEL IR : 100%LEL Tx : 200ppm SC : 500ppm
84	Ethylene glycol monomethyl ether (EGME) = 2-methoxy ethanol = methyl cellosolve	C3H8O2	2.3	2.62	109-86-4	Ex : 100%LEL IR : 100%LEL Tx : 20ppm
85	Ethylene oxide(EO)	C2H4O	3	1.5	75-21-8	Ex : 100%LEL IR : 100%LEL Tx : 30ppm , 100ppm
86	Ethyl methyl carbonate(EMC)	-	-	-	623-53-0	SC : 500ppm PID : 500 / 5000ppm
87	Ethyl mercaptan (EtSH) (Ethanethiol) EtM	C2H6S	2.8	2.14	75-08-1	Tx : 50ppm
88	Fluorine	F2	-	1.3	7782-41-4	Tx : 3ppm
89	Fluoroform(R-23)	CHF3	-	2.4	75-46-7	Tx :10,000ppm
90	Fluoromethane	CH3F	-	1.195	593-53-3	Tx : 2000ppm
91	Formaldehyde	CH2O	7	1.067	50-00-0	Tx : 10ppm
92	Formic acid	HCOOH	18	1.6	64-18-6	Tx : 20ppm, 30ppm, 50ppm
94	Germane	GeH4	-	2.65	7782-65-2	Tx : 1ppm
95	Germanium tetrachloride	GeCl4	-	-	10038-98-9	Tx : 15ppm
96	Germanium tetrafluoride	GeF4	-	-	-	Tx : 9ppm
97	Helium	He	-	0.14	7440-59-7	TC : 100VoL%
98	n-Heptane	C7H16	1.1	3.46	142-82-5	Ex : 100%LEL IR : 100%LEL
99	n-Hexane	C6H14	1.1	3	110-54-3	Ex : 5000ppm 100%LEL IR : 100%LEL
100	Hexafluorobutadiene	C4F6	7	-	685-63-2	IR : 2000ppm Tx: 100ppm, 2000ppm
101	Hexamethyldisilazane(HMDS)	C6H19NSi2	0.8	4.6	999-97-3	IR : 100%LEL Tx : 50ppm
102	Hydrogen	H2	4	0.07	1333-74-0	TC : 100VoL% Ex : 100%LEL Tx : 2000ppm
103	Hydrogen bromide	HBr	-	2.8	10035-10-6	Tx : 9ppm, 20ppm
104	Hydrogen chloride	HCl	-	1.3	7647-01-0	Tx : 3ppm, 15ppm
105	Hydrogen cyanide (AC)	HCN	-	-	74-90-8	Tx : 30ppm
106	Hydrogen fluoride	HF	-	0.69	7664-39-3	Tx : 9ppm
107	Hydrogen peroxide	H2O2	-	1.17	7722-84-1	Tx : 100ppm
108	Hydrogen selenide	H2Se	-	2.8	7783-07-5	Tx : 0.25ppm
109	Hydrogen sulfide	H2S	4.3	1.19	7783-06-4	Tx : 30ppm
110	isoocthy alcohol (2-ethyl-1-hexanol)	C8H18O	0.88	4.49	104-76-7	Ex : 100%LEL
111	iso-propyl alcohol(IPA)	C3H7OH	2	2.1	67-63-0	Ex : 100%LEL IR : 100%LEL Tx : 50ppm, 100ppm
112	Methane	CH4	5	0.554	74-82-8	Ex : 100%LEL IR : 100%LEL
113	Methyl acetate	C3H6O2	3.1	2.6	79-20-9	Ex : 100%LEL IR : 100%LEL
114	Methyl acrylate(MA)	C4H6O2	2.8	3	96-33-3	Ex : 100%LEL IR : 100%LEL Tx : 250ppm
115	Methyl alcohol	CH3OH	5.5	1.1	67-56-1	Ex : 100%LEL IR : 100%LEL Tx : 30ppm, 50ppm
116	Methyl amine	CH5N	4.9	1.07	74-89-5	Tx: 100ppm
117	Methyl bromide	CH3Br	10	3.3	74-83-9	Tx: 100ppm

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118	Methyl chloride(MC , R40)	CH3Cl	8.1	1.8	74-87-3	Ex : 100%LEL IR : 100%LEL Tx : 1500ppm
