

PID RESPONSE FACTORS FOR VOCS

APPLICATION NOTE TSI-148 (A4)

While TSI Volatile Organic Compound (VOC) probes are calibrated using isobutylene, the probe's Photo Ionization Detectors (PID) are broadband VOC detectors with a response that differs for each VOC compound.

PID lamps can be created with a number of gasses, each of which has different photon energy. TSI's PID probes use Krypton gas, with photon energy of 10.6 eV that offers a long lamp life and responds to a wide range of gases.

If you know what VOC you are measuring then the table below will allow you to calculate the real concentration for your specific VOC that responds to a 10.6 eV (Electron Volt) lamp source.

The table includes four columns:

1. **Gas/ VOC** The most common name for the VOC.
2. **CAS No.** You can find the VOC using the CAS No.
3. **Formula** To assist in identifying the VOC and to determine the VOC's molecular weight.
4. **Response Factor (RF).** Multiply the displayed concentration by the Response Factor to calculate the actual concentration of the VOC.

VOC Response

Occasionally you will be measuring a mixture of VOCs. If the total concentration is within the linear range of your PID, then it is reasonable to assume that the concentrations are additive without interference between the different VOCs. If you are measuring a combination of VOCs, then accurate measurement of one of these VOCs will be difficult. Without careful data analysis, you will get only a RF averaged measurement. Be cautious when reporting actual VOC concentration if you know that there may be several VOC's present.

Note

TSI PID sensors cannot measure all VOCs or gases. VOC's that have an electron-volt potential greater than or equal (\geq) to 10.6 eV will give no response since they cannot be ionized by the 10.6 eV lamp source. Semi-Volatile Organic Compounds (SVOC) cannot be measured if the vapor pressure is too low (a few ppm at 20°C) to volatilize the compound.



Gas/VOC	CAS No.	Formula	Response Factor
Acetaldehyde	75-07-0	C ₂ H ₄ O	4.9
Acetic Acid	64-17-7	C ₂ H ₄ O ₂	36.2
Acetic Anhydride	108-24-7	C ₄ H ₆ O ₃	4.0
Acetone	67-64-1	C ₃ H ₆ O	0.7
Acrolein	107-02-8	C ₃ H ₄ O	4.0
Acrylic Acid	79-10-7	C ₃ H ₄ O ₂	2.7
Allyl alcohol	107-18-6	C ₃ H ₆ O	2.1
Allyl chloride	107-05-1	C ₃ H ₅ Cl	4.5
Ammonia	7664-41-7	H ₃ N	8.5
Amyl acetate, n-	628-63-7	C ₇ H ₁₄ O ₂	1.8
Amyl alcohol	71-41-0	C ₅ H ₁₂ O	3.2
Aniline	62-53-3	C ₆ H ₇ N	0.5
Anisole	100-66-3	C ₇ H ₈ O	0.5
Arsine	7784-42-1	AsH ₃	2.5
Asphalt, petroleum fumes	8052-42-4	C ₆ H ₆	1.0
Benzaldehyde	100-52-7	C ₇ H ₆ O	0.9
Benzene	71-43-2	C ₆ H ₆	0.5
Benzenethiol	108-98-5	C ₆ H ₅ SH	0.7
Benzonitrile	100-47-0	C ₇ H ₅ N	0.7
Benzyl alcohol	100-51-6	C ₇ H ₈ O	1.3
Benzyl chloride	100-44-7	C ₇ H ₇ Cl	0.6
Benzyl formate	104-57-4	C ₈ H ₈ O ₂	0.8
Biphenyl	92-52-4	C ₁₂ H ₁₀	0.4
Bis(2,3-epoxypropyl) ether	2238-07-5	C ₆ H ₁₀ O ₃	3.0
Bromine	7726-95-6	Br ₂	20.0
Bromobenzene	108-86-1	C ₆ H ₅ Br	0.7
Bromoethane	74-96-4	C ₂ H ₅ Br	5.0
Bromoethyl methyl ether, 2-	6482-24-2	C ₃ H ₇ OBr	2.5
Bromoform	75-25-2	CHBr ₃	2.8
Bromopropane, 1-	106-94-5	C ₃ H ₇ Br	1.3
Butadiene	106-99-0	C ₄ H ₆	0.8
Butadiene diepoxide,1,3-	1464-53-5	C ₄ H ₆ O ₂	4.0
Butane, n-	106-97-8	C ₄ H ₁₀	46.3
Butanol, 1-	71-36-3	C ₄ H ₁₀ O	4.0
Buten-3-ol, 1-	598-32-3	C ₄ H ₈ O	1.2
Butene, 1-	106-98-9	C ₄ H ₈	1.3
Butoxyethanol, 2-	111-76-2	C ₆ H ₁₄ O ₂	1.1
Butyl acetate, n-	123-86-4	C ₆ H ₁₂ O ₂	2.4
Butyl acrylate, n-	141-32-2	C ₇ H ₁₂ O ₂	1.5
Butyl lactate	138-22-7	C ₇ H ₁₄ O ₃	2.5
Butyl mercaptan	109-79-5	C ₄ H ₁₀ S	0.5
Butylamine, 2-	513-49-5	C ₄ H ₁₁ N	0.9
Butylamine, n-	109-73-9	C ₄ H ₁₁ N	1.0
Camphene	565-00-4	C ₁₀ H ₁₆	0.5
Carbon disulfide	75-15-0	CS ₂	1.4
Carbon tetrabromide	558-13-4	CBr ₄	3.0
Carvone, R-	6485-40-1	C ₁₀ H ₁₄ O	1.0
Chlorine dioxide	10049-04-4	ClO ₂	1.0
Chloro-1,3-butadiene, 2-	126-99-8	C ₄ H ₅ Cl	3.2
Chlorobenzene	108-90-7	C ₆ H ₅ Cl	0.5

