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RESPIRATORY PROTECTION SELECTION GUIDE

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RESPIRATORY PROTECTIVE EQUIPMENT STANDARDS

Respirators are normally defined as filtering Respiratory Protective Devices (which remove contaminants from an otherwise breathable atmosphere).

Because of the diversity of applications, there are many different types of respirators in service, ranging from simple disposable filtering facepieces, to fully self-contained breathing apparatus. This diversity is reflected in the many European and international product standards to which these devices are designed.

Generally, these standards can be regarded as statutory in that all devices being sold must comply with the most appropriate standard.

In Europe, all RPE (Respiratory Protective Equipment) must be CE approved and marked before it can be sold. The CE mark only signifies that the product and its manufacture have been independently examined against the basic safety requirements of the PPE directive - 89/686/EEC, and, therefore, offers no clues as to the suitability or performance of a particular piece of equipment. It is, therefore, necessary to look to the product standard in order to understand the performance requirements.

EN149
Disposable filtering facepiece respirators for particulates only. These devices are substantially constructed from the filter media itself, and are disposed of after each shift. There are three protection classes in this standard: FFP1, FFP2 and FFP3. These devices cover only the nose, mouth and chin.

EN 405 HALF MASK
Disposable half mask respirators which incorporate a gas filtering element as well as a particulate filtering element. They cover the nose, mouth and chin and usually have an adjustable head harness.

These devices are re-usable to a degree, although, since the gas filter elements are not replaceable, the complete mask must be replaced when the filters are exhausted. There are several classifications of device in this standard depending on the particulate filtration efficiency and gas filtration capacity (life before saturation).

EN140
Half or quarter masks which cover the nose, mouth and chin, or just the nose and mouth. The facepiece is, generally, a flexible rubber or silicone rubber material, and masks can usually be fitted with a range of replaceable filters which conform to the separate standards EN141, 143, 371, 372 (see below). The maximum weight of filters to be fitted to half masks is 300 grams, since heavy filters are liable to disturb the faceseal and prove uncomfortable. Half masks may be fitted with the EN148/1 standard thread fitting which allows the use of standard thread canisters.

EN136
Full facemasks that cover the whole face. They have a flexible rubber or silicone rubber faceseal and are fitted with a transparent visor. Full facemasks are usually fitted with replaceable filters conforming to the separate standards EN141, 143, 371, 372. The maximum weight of filters to be fitted directly to full facemasks is 500 grams. Full facemasks today commonly have the EN148-1 standard thread to take the full range of standard filter canisters, although use of twin filter full facemasks with dedicated filter fittings is becoming more common, since standard thread filters tend to be heavy with high breathing resistance.

Within EN136 there are three Classes. Class 1 is a light duty full facemask which is maintenance-free and cannot be fitted with standard canisters, Class 2 is a fully maintainable general duty respirator and Class 3 is a fire fighting mask which has passed a strict radiant heat test. All three Classes provide the same level of respiratory protection.

EN148
Describes various standard thread connections frequently used in RPE. Most common is EN148-1, which is the 40mm-thread connection known more commonly as DIN40 or NATO standard, and this is often used with full facemasks and filter canisters. If a mask is approved with a standard EN148-1 thread, it can be fitted with any approved standard thread filter, subject to the filter weight restrictions. However, this “mix and match” approach does not extend to powered respirator systems, which must be approved with manufacturer specific filters in order to assure correct flow rates and filter life.

EN143
Particulate filters which are effective against all dusts and fibres. Most are also effective against metal (e.g. welding) fume, liquid mists, bacteria and virus, although this should always be checked with the supplier of any individual filter. This standard describes only those filters to be fitted to EN140 half masks and EN136 full facemasks; the requirements for powered respirator filters are separately contained within the powered RPD standards. There are three classes of particulate filter, P1: low efficiency, P2: medium efficiency and P3: high efficiency. Since the relative performance difference between these filters is rather large, it is very important that the correct filter class is chosen for any given application.

EN141
Gas/vapour or combination filters. A combination filter is one that combines a gas filtering element with a particulate filtering element conforming to EN143 above. Gas/vapour filters are classified according to type and class.

GAS/VAPOUR FILTER TYPES

TYPE	COLOUR CODE	APPLICATION
A	Brown	Certain organic compounds with a boiling point above 65°C, as specified by the manufacturer
B	Grey	Certain inorganic substances e.g. Chlorine, Hydrogen sulphide, Hydrogen cyanide (excluding Carbon monoxide)
E	Yellow	Certain acid gases e.g. Sulphur dioxide
K	Green	Ammonia and certain organic ammonia derivatives
No_xP3	Blue/White	Oxides of Nitrogen (single use only)
HgP3	Red/White	Mercury and compounds

Since the filter adsorbent materials are usually different for each of these types, it is clearly vital the correct filter is used for any given substance.

EN141 also classifies filters by capacity, with classes 1 - 3 being low, medium and high capacity, respectively.