119	Methyl chloroformate(MCF)	C2H3ClO2	6.7	3.3	79-22-1	IR: 100%LEL Ex: 100%LEL SC: 200ppm
120	Methyl cyclohexane(MCH)	C7H14	1.2	3.4	108-87-2	Ex : 100%LEL IR : 100%LEL
121	Methyl chlorosilane(MCS)		5.9	-	993-00-0	Tx: 15ppm
122	Methyl trichlorosilane(MTCS)	CH3Cl3Si	-	-	75-79-6	Tx: 15ppm
123	Methyl ethyl ketone(MEK)	C4H8O	1.8	2.41	78-93-3	Ex : 100%LEL IR : 100%LEL
126	Methacrylic acid(MAA)	C4H6O2	1.6	2.97	79-41-4	IR : 100%LEL Tx : 60ppm PID : 60ppm
127	Methyl mercaptan(MeM)	CH3SH	3.9	1.66	74-93-1	Tx : 50ppm
128	Methyl methacrylate(MMA)	C5H8O2	1.7	3.5	80-62-6	Ex : 100%LEL IR : 100%LEL Tx : 500ppm
129	Methyl silane (MMS)	SiH3CH3	-	1.59	992-94-9	Tx : 15ppm
130	Molybdenum hexafluoride	MoF6	-		7783-77-9	Tx : 9ppm
133	Nitric acid	HNO3	-	2.2	7697-37-2	Tx : 20ppm
134	Nitrogen dioxide	NO2	-	1.58	10102-44-0	Tx : 10ppm
135	Nitrogen monoxide	NO	-	1.04	10102-43-9	Tx : 100ppm
136	Nitrogen trifluoride	NF3	-	2.5	7783-54-2	Tx : 30ppm, 50ppm, 500ppm
137	Nitrous oxide	N2O	-	1.53	10024-97-2	Tx : 5vol% IR : 200~4000ppm
139	NMP	C5H9NO	0.99	3.4	872-50-4	Ex : 100%LEL Tx : 200ppm
140	iso-Octane	C8H18	1.1	3.9	540-84-1	Ex : 100%LEL IR : 100%LEL
141	Octafluoro cyclobutane	C4F8	-	7.33	115-25-3	Tx : 200ppm
142	Octafluoro cyclopentene	C5F8	-	-	559-40-0	Tx : 300ppm, 60ppm, 2000ppm
143	Oxygen	O2		1.1	7782-44-7	Tx : 25vol% , 30vol%
144	Ozone	O3		1.6	10028-15-6	Tx : 1ppm
145	n-Pentane	C5H12	1.5	2.5	109-66-0	Ex : 100%LEL IR : 100%LEL
146	i-Pentane	C5H12	1.4	2.5	78-78-4	Ex : 100%LEL IR : 100%LEL SC : 1000ppm
147	Phenol	C6H6O	1.36	3.2	108-95-2	Tx : 15ppm PID : 15ppm/200ppm
148	Phosgene	COCl2	-	3.4	75-44-5	Tx : 1ppm
149	Phosphine	PH3	1.8	1.17	7803-51-2	Tx : 1ppm
150	Phosphorus Pentafluoride	PF5	-	-	7647-19-0	Tx : 9ppm
151	Phosphorus trichloride	PCl3	-	4.74	7719-12-2	Tx : 15ppm
152	Phosphorus oxychloride	POCl3	-	5.29	10025-87-3	Tx : 15ppm
153	Propane	C3H8	2.1	1.55	74-98-6	Ex : 100%LEL IR : 100%LEL
154	n-Propyl acetate	C5H10O2	2	3.5	109-60-4	Ex : 100%LEL IR : 100%LEL
155	i-Propyl acetate	C5H10O2	1.8	3.5	108-21-4	Ex : 100%LEL IR : 100%LEL SC : 500ppm
156	Propyl amine	C3H9N	2	2	107-10-8	Tx : 75ppm
157	n-Propyl bromide	C3H7Br	4.6	-	106-94-5	Tx : 75ppm
160	Propylene glycol monoethyl ether(PGEE)	C5H12O2	1.30	3.6	1569-02-4	Ex : 100%LEL IR : 100%LEL

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161	i-Propyl mercaptan	C3H8S	-	2.6	75-33-2	Tx : 50ppm