Gas/VOC	CAS No.	Formula	Response Factor
Chloroethanol, 2-	107-07-3	C ₂ H ₅ ClO	10.0
Chloroethyl methyl ether, 2-	627-42-9	C ₃ H ₇ ClO	2.6
Chlorotoluene, o-	95-49-8	C ₇ H ₇ Cl	0.5
Chlorotoluene, p-	108-41-8	C ₇ H ₇ Cl	0.5
Chlorotrifluoroethylene	79-38-9	C ₂ ClF ₃	1.0
Citral	5392-40-5	C ₁₀ H ₁₆ O	1.0
Citronellol	26489-01-0	C ₁₀ H ₂₀ O	1.0
Cresol, m-	108-39-4	C ₇ H ₈ O	1.1
Cresol, o-	95-48-7	C ₇ H ₈ O	1.1
Cresol, p-	106-44-5	C ₇ H ₈ O	1.1
Crotonaldehyde	4170-30-3	C ₄ H ₆ O	1.0
Cumene	98-82-8	C ₉ H ₁₂	0.6
Cyclohexane	110-82-7	C ₆ H ₁₂	1.3
Cyclohexanol	108-93-0	C ₆ H ₁₂ O	2.9
Cyclohexanone	108-94-1	C ₆ H ₁₀ O	1.1
Cyclohexene	110-83-8	C ₆ H ₁₀	0.8
Cyclohexylamine	108-91-8	C ₆ H ₁₃ N	1.0
Cyclopentane	287-92-3	C ₅ H ₁₀	4.0
Decane, n-	124-18-5	C ₁₀ H ₂₂	1.0
Diacetone alcohol	123-42-2	C ₆ H ₁₂ O ₂	0.8
Dibenzoyl peroxide	94-36-0	C ₁₄ H ₁₀ O ₄	0.8
Dibromochloromethane	124-48-1	CHBr ₂ Cl	10.0
Dibromoethane 1,2-	106-93-4	C ₂ H ₄ Br ₂	2.0
Dibutyl hydrogen phosphate	107-66-4	HC ₈ H ₁₈ PO ₄	4.0
Dichloro-1-propene, 2,3-	78-88-6	C ₃ H ₄ Cl ₂	1.4
Dichloroacetylene	7572-29-4	C ₂ Cl ₂	5.0
Dichlorobenzene o-	95-50-1	C ₆ H ₄ Cl ₂	0.5
Dichloroethene, 1,1-	75-35-4	C ₂ H ₂ Cl ₂	1.0
Dichloroethene, cis-1,2-	156-59-2	C ₂ H ₂ Cl ₂	0.8
Dichloroethene, trans-1,2-	540-59-0	C ₂ H ₂ Cl ₂	0.7
Dichloroethylene 1,2-	540-59-0	C ₂ H ₂ Cl ₂	0.8
Dichloromethane	75-09-2	CH ₂ Cl ₂	39.0
Dicyclopentadiene	77-73-6	C ₁₀ H ₁₂	0.9
Diesel Fuel	68334-30-5		0.8
Diethyl ether	60-29-7	C ₄ H ₁₀ O	0.9
Diethyl maleate	141-05-9	C ₈ H ₁₂ O ₄	2.0
Diethyl phthalate	84-66-2	C ₁₂ H ₁₄ O ₄	1.0
Diethyl sulphate	64-67-5	C ₄ H ₁₀ SO ₄	3.0
Diethyl sulphide	352-93-2	C ₄ H ₁₀ S	0.6
Diethylamine	109-89-7	C ₄ H ₁₁ N	1.0
Diethylaminoethanol, 2-	100-37-8	C ₆ H ₁₅ ON	2.7
Diethylaminopropylamine, 3-	104-78-9	C ₇ H ₁₈ N ₂	1.0
Dihydrogen selenide	7783-07-5	H ₂ Se	1.0
Dihydroxybenzene, 1,2	120-80-9	C ₆ H ₆ O ₂	1.0
Dihydroxybenzene, 1,3	108-46-3	C ₆ H ₆ O ₂	1.0
Diisobutylene	107-39-1	C ₈ H ₁₆	0.6
Diisopropyl ether	108-20-3	C ₆ H ₁₄ O	0.7
Diisopropylamine	108-18-9	C ₆ H ₁₅ N	0.7
Diketene	674-82-8	C ₄ H ₄ O ₂	2.2
Dimethoxymethane	109-87-5	C ₃ H ₈ O ₂	1.4