EN371
Filters for use against certain low boiling point organic vapours as specified by the manufacturer. Organic vapours with boiling points below 65°C are rather volatile, and, therefore, less readily adsorbed by filter charcoals. In addition, once adsorbed, there can be a marked tendency for the contaminant to desorb back into the air stream whilst the filter is being used. For this reason, these filters are single use only and must be replaced after each shift. The filters are marked AX and have a brown label.

EN372
This standard allows a filter to be specifically approved against a given substance. They are not common, as most applications are adequately covered by the other standards. The filters are marked SX and have a violet label, and will be marked with the substance of application.

EN146
This is the original standard for powered hoods and helmets for protection against particulates only. Three levels of protection are available: THP1, THP2 and THP3, the latter being the highest. This standard has now been superseded by EN12941.

EN12941
This is the standard for powered hoods and helmets and includes provision for protection against both particulates and gases/ vapours. There are three protection classes - TH1, TH2, TH3. These devices rely, for their protection, on a constant flow of filtered air, provided by a battery powered fan, and offer no protection if the fan is not working. Filter types available, and combinations thereof, are P (particulate), A, B, E, K, AX, SX, Nox, HgP. It should be noted that not all combinations are available commercially (e.g. AX). The particulate filter efficiency is required to match the total protection of the system, so, filters will be marked TH1 P, TH2 P, TH3 P etc depending on which level of device they are approved with.

EN12942
The latest standard for power assisted facemask respirators. It includes provision for protection against both particulates and gases/ vapours. The three protection classes are TM1, TM2 and TM3. These devices, which may include half masks or full facemasks, are termed “power assisted” since they will still offer protection equivalent to a standard negative pressure respirator if the power fails. Filter classifications follow the same pattern as for EN12941.

RISK ASSESSMENT

(1) PARTICULATES

Particulates include dusts (finely divided solid materials including fibres), mists (liquid droplets, aerosols), fumes (thermally generated solid particles generated in extreme high heat e.g. welding and certain combustion and chemical processes), bacteria and virus.

(2) GASES AND VAPOURS

Materials in the atmosphere in the molecular state. Vapour is the gaseous phase of a material normally liquid at room temperature. Some gases and vapours can enter the body through the skin in sufficient quantities to be toxic. However, usually the most important route of entry into the body is through the lungs, whose delicate lining can be permeated or temporarily or permanently damaged by toxic materials.

A risk assessment is normally a legal requirement, for instance under COSHH or other UK regulations or their international equivalents, where a hazard to health is likely. A risk assessment should always be written and kept on file and should show:

i. What is the hazard and what are its likely health effects?
Identify hazardous substances by scientific name and physical state.

ii. What risk is associated with this hazard?
This will entail assessing, and preferably measuring, airborne contamination levels, and comparing the results with acceptable limits. Acceptable limits may be set by statutory bodies (e.g. OES, MAK, TLV) or arrived at by considering likely health effects of exposure. Material safety data sheets should be consulted, paying particular attention to the assigned ‘R’ (Risk) phrases. Where the substance is gaseous, the volatility can be used to help with crude estimates of likely concentration. For dusty environments, a qualitative assessment of dustiness may be possible and helpful in identifying adequate RPDs.

iii. How do you control the risk to an acceptable level?
Options such as removing the source of hazard from the work area or applying engineering controls should always be implemented before resorting to an RPD.

If a respiratory device is chosen, it must:

(a) Fit
(b) Be compatible with the task
(c) Be compatible with other PPE worn
(d) Be suitable and adequate to control the risk (e.g. have sufficient protection, correct filters etc.)
(e) Be approved (e.g. CE marked)
(f) Be properly cleaned and maintained in accordance with manufacturer’s instructions.

These are legal requirements and all should be considered as part of the written assessment.
They are the responsibility of the employer, who must manage the respiratory protection programme. Of course, it is unlikely that an employer will have the necessary expertise to carry out these tasks and they will be seeking advice from Occupational Hygiene Consultants (particularly for workplace monitoring) and suppliers of chemicals, as well as safety equipment suppliers. Equipment suppliers must ensure that information they give on their products is accurate and assists users in making an informed choice in selecting appropriate products, but employers must realise the ultimate responsibility is with them.

HOW TO DECIDE IF A RESPIRATORY PROTECTIVE DEVICE IS BOTH SUITABLE AND ADEQUATE FOR A GIVEN APPLICATION

A. SUITABILITY

A device is suitable if it provides appropriate protection for a given application. To do this it must:

i. Fit the person to whom it is issued, taking into account, for instance whether they have a beard, spectacles etc.

ii. Be capable of providing the appropriate protection (e.g. fitted with correct filters or be to the appropriate standard etc).

iii. Be matched to the task, e.g. not hinder mobility or vision unduly, not impose undue physiological burden (particularly relevant for wearers with medical conditions, some of whom may not be capable of safely wearing RPE). The wearer must be capable of doing their job with minimum impedance from the device worn.

iv. Be compatible with any other items of PPE worn, e.g. eye, face, hearing or skin protection, and not degrade the protection offered by any of these devices.

v. Be not likely to cause or exacerbate heat strain – this is a significant risk where protective clothing is used in combination with respiratory protection.

vi. Give sufficient duration for the application.