162	n-Propyl mercaptan	C3H8S	1.8	2.6	107-03-9	Tx : 100ppm
163	Propylene	C3H6	2.4	1.5	115-07-1	Ex : 100%LEL SC : 2000ppm Tx : 2000ppm
164	Propylene oxide	C3H6O	2	2	75-56-9	Ex : 100%LEL Tx : 30ppm, 100ppm
166	Propylene Glycol Monomethyl Ether (PGME)		1.9	3.1	107-98-2	Ex : 100%LEL IR : 100%LEL
167	Propylene Glycol Monomethyl Eter Acetate (PGMEA)	C6H12O3	1.5	4.6	108-65-6	Ex : 100%LEL SC : 2000ppm IR : 100%LEL
168	Pyridine	C5H5N	1.8	2.73	110-86-1	Tx : 500ppm
169	R410a	R125 50% , R32 50%	-	3.0		Tx : 5000ppm
170	Silane	SiH4	1.37	1.3	7803-62-5	Tx : 15ppm
171	Silicon tetrachloride	SiCl4	-	-	10026-04-7	Tx : 15ppm
172	Silicon tetrafluoride	SiF4	-	-	7783-61-1	Tx : 9ppm
173	Styrene(SM)	C8H8	0.9	3.6	100-42-5	Ex : 100%LEL IR : 100%LEL SC : 2000ppm Tx : 50ppm
174	Sulfur dioxide	SO2	-	-	7446-09-5	Tx : 10ppm
175	Sulfur hexafluoride	SF6	-	-	2551-62-4	Tx : 2000ppm
176	sulfuric acid	H2SO4	-	3.4	7664-93-9	Tx : 25ppm, 100ppm
177	Tantalum fluoride	TaF5	-	-	7783-71-3	Tx : 9ppm
178	TEOS(Tetraethyl orthosilicate)	Si(CH3O)4	-	-	78-10-4	Tx : 30ppm
179	Tetrafluoroethylene	C2F4	11	3.9	116-14-3	Tx : 500ppm
180	Tetrahydrofuran	C4H8O	2	2.49	109-99-9	Ex : 100%LEL IR : 100%LEL Tx : 50ppm, 100ppm
181	Tetrahydrothiophene(THT)	C4H8S	-	3.05	110-01-0	Tx : 100ppm
182	Thinner	MEK60%, Heptane 30% Toluene1.8% …	-	-		Ex : 100%LEL IR : 100%LEL
183	Tin tetrachloride	SnCl4	-	-	7646-78-8	Tx : 15ppm
184	Titanium(IV) fluoride	TiF4	-	-	7783-63-3	Tx : 9ppm
185	Titanium tetrachloride	TiCl4	-	-	7550-45-0	Tx : 15ppm
186	Toluene	C7H8	1.1	3.1	108-88-3	Ex : 100%LEL IR : 100%LEL PID : 100ppm
187	Trichloro ethane (TCA) [Methylchloroform(R140a)]	CH3CCl3	8	4.63	71-55-6	Tx : 1000ppm
189	Trichlorosilane(TCS)	SiHCl3	-	-	10025-78-2	Tx : 15ppm
190	Triethylamine(TEA)	C6H15N	1.2	3.5	121-44-8	Tx : 100ppm
191	Trifluoroacetic acid(TFA)	C2HF3O2	-	4	76-05-1	Tx : 50ppm
192	Trimethylamine(TMA)	C3H9N	2	2	75-50-3	Ex : 100%LEL IR : 100%LEL Tx : 100ppm
193	Trimethoxy boron(TMB)	B(OCH3)3	-	-	121-43-7	Tx : 75ppm, 500ppm
194	Trimethylsilane(TMS)	C3H10Si	-	-	993-07-7	Tx : 30ppm
195	Trisilane	Si3H8	-	-	7783-26-8	Tx : 15ppm
196	Tungsten hexafluoride	WF6	-	-	7783-82-6	Tx : 9ppm
197	Vinyl acetate	C4H6O2	2.6	3	108-05-4	Ex : 100%LEL IR : 100%LEL
198	Vinyl chloride	C2H3Cl	3.6	2.2	75-01-4	Tx : 30ppm
199	o-Xylene	C8H10	0.9	3.7	95-47-6	Ex : 100%LEL IR : 100%LEL SC : 1000ppm