Gas/VOC	CAS No.	Formula	Response Factor
Dimethyl cyclohexane, 1,2-	583-57-3	C ₈ H ₁₆	1.1
Dimethyl disulphide	624-92-0	C ₂ H ₆ S ₂	0.2
Dimethyl ether	115-10-6	C ₂ H ₆ O	1.3
Dimethyl phthalate	131-11-3	C ₁₀ H ₁₀ O ₄	1.0
Dimethyl sulphide	75-18-3	C ₂ H ₆ S	0.5
Dimethylacetamide N,N-	127-19-5	C ₄ H ₉ NO	1.3
Dimethylamine	124-40-3	C ₂ H ₇ N	1.4
Dimethylaminoethanol	108-01-0	C ₄ H ₁₁ NO	1.5
Dimethylaniline, NN-	121-69-7	C ₈ H ₁₁ N	0.6
Dimethylbutyl acetate	108-84-9	C ₈ H ₁₆ O ₂	1.6
Dimethylethylamine, NN-	598-56-1	C ₄ H ₁₁ N	0.8
Dimethylformamide	68-12-2	C ₃ H ₇ NO	0.9
Dimethylheptan-4-one, 2,6-	108-83-8	C ₉ H ₁₈ O	0.8
Dimethylhydrazine, 1,1-	57-14-7	C ₂ H ₈ N ₂	1.0
Dinitrobenzene, m-	99-65-0	C ₆ H ₄ N ₂ O ₄	3.0
Dinitrobenzene, p-	100-25-4	C ₆ H ₄ N ₂ O ₄	5.0
Dinonyl phthalate	84-76-4	C ₂₆ H ₄₂ O ₄	1.0
Dioxane 1,2-		C ₄ H ₈ O ₂	1.5
Dioxane 1,4-	123-91-1	C ₄ H ₈ O ₂	1.5
Dipentene	138-86-3	C ₁₀ H ₁₆	0.9
Diphenyl ether	101-84-8	C ₁₂ H ₁₀ O	0.8
Disulphur dichloride	10025-67-9	S ₂ Cl ₂	3.0
Di-tert-butyl-p-cresol	2409-55-4	C ₁₁ H ₁₆ O	1.0
Divinylbenzene	1321-74-0	C ₁₀ H ₁₀	0.4
Dodecanol	112-53-8	C ₁₂ H ₂₆ O	0.9
Epichlorohydrin	106-89-8	C ₃ H ₅ ClO	8.0
Epoxypropyl isopropyl ether, 2,3-	4016-14-2	C ₆ H ₁₂ O ₂	1.1
Ethanol	64-17-5	C ₂ H ₆ O	8.7
Ethanolamine	141-43-5	C ₂ H ₇ NO	3.0
Ethoxy-2-propanol, 1-	1569-02-4	C ₅ H ₁₀ O ₂	2.0
Ethoxyethanol, 2-	110-80-5	C ₄ H ₁₀ O ₂	29.8
Ethoxyethyl acetate, 2-	111-15-9	C ₆ H ₁₂ O ₃	3.0
Ethyl(S)-(-)-lactate	97-64-3	C ₅ H ₁₀ O ₃	3.0
Ethyl acetate	141-78-6	C ₄ H ₈ O ₂	3.6
Ethyl acrylate	140-88-5	C ₅ H ₈ O ₂	2.0
Ethyl amine	75-04-7	C ₂ H ₇ N	1.0
Ethyl benzene	100-41-4	C ₈ H ₁₀	0.5
Ethyl butyrate	105-54-4	C ₆ H ₁₂ O ₂	1.0
Ethyl chloroformate	541-41-3	C ₃ H ₅ O ₂ Cl	80.0
Ethyl cyanoacrylate	7085-85-0	C ₆ H ₇ O ₂ N	1.5
Ethyl decanoate	110-38-3	C ₁₂ H ₂₄ O ₂	1.8
Ethyl formate	109-94-4	C ₃ H ₆ O ₂	30.0
Ethyl hexanoate	123-66-0	C ₈ H ₁₆ O ₂	2.6
Ethyl hexanol, 2-	105-76-7	C ₈ H ₁₈ O	1.5
Ethyl hexyl acrylate, 2-	103-11-7	C ₁₁ H ₂₀ O ₂	1.0
Ethyl mercaptan	75-08-1	C ₂ H ₆ S	0.7
Ethyl octanoate	106-32-1	C ₁₀ H ₂₀ O ₂	2.3
Ethylene	74-85-1	C ₂ H ₄	8.0
Ethylene glycol	107-21-1	C ₂ H ₆ O ₂	20.0
Ethylene oxide	75-21-8	C ₂ H ₄ O	15.0