B. ADEQUACY

A Respiratory Protective Device is adequate if it provides a sufficient level of protection to reduce the exposure of the wearer to an acceptable level. To determine this, it is necessary to know the expected concentration of contaminant in the workplace, and calculate the minimum factor by which it must be reduced to reach an acceptable level.

It would be a matter of assessment in any given situation what constituted an acceptable level, but, in any case, this must be well below any applicable Exposure Limit (e.g. OES, MEL, MAK, TLV).

This minimum factor defines the minimum required Protection Factor of the RPD. Protection Factor is defined as:

$$\textbf{PF=} \frac{\text{Contaminant Concentration Outside The Mask}}{\text{Contaminant Concentration Inside The Mask}}$$

The Protection Factor of any given device is very much dependent on the level of leakage. Leakage can vary greatly depending on fit, flow rate (if applicable), training and motivation of wearer, temperature and humidity, application and many other influences. Historically, a Nominal Protection Factor (NPF) has been quoted for a given class of respirator, this being based on the minimum acceptable performance in laboratory tests.

It was thought that, since the laboratory tests were designed to provide a realistic assessment of the respirator leakage on actual human test subjects, and the number quoted was based on the minimum allowed performance, the NPF was a reasonable indicator of workplace performance. More recently, however, an increasing number of Workplace Protection Factor (WPF) Studies, carried out in real workplace situations, have indicated that, in many cases, this is not a realistic approach. Instead, a new system has been adopted in the UK whereby safer Assigned Protection Factors have been set. These APFs, contained in the revised standard BS4275, allow safety professionals to make a much safer assumption about the level of protection offered by a respirator.

The Assigned Protection Factors given overleaf are those which are used in the United Kingdom. The approach is a cautious one, and it would, therefore, seem appropriate that users outside the UK follow these guidelines also. The revision of European Guideline document CR529 is likely to follow a similar approach, although, to date, no European APFs have been set. There are, however, different Assigned Protection Factors published in Germany - ZH1/701 - Regeln für den Einsatz von Atemschutzgeräten by HVBG, and by NIOSH in the United States.

In all cases, to decide if a given respirator is adequate:

$$\textbf{Minimum required APF} = \frac{\text{Workplace Concentration}}{\text{Maximum Acceptable Exposure Concentration}}$$

PROTECTION FACTORS FOR COMMON RPD TYPES

Standard	Description	Class or Filter	Nominal PF	Assigned PF*
EN 149	Filtering facepieces for particulates	FFP1	4	4
		FFP2	12.5	10
		FFP3	50	20
EN 405	Filtering half masks for gases or particulates	FFGASxP1(*)	4	4
		FFGASxP2 (*)	12.5	10
		FFGASxP3 (*)	50	20
		(* for particulates) All, for gases	50	10
EN 140	Half mask	P1	4	4
		P2	12.5	10
		P3	50	20
		GAS	50	10
EN 136	Full facemask (all classes)	P2	17	10
		P3	1000	40
		GAS	2000	20
EN 12941	Powered hoods or helmets	TH1	10	10
		TH2	50	20
		TH3	500	40
EN 12942	Power assisted masks	TM1	20	10
		TM2	200	20
		TM3	2000	40
EN 1835	Light duty airline hood or helmet	LDH1	10	10
		LDH2	50	20
		LDH3	200	40
EN 12419	Light duty airline, full or half mask	LDM1	20	20
		LDM2	200	20
		LDM3	2000	40
EN 139	Compressed airline, full or half mask	C/w half mask	50	20
		C/w full mask Constant Flow	2000	40
		C/w full mask Negative pressure demand	2000	40
		C/w full mask Positive pressure demand	2000	2000
EN 270	Compressed airline breathing apparatus, c/w hood		200	40
	Compressed airline suit			200
EN	Fresh air hose breathing apparatus, c/w full			40
EN 137	Self-contained open circuit breathing apparatus	Negative pressure demand	2000	40
		Positive pressure demand	2000	2000

* According to BS4275 : 1997 and Revised

SOME SPECIAL CONSIDERATIONS FOR RESPIRATORY PROTECTION DEVICE SELECTION

Some applications, by their nature, require special consideration to be given to Respiratory Selection. Some examples are discussed below.

A. BACTERIA AND VIRUS

Safe exposure standards have not been established for bacteria and virus and this gives rise to difficulty in deciding what level of protection is required. In general, high efficiency particle filters are required and these should be of a type approved for liquid aerosols.