Gas/VOC	CAS No.	Formula	Response Factor
Ferrocene	102-54-5	C ₁₀ H ₁₀ Fe	0.8
Formamide	75-12-7	CH ₃ ON	2.0
Furfural	98-01-1	C ₅ H ₄ O ₂	1.4
Furfuryl alcohol	98-00-0	C ₅ H ₆ O ₂	2.0
Gasoline vapors	8006-61-9		1.1
Gasoline vapors92 octane	8006-61-9		0.8
Germane	7782-65-2	GeH ₄	10.0
Glutaraldehyde	111-30-8	C ₅ H ₈ O ₂	0.9
Heptan-2-one	110-43-0	C ₇ H ₁₄ O	0.7
Heptan-3-one	106-35-4	C ₇ H ₁₄ O	0.8
Heptane n-	142-82-5	C ₇ H ₁₆	2.1
Hexamethyldisilazane, 1,1,1,3,3,3-	999-97-3	C ₆ H ₁₉ NSi ₂	1.0
Hexamethyldisiloxane	107-46-0	C ₆ H ₁₈ OSi ₂	0.3
Hexan-2-one	591-78-6	C ₆ H ₁₂ O	0.8
Hexane n-	110-54-3	C ₆ H ₁₄	4.2
Hexene, 1-	592-41-6	C ₆ H ₁₂	0.9
Hydrazine	302-01-2	H ₄ N ₂	3.0
Hydrogen peroxide	7722-84-1	H ₂ O ₂	4.0
Hydrogen sulfide	7783-06-4	H ₂ S	4.0
Hydroquinone	123-31-9	C ₆ H ₆ O ₂	0.8
Hydroxypropyl acrylate 2-	999-61-1	C ₆ H ₁₀ O ₃	1.5
Iminodi(ethylamine) 2,2-	111-40-0	C ₄ H ₁₃ N ₃	0.9
Iminodiethanol 2,2'-	111-42-2	C ₄ H ₁₁ NO ₂	1.6
Indene	95-13-6	C ₉ H ₈	0.5
Iodine	7553-56-2	I ₂	0.2
Iodoform	75-47-8	CHI ₃	1.5
Iodomethane	74-88-4	CH ₃ I	0.4
Isoamyl acetate	123-92-2	C ₇ H ₁₄ O ₂	1.6
Isobutane	75-28-5	C ₄ H ₁₀	8.0
Isobutanol	78-83-1	C ₄ H ₁₀ O	3.5
Isobutyl acetate	110-19-0	C ₆ H ₁₂ O ₂	2.3
Isobutyl acrylate	106-63-8	C ₇ H ₁₂ O ₂	1.3
Isobutylene	115-11-7	C ₄ H ₈	1.0
Isobutyraldehyde	78-84-2	C ₄ H ₈ O	1.2
Isodecanol	25339-17-7	C ₁₀ H ₂₂ O	0.9
Isononanol	2452-97-9	C ₉ H ₂₀ O	1.5
Isooctane	565-75-3	C ₈ H ₁₈	1.1
Isooctanol	26952-21-6	C ₈ H ₁₈ O	1.7
Isopentane	78-78-4	C ₅ H ₁₂	6.0
Isophorone	78-59-1	C ₉ H ₁₄ O	0.8
Isoprene	78-79-5	C ₅ H ₈	0.7
Isopropanol	67-63-0	C ₃ H ₈ O	4.4
Isopropyl acetate	108-21-4	C ₅ H ₁₀ O ₂	2.2
Isopropyl chloroformate	108-23-6	C ₄ H ₇ O ₂ Cl	1.6
Jet Fuel JP-4			0.8
Jet Fuel JP-5			0.7
Jet Fuel JP-8			0.7
Ketene	463-51-4	C ₂ H ₂ O	3.0
Maleic anhydride	108-31-6	C ₄ H ₂ O ₃	2.0
Mercaptoacetic acid	68-11-1	C ₂ H ₄ O ₂ S	1.0

Gas/VOC	CAS No.	Formula	Response Factor
Mesitylene	108-67-8	C ₉ H ₁₂	0.3
Methacrylic acid	79-41-4	C ₄ H ₆ O ₂	2.3
Methacrylonitrile	126-98-7	C ₄ H ₅ N	5.0
Methanol	67-56-1	CH ₄ O	200.0
Methoxyethanol, 2-	109-86-4	C ₃ H ₈ O ₂	2.7
Methoxyethoxyethanol, 2-	111-77-3	C ₅ H ₁₂ O ₃	1.4
Methoxymethylethoxy-2-propanol	34590-94-8	C ₇ H ₁₆ O ₃	1.3
Methoxypropan-2-ol	107-98-2	C ₄ H ₁₀ O ₂	3.0
Methoxypropyl acetate	108-65-6	C ₆ H ₁₂ O ₃	1.2
Methyl acetate	79-20-9	C ₃ H ₆ O ₂	5.2
Methyl acrylate	96-33-3	C ₄ H ₆ O ₂	3.4
Methyl bromide	74-83-9	CH ₃ Br	1.9
Methyl cyanoacrylate	137-05-3	C ₅ H ₅ O ₂ N	5.0
Methyl ethyl ketone	78-93-3	C ₄ H ₈ O	0.8
Methyl ethyl ketone peroxides	1338-23-4	C ₈ H ₁₈ O ₂	0.8
Methyl isobutyl ketone	108-10-1	C ₆ H ₁₂ O	0.8
Methyl isothiocyanate	556-61-6	C ₂ H ₃ NS	0.6
Methyl mercaptan	74-93-1	CH ₄ S	0.7
Methyl methacrylate	80-62-6	C ₅ H ₈ O ₂	1.6
Methyl propyl ketone	107-87-9	C ₅ H ₁₀ O	0.8
Methyl salicylate	119-36-8	C ₈ H ₈ O ₃	1.2
Methyl sulphide	75-18-3	C ₂ H ₆ S	0.5
Methyl t-butyl ether	1634-04-4	C ₅ H ₁₂ O	0.8
Methyl-2-propen-1-ol, 2-	51-42-8	C ₄ H ₈ O	1.1
Methyl-2-pyrrolidinone, N-	872-50-4	C ₅ H ₉ NO	0.9
Methyl-4,6-dinitrophenol, 2-	534-52-1	C ₇ H ₆ N ₂ O ₅	3.0
Methyl-5-hepten-2-one, 6-	110-93-0	C ₈ H ₁₄ O	0.8
Methylamine	74-89-5	CH ₅ N	1.4
Methylbutan-1-ol, 3-	123-51-3	C ₅ H ₁₂ O	3.4
Methylcyclohexane	108-87-2	C ₇ H ₁₄	1.1
Methylcyclohexanol, 4-	589-91-3	C ₇ H ₁₄ O	2.4
Methylcyclohexanone 2-	583-60-8	C ₇ H ₁₂ O	1.0
Methylheptan-3-one, 5-	541-85-5	C ₈ H ₁₆ O	0.8
Methylhexan-2-one, 5-	110-12-3	C ₇ H ₁₄ O	0.8
Methylhydrazine	60-34-4	CH ₆ N ₂	1.3
Methyl-N-2,4,6-tetranitroaniline, N-	479-45-8	C ₇ H ₅ N ₅ O ₈	3.0
Methylpent-3-en-2-one, 4-	141-79-7	C ₆ H ₁₀ O	0.7
Methylpentan-2-ol, 4-	108-11-2	C ₆ H ₁₄ O	2.8
Methylpentane-2,4-diol, 2-	107-41-5	C ₆ H ₁₄ O ₂	4.0
Methylpropan-2-ol, 2-	75-65-0	C ₄ H ₁₀ O	3.5
Methylstyrene	25013-15-4	C ₉ H ₁₀	0.5
Mineral oil	8042-47-5		0.8
Mineral spirits	64475-85-0		0.8
Naphthalene	91-20-3	C ₁₀ H ₈	0.4
Nitric oxide	10102-43-9	NO	8.0
Nitroaniline 4-	100-01-6	C ₆ H ₆ N ₂ O ₂	0.8
Nitrobenzene	98-95-3	C ₆ H ₅ NO ₂	1.7
Nitrogen dioxide	10102-44-0	NO ₂	10.0
Nitrogen trichloride	10025-85-1	NCl ₃	1.0
Nonane, n-	111-84-2	C ₉ H ₂₀	1.3