Furthermore, to decide what class of respirator is appropriate, it is necessary to consider at least the following:

(1) Proximity to contamination source
(2) Level of ventilation/ dilution
(3) Risk of contamination (e.g. by splash, from coughing etc)
(4) Infectious dose of the organism, for example TB is very infectious, whereas HIV virus is much more difficult to transfer

If risk from all of these factors is ranked low, it is likely that an FFP3SL disposable or half mask with P3 filter would be adequate. For progressively higher risks, higher levels of RPD would be required. If the level of risk cannot be identified at least qualitatively, it would be unwise to consider using anything less than TH3 or TM3 powered respirators against bacteria and virus.

Products that are used against bacteria/virus must be effectively decontaminated after each use and filters etc must be disposed of as controlled waste after each use. Measures to control exposure at source should always be used in addition to RPE

B. ASBESTOS AND ASBESTOS REMOVAL

Deaths from asbestos related diseases are rising rapidly in most countries and it is probably the single largest respiratory killer after tobacco smoke. Asbestos exposure potentially affects many tradespeople in construction and maintenance industries e.g. plumbers, plasterers, joiners and electricians, as the use of asbestos in construction materials is not usually obvious to the untrained eye. Use of RPE fitted with effective particle filters is essential when working with asbestos-containing materials, and even this will not be adequate unless suitable measures are taken to ensure dust levels are minimised, e.g. damping down, isolation of the work area, and avoiding drilling, sawing and breaking asbestos based materials, where possible. In the UK, only licensed contractors who are properly trained and equipped for this specialised work, can carry out significant tasks with asbestos.

Where work (e.g. removal, demolition, construction) which is likely to give rise to asbestos dust is contemplated, minimum TM3 power assisted respirator or EN139 positive pressure demand breathing apparatus should be worn. According to national legislation, full measures for controlling dust at source should be used in combination with appropriate work enclosures and decontamination procedures.

The RPD maximum use concentrations advised are as follows (for all types of asbestos):

Suitable TM3 power assisted full facemask - 8 fibres/ml.

Suitable positive pressure demand full facemask Breathing Apparatus – 40 fibres/ml.*

**Note: No data showing the workplace protection factors for this type of device were available at the time of going to press. A cautious protection level has, therefore, been assigned.*

C. ISOCYANATES

There are several organic chemicals within the Isocyanates family and they are found in many industrial applications where two liquid components react to form a solid material. Examples are two-pack paints, insulation materials (e.g. cavity wall), polyurethanes and various coatings. Most of these materials are toxic and can provoke severe allergic reaction in sensitised individuals. Occupational Asthma is common in workers who have been exposed even to very low levels and there is a possibility some may be carcinogenic. For this reason Isocyanates have a very low exposure limit, and it is vital that exposures are kept as far as possible below this limit.

Although Isocyanate particulate and vapour is readily filtered by AP3 class filters, the substances have very poor warning properties, therefore, a worker may be unaware that their filter is exhausted and omit to replace it when necessary. For this reason, the only filtering respirators likely to be suitable for protection against Isocyanates are full facemasks with A2P3 canisters. These should only be used either for short term escape from a limited spillage or leak, or for short periods where the contaminant concentration is known to be less than 10 X the Exposure Limit (MEL in UK). For general exposures less than 10 X the Exposure Limit, suitable air fed equipment with an APF of at least 40 is generally preferred. For general exposures greater than this, positive pressure demand breathing apparatus should be used, possibly with an auxiliary A2P3 filter to allow transit to the airline connection point (if applicable).

Disposable filtering facepieces, half mask respirators and powered respirator systems are not ideally suited for the control of Isocyanate exposure, therefore, should not be used unless exposure levels have already been controlled at source to well below the control limit.

D. SOLVENTS

The term “solvent” includes a huge variety of organic liquids used in many applications, particularly paints, coatings, agricultural sprays and cleaning materials. Some are relatively innocuous, albeit sometimes with a fairly strong odour, while others are toxic, with possibility of permanent organ damage or carcinogenicity. Many solvents are relatively volatile organic liquids which can be filtered with A type filters. However, there are several commonly found substances, e.g. Acetone, Dichloromethane and Diethyl Ether which are so volatile they may require either an AX type single use filter or indeed may not be filterable at all.

It is vital in the assessment that the airborne concentrations of all solvents in any mix be determined and that the filter types are individually checked.

Because solvents are usually physically absorbed by charcoal filters rather than chemically absorbed, the volatility has a major effect on the filter performance. Also, being volatile, solvents can often be found in surprisingly high concentrations in a work area, meaning that filter life will be correspondingly short. For example, during a painting operation with a toluene based paint in a relatively small, poorly ventilated room, levels of toluene vapour were measured in excess of 500 ppm, meaning that a typical A1 filter cartridge would be unlikely to last more than 2 or 3 hours before saturation. The level of ventilation is vitally important here, since it is relatively easy with even very simple extraction or air management to reduce contaminant concentrations very significantly. Again, it is important that this is all properly assessed, as relying on taste or smell to determine filter life may not be safe. This is doubly important if powered respirators are being considered; although they are usually available with efficient vapour filters, the life of powered respirators is rather shorter, owing to the high airflow.