Gas/VOC	CAS No.	Formula	Response Factor
Norbornadiene, 2,5-	121-46-0	C ₇ H ₈	0.6
Octachloronaphthalene	2234-13-1	C ₁₀ Cl ₈	1.0
Octane, n-	111-65-9	C ₈ H ₁₈	1.6
Octene, 1-	111-66-0	C ₈ H ₁₆	0.7
Oxydiethanol 2,2-	111-46-6	C ₄ H ₁₀ O ₃	4.0
Paraffin wax, fume	8002-74-2		1.0
Paraffins, normal	64771-72-8		1.0
Pentacarbonyl iron	13463-40-6	FeC ₅ O ₅	1.0
Pentan-2-one	107-87-9	C ₅ H ₁₀ O	0.8
Pentan-3-one	96-22-0	C ₅ H ₁₀ O	0.8
Pentandione, 2,4-	123-54-6	C ₅ H ₈ O ₂	0.8
Pentane, n-	109-66-0	C ₅ H ₁₂	7.9
Peracetic acid	79-21-0	C ₂ H ₄ O ₃	2.0
Petroleum ether	64742-82-1	C ₆ H ₁₄	0.9
Phenol	108-95-2	C ₆ H ₆ O	1.2
Phenyl propene, 2-	98-83-9	C ₉ H ₁₀	0.4
Phenyl-2,3-epoxypropyl ether	122-60-1	C ₉ H ₁₀ O ₂	0.8
Phenylenediamine, p-	106-50-3	C ₆ H ₈ N ₂	0.6
Phosphine	7803-51-2	PH ₃	2.0
Picoline, 3-	108-99-6	C ₆ H ₇ N	0.9
Pinene, alpha	80-56-8	C ₁₀ H ₁₆	0.3
Pinene, beta	127-91-3	C ₁₀ H ₁₆	0.3
Piperidine	110-89-4	C ₅ H ₁₁ N	0.9
Piperylene	504-60-9	C ₅ H ₈	0.7
Prop-2-yn-1-ol	107-19-7	C ₃ H ₄ O	1.3
Propan-1-ol	71-23-8	C ₃ H ₈ O	4.8
Propane-1,2-diol, total	57-55-6	C ₃ H ₈ O ₂	10.0
Propene	115-07-1	C ₃ H ₆	1.4
Propionaldehyde	123-38-6	C ₃ H ₆ O	1.7
Propionic acid	79-09-4	C ₃ H ₆ O ₂	8.0
Propyl acetate, n-	109-60-4	C ₅ H ₁₀ O ₂	2.5
Propylene oxide	75-56-9	C ₃ H ₆ O	7.0
Propyleneimine	75-55-8	C ₃ H ₇ N	1.3
Pyridine	110-86-1	C ₅ H ₅ N	0.8
Pyridylamine 2-	504-29-0	C ₅ H ₆ N ₂	0.8
Styrene	100-42-5	C ₈ H ₈	0.4
Terphenyls		C ₁₈ H ₁₄	0.6
Terpinolene	586-62-9	C ₁₀ H ₁₆	0.5
Tert-butanol	75-65-0	C ₄ H ₁₀ O	2.6
Tetrabromoethane, 1,1,2,2-	79-27-6	C ₂ H ₂ Br ₄	2.0
Tetracarbonylnickel	13463-39-3	NiC ₄ O ₄	1.0
Tetrachloroethylene	127-18-4	C ₂ Cl ₄	0.7
Tetrachloronaphthalenes,all isomers	20020-02-4	C ₁₀ H ₄ Cl ₄	1.0
Tetraethyl orthosilicate	78-10-4	C ₈ H ₂₀ O ₄ Si	2.0
Tetrafluoroethylene	116-14-3	C ₂ F ₄	1.0
Tetrahydrofuran	109-99-9	C ₄ H ₈ O	1.6
Tetramethyl succinonitrile	3333-52-6	C ₈ H ₁₂ N ₂	1.0
Therminol			1.0
Toluene	108-88-3	C ₇ H ₈	0.5
Toluene-2,4-diisocyanate	584-84-9	C ₉ H ₆ N ₂ O ₂	1.6