E. MATERIALS WITH NO SET EXPOSURE LIMIT

There may be substances for which there is not a statutory exposure limit; this is, for example, increasingly true of carcinogens. In these cases, it is usually necessary to set an internal control level, and unless there is good reason to do otherwise, this level will usually be the lowest detectable concentration using modern detection equipment. Some substances may not be easy to detect, and in these cases, the philosophy should always be to reduce exposure as far as is practical.

Generally, control at source of carcinogenic substances should be designed to achieve these low levels, with RPD used solely as a last resort. However, in this situation, it would still be advisable to select the highest protection RPD compatible with the task and the wearer(s).

F. WORKING IN CONFINED SPACES

Working in confined spaces requires special care and procedures.

Confined spaces are many and varied and commonly include spaces which:

- have restricted means of entry or exit;
- are not intended as a regular workplace;
- are at atmospheric pressure during occupancy;
- could have inadequate ventilation and/or an atmosphere which may become contaminated or oxygen deficient.

Hundreds of workers die worldwide every year working in confined spaces, pointing to the fact that this is an area that requires special care and training. Courses on working in confined spaces are run by many reputable training organisations. These, typically, last a week and cover the full spectrum of working in confined spaces; these notes are intended as an aide memoir to fully trained operatives and do not represent a full and formal working protocol.

There are basically four types of risk when working in confined spaces; oxygen deficiency, explosive atmospheres, toxic vapours and gases and physical hazards.

Confined spaces occur in almost every industry. Examples include storage tanks, sewers, cold store rooms, vaults, ducts, boilers, basements, manholes and ships holds. An open ditch or open topped vault can become a “confined space” if air circulation is poor and gases, heavier than air, can accumulate at the bottom. A structure of irregular shape becomes a confined space if pockets of gas or vapour accumulate where air does not circulate.

THE RESPIRATORY PROTECTION PROGRAMME

This guide is principally about selecting the correct Respiratory Protective Device for a given application. However, device selection is only one element of the total programme, which has little value unless it is properly managed.

The key elements of a successful respiratory programme are:

(1) Risk Assessment
(2) Control at Source
(3) Device Selection, including fitting of devices to workers
(4) Worker Training
(5) Hygiene Facilities (e.g. decontamination)
(6) Maintenance and checking of equipment
(7) Monitoring, reassessing and corrective actions for programme shortcomings

Note that all the above also apply to engineering controls, where assessment, training, maintenance and monitoring are equally important in assuring programme success.

WORKER TRAINING

The following, as a minimum, should be covered as part of worker training:

(1) Nature of the hazard, possible health effects, and the control measures to be used.
(2) How to recognise faults in their respirator, where to report them, and where and how to obtain spares (if applicable).
(3) If applicable, how to maintain the RPD, although it is nearly always preferable, except in very small companies, to have one person specially trained to maintain devices.
(4) How to perform checks prior to use.
(5) How to put the device on.
(6) Any limitations to the use of the device which may be applicable (e.g. work areas, tasks etc where the device is not suitable).
(7) How to take the device off, including any applicable decontamination procedures.
(8) How and where to clean it.
(9) Where to store it.
(10) Practical exercises to ensure that the device is used correctly.

Training should be revised regularly in order to ensure workers remain proficient, and retraining may also be necessary where audits show incorrect worker practices.

SELECTING AND USING FILTERS

1. Fully identify the prevailing workplace hazards, checking the scientific names of the chemicals. Ensure that the state of the substance is known - Is it a gas, vapour or particle or, a mixture of these?
   Special attention is needed if there are several substances that may interact, either by reacting chemically, or by having synergistic adverse health effects.
2. Check the filter type.
3. Estimate the likely atmospheric concentration. This is best done by measurement, and where this is possible, it is strongly recommended that a workplace survey is carried out. This is particularly important if the substance has long term health effects e.g. carcinogens, respiratory sensitisers, toxic metals.
   Where measurement is not possible, an estimate should be made of the maximum likely concentration. Qualitative evaluation of dustiness, vapour volatility and the amount of material present can be very helpful if measurements are not available.

For Particulate hazards

i. Choose a particle filter.
ii. Ensure that it has the correct efficiency for the application and that it is correctly marked for the respirator (powered systems).
iii. Ensure that the filter is new and undamaged. Check that it is suitable for liquid / mists / bacteria / virus / metal fume, as applicable.
iv. Mark date and time of first use on the filter label or record separately if this is not convenient.
v. Replace the filter when breathing resistance becomes noticeably higher or when a powered respirator fails the flow test.
vi. If the filter has been used against toxic dusts, bacteria or virus, it is usual to dispose of it as controlled waste after each use.
vii. Always replace a particulate filter after 6 months of use regardless of any of the above.

For Gas/Vapour Hazards

- **i.** Choose the correct filter type.
- **ii.** Ensure that it is new and undamaged and not time expired.
- **iii.** Mark date and time of first use on the filter label or record separately if this is not convenient.
- **iv.** Check duration with the manufacturer. This will require the atmospheric concentration to be known. Bear in mind that mixtures of substances can severely reduce filter life. Concentrations of all substances in the mix must be known.
- **v.** Replace filters when calculated duration is reached.
- **vi.** If the duration is not known, extreme caution should be exercised when using filters.
- **vii.** If the substance is tasted or smelt, the filter must be replaced immediately. Subsequent filters should be used for no more than half the duration of the initial filter. Taste/Smell must not generally be used as an end of life indication.
- **viii.** If the substance has poor warning properties (taste/smell) and the concentration is not known, then gas filters should not be used. Consider air supplied equipment.
- **ix.** Do not use a gas filter which has been out of its packaging for more than six months, regardless of any of the above.

The above requirements should be read together for applications which require combination filters.

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
AGE	C6 H10 O2	106-92-3	Liquid	no	ppm	5.00		50.0	154.0	-64.0	57	no	yes	A		
ACETALDEHYDE	C2 H4 O	75-07-01	Liquid	YES	ppm	20.0		10000.0	21.0	-123.5	-20	yes	no	AX		
ACETIC ACID	C2 H4 O2	64-19-7	Liquid	no	ppm	10.00		1000.0	117.9	16.6	40.00	yes	no	A	P3	
ACETIC ANHYDRIDE	C4 H6 O3	108-24-7	Liquid	no	ppm	5.00		1000.0	139.6	-73.1	49.00	yes	no	A		
ACETONE	C3 H6 O	67-64-1	Liquid	no	ppm	750.00		20000.0	56.5	-94.0	-20.00	yes	no	AX		
ACETONITRILE	C2 H3 N	75-05-8	Liquid	no	ppm	40.00		4000.0	81.6	-45.7	2.00	yes	no	A		
ACETYLENE	C2 H2	74-86-2	Gas	no	ppm				-84.0	-81.0	-18	no	no			Use Airline
o-ACETYLSALICYLIC ACID	C9 H8 O4	50-78-2	Solid	no	mg/m3	5.00			140.0	135.0	-		no		P	
ACROLEIN	C3 H4 O	107-02-8	Liquid	no	ppm	0.10		2.0	53.0	-86.9	-20.00	no	no	AX		
ACRYLALDEHYDE	C3 H4 O	107-02-8	Liquid	no	ppm	0.10		2.0	53.0	-86.9	-20.00	no	no	AX		
ACRYLAMIDE	C3 H5 N O	79-06-1	Solid	YES	mg/m3	MEL	0.300		125.0	84.5	138	yes	yes	A	P	
ACRYLIC ACID	C3 H4 O2	79-10-7	Liquid	no	ppm	10.00			141.6	13.0	54.00	no	no	A		
ACRYLONITRILE	C3 H3 N	107-13-1	Liquid	YES	ppm	MEL	2.000		78.0	-83.0	-5	no	yes	A		
ALDRIN (ISO)	C12 H8 Cl6	309-00-2	Solid	YES	mg/m3	0.25				104.0		no	yes	A	P	
ALLYL ALCOHOL	C3 H6 O	107-18-6	Liquid	no	ppm	2.00		20.0	97.1	-129.0	21	no	yes	A		
ALLYL 2,3-EPOXYPROPYL ETHER	C6 H10 O2	106-92-3	Liquid	no	ppm	5.00		50.0	154.0	-64.0	57	no	yes	A		
ALLYL GLYCIDYL ETHER	C6 H10 O2	106-92-3	Liquid	no	ppm	5.00		50.0	154.0	-64.0	57	no	yes	A		
ALPHA-CHLOROTOLUENE	C7 H7 Cl	100-44-7	Liquid	no	ppm	1.00		10.0	179.0	-45.0	67	no	no	A		
ALUMINIUM ALKYL COMPOUNDS	Various	n/a	Solid	no	mg/m3	2.00						no	no		P	
ALUMINIUM METAL (RESPIRABLE DUST)	Al	7429-90-5	Solid	no	mg/m3	4.00			2467.0	660.4		no	no		P	
ALUMINIUM OXIDE (RESPIRABLE DUST)	Al2 O3	1344-28-1	Solid	no	mg/m3	4.00			2980.0	2072.0		no	no		P	
ALUMINIUM SALTS, SOLUBLE	Al	1344-28-1	Solid	no	mg/m3	2.00						no	no		P	