Gas/VOC	CAS No.	Formula	Response Factor
Toluenesulphonylchloride, p-	98-59-9	C ₇ H ₇ SO ₂ Cl	3.0
Toluidine, o-	95-53-4	C ₇ H ₉ N	0.5
Tributyl phosphate	126-73-8	C ₁₂ H ₂₇ O ₄ P	5.0
Tributylamine	102-82-9	C ₁₂ H ₂₇ N	1.0
Trichlorobenzene 1,2,4-	120-82-1	C ₆ H ₃ Cl ₃	0.6
Trichloroethylene	79-01-6	C ₂ HCl ₃	0.7
Trichlorophenoxyacetic acid, 2,4,5-	93-76-5	C ₈ H ₅ O ₃ Cl ₃	1.0
Triethylamine	121-44-8	C ₆ H ₁₅ N	0.9
Trimethylamine	53-50-3	C ₃ H ₉ N	0.5
Trimethylbenzene, 1,3,5-	108-67-8	C ₉ H ₁₂	0.3
Turpentine	8006-64-2	C ₁₀ H ₁₆	0.6
TVOC			1.0
Undecane, n-	1120-21-4	C ₁₁ H ₂₄	0.9
Vinyl acetate	108-05-2	C ₄ H ₆ O ₂	1.1
Vinyl bromide	593-60-2	C ₂ H ₃ Br	1.0
Vinyl chloride	75-01-4	C ₂ H ₃ Cl	2.1
Vinyl-2-pyrrolidinone, 1-	88-12-0	C ₆ H ₉ NO	0.9
Xylene mixed isomers	1330-20-7	C ₈ H ₁₀	0.4
Xylene, m-	108-38-3	C ₈ H ₁₀	0.4
Xylene, o-	95-47-6	C ₈ H ₁₀	0.6
Xylene, p-	106-42-3	C ₈ H ₁₀	0.6
Xylidine, all	1300-73-8	C ₈ H ₁₁ N	0.7



UNDERSTANDING, ACCELERATED

TSI Incorporated – Visit our website www.tsi.com for more information.

USA Tel: +1 800 874 2811
 UK Tel: +44 149 4 459200
 France Tel: +33 4 91 11 87 64
 Germany Tel: +49 241 523030

India Tel: +91 80 67877200
 China Tel: +86 10 8219 7688
 Singapore Tel: +65 6595 6388