4-AMINOAZOBENZENE	4 H11 N3 C12			YES										A	P	
4-AMINOBIPHENYL	4 H11 N C12	92-67-1	Solid	YES					302.0	53.4						Use SCBA
4-AMINOBIPHENYL SALTS	Various			YES												Use SCBA
4-AMINO-3-FLUOROPHENOL	3 F 24H N4 C24 O4			YES										A	P	
AMINODIMETHYLBENZENE	as Xylidine	1300-73-8	Liquid	no	ppm	2.00		50.0	213.0	16.0	96	no	yes	A		
2-AMINOETHANOL	C2 H7 N O	141-43-5	Liquid	no	ppm	3.00		30.0	170.0	10.3	85	yes	no	A		
2-AMINOPYRIDINE	C5 H6 N2	504-29-0	Solid	no	mg/m3	2.00		5.0	210.6	58.1	67	no	no	A	P	
AMMONIA	H3 N	7664-41-7	Liquid	no	ppm	25.00		300.0	-33.4	-77.7		yes	no	K		
AMMONIUM CHLORIDE, FUME	H4 Cl N	12125-02-9	Solid	no	mg/m3	10.00			520.0			no	no	K	P	
AMMONIUM SULPHAMATE	H6 N2 O3 S	7773-06-0	Solid	no	mg/m3	10.00		1500.0	160.0	125.0		no	no		P	
n-AMYL ACETATE	as Pentyl Acetate	628-63-7	Liquid	no	ppm	50.00		1000.0	142.0	-79.0	37.00	no	no	A		
sec-AMYL ACETATE	as 1-Methylbutyl Acetate	626-38-0	Liquid	no	ppm	50.00		1000.0	130.0	-78.0	25.00	no	no	A		
ANILINE	C6 H7 N	62-53-3	Liquid	YES	ppm	MEL	1.00		185.0	-6.0	70	no	yes	A		
ANISIDINES, O- AND P-ISOMERS	C7 H9 N O	90-04-0	Liquid	YES	ppm	0.1		50.0	224.0	6.2	118	no	yes	A	P3	
ANTIMONY AND COMPOUNDS (AS SB)	Sb	7440-36-0	Solid	no	mg/m3	MEL	0.500	50.0	1750.0	630.5		no	no		P3	
ANTIMONY TRIOXIDE	O3 Sb2	1309-64-4	Solid	no	mg/m3	MEL	0.500		1550.0	656.0		no	no		P	
ANTIMONY TRISULPHIDE	S3 Sb2		Solid	no	mg/m3	MEL	0.500		1150.0	550.0		no	no		P	
p - ARAMID RESPIRABLE FIBRES	(C14 H10 O2 N2)n	26125-61-1		no	fibres/ml	0.50									P	
ARGON	Ar	7440-37-1	Gas	no	ppm				-186.0			no	no			Use Airline
ARSENIC ACID & ITS SALTS	As H O3			YES	mg/m3	MEL	0.100								P	
ARSENIC PENTOXIDE	As2 O5			YES	mg/m3	MEL	0.100			315.0					P	
ARSENIC TRIOXIDE	As2 O3	1327-53-3		YES	mg/m3	MEL	0.100			312.3					P	
ARSENIC & COMPOUNDS EXCEPT ARSINE	As	7440-38-2	Solid	YES	mg/m3	MEL	0.100		613.0	613.0		no	no		P3	
ARSINE	As H3	7784-42-1	Liquid	YES	ppm	0.05			-55.0	-116.0		no	no			Use Airline
ASBESTOS	n/a	1332-21-4	Fibre	YES	fibre/ml	MEL	0.200			600.0		no	no		P3	
ASPHALT, PETROLEUM FUMES	n/a	8052-42-4	Solid	YES	mg/m3	5.00						no	no	A	P	
ASPIRIN	as o-Acetylsalicylic Acid	50-78-2	Solid	no	mg/m3	5.00			140.0	135.0			no		P	
ATRAZINE (ISO)	C8 H14 CL N5	1912-24-9	Solid	no	mg/m3	10.00				172.0		no	no		P	
AZINPHOS-METHYL (ISO)	C10 H12 N3 O3 P S2	86-50-0	Solid	no	mg/m3	0.20		10.0		72.8		no	yes	A	P3	
AZIRIDINE	C2 H5 N	151-56-4	Liquid	YES	ppm				56.5	-36.1	-11	no	yes	AK		
AZODICARBONAMIDE	C2 H4 N4 O2	123-77-3		no	mg/m3	MEL	1.000								P3	
BCME (Bis (chloromethyl) ETHER)	Cl2 C2 H4 O	542-88-1	Liquid	YES	ppm	MEL	0.001		104.0	-41.5						Use SCBA
BGE	C7 H14 O2	2426-08-6	Liquid	no	ppm	25.0		250.0	164.0					A		
γ-BHC (ISO)	as Lindane	58-89-9	Solid	no	mg/m3	0.10		50.0	323.0	113.0				A	P	
BARIUM COMPOUNDS SOLUBLE (AS BA)	Ba	7440-39-3	Solid	no	mg/m3	0.50		250.0	1640.0	725.0		no	no		P	
BARIUM SULPHATE, RESPIRABLE DUST	BaO4 S	7727-43-7	Solid	no	mg/m3	4.00			1600.0	1580.0		no	no		P	
BARIUM SULPHATE, TOTAL INHALABLE DUST	BaO4 S	7727-43-7	Solid	no	mg/m3	10.00			1600.0	1580.0		no	no		P	
BENOMYL (ISO)	C14 H18 N4 O3	17804-35-2	Solid	no	mg/m3	10.00				300.0		no	no	A	P	
BENZENE	C6 H6	71-43-2	Liquid	YES	ppm	MEL	3.000	2000.0	80.1	5.5	-11	no	yes	A		
BENZENETHIOL	C6 H6 S	108-98-5	Liquid	no	ppm	0.50			168.7	-14.8	55.6	no	no	A		

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
BENZENE-1,2,4-TRICARBOXYLIC ACID 1,2-ANHYDRIDE	C9 H4 O5	552-30-7	Solid	no	mg/m3	0.04			240.0	162.0		no	no	A	P3	
BENZIDENE SALTS	Various		Solid	YES										A	P3	
BENZIDINE	C12 H12 N2	92-87-5	Solid	YES					400.0	115.0				A	P3	
BENZO-(a)-ANTHRACENE	C18 H12			YES										A	P3	
BENZO-(a)-PYRENE	C20 H12			YES						1770				A	P3	
BENZO-(b)-FLUORANTHENE	C20 H12		Solid	YES						1670				A	P3	
BENZO-(j)-FLUORANTHENE	C20 H12			YES						1670				A	P3	
BENZO-(k)-FLUORANTHENE	C20 H12			YES						1670				A	P3	
p-BENZOQUINONE	C6 H4 O2	106-51-4	Solid	no	mg/m3	0.45		100.0		115.0	51.8			A	P	
BENZOYL PEROXIDE	as Dibenzoyl Peroxide	94-36-0	Solid	no	mg/m3	5.00		1500.0		104.0	80	no	no	A	P	
BENZYL BUTYL PHTHALATE	C19 H20 O4	85-68-7		no	mg/m3	5.00								A	P	
BERYLLIUM AND COMPOUNDS	Be	7440-41-7	Solid	YES	mg/m3	MEL	0.002		2970.0	1278.0		no	no			Use SCBA
BIPHENYL	C12 H10	92-52-4	Solid	no	mg/m3	1.30		100.0	256.0	71.0	112.8	no	no	A	P	
BIS(CHLOROMETHYL) ETHER	C2 H4 Cl2 O	542-88-1	Liquid	YES	ppm	MEL	0.001		104.0	-42.0	<18.9	no	no			Use SCBA
2,2 - BIS (p - CHLOROPHENYL) - 1,1,1-TRICHLOROETHANE	as Methoxychlor	72-43-5	Solid	YES	mg/m3	10			Decom	80		no	no	A	P	
BIS(2,3-EPOXYPROPYL) ETHER	C6 H10 O3	2238-07-5	Liquid	YES	ppm	0.10			260.0		63.9	no	no	A	P3	
BIS(2-ETHYLHEXYL) PHTHALATE	C24 H38 O4	117-81-7	Liquid	YES	mg/m3	5.00			386.0	-55.0	215.6	no	no	A	P3	
2,2-Bis(P-METHOXYPHENYL)-1,1,1-TRICHLOROETHANE	C16 H15 Cl3 O2	72-43-5	solid	YES					Decom	80		no	no	A	P	
BISMUTH TELLURIDE	as Dibismuth tritelluride	1304-82-1	Solid	no	mg/m3	10.00				573.0		no	no		P3	
BISMUTH TELLURIDE,SELENIUM DOPED (SD)	as Dibismuth tritelluride(SD)	n/a	Solid	no	mg/m3	5.00				573.0		no	no		P3	
BORATES, (Tetra) SODIUM SALTS	as Disodium tetraborate	1330-43-4	Solid	no	mg/m3	1.00			1575.0	741.0		no	no		P3	
BORNAN-2-ONE	C10 H16 O	76-22-2	Solid	no	mg/m3	2.00		200.0	204.0	179.8	65.6	no	no	A	P	
BORON OXIDE	as Diboron trioxide	1303-86-2	Solid	no	mg/m3	10.00		2000.0	1860.0	450.0		no	no		P	
BORON TRIBROMIDE	B Br3	10294-33-4	Liquid	no	ppm	1.00			91.3	-46.0		no	no			Use Airline
BORON TRIFLUORIDE	B F3	7637-07-2	Gas	no	ppm	1.00		25.0	-100.0	-127.0		no	no			Use Airline
BROMACIL (ISO)	C9 H13 Br N2 O2	314-40-9	Solid	no	mg/m3	11.00			Sublms	158.0		no	no	A	P	
BROMINE	Br2	7726-95-6	Liquid	no	ppm	0.10		3.0	58.8	-7.2		yes	no	B	P3	
BROMINE PENTAFLUORIDE	Br F5	7789-30-2	Liquid	no	ppm	0.10			40.5	-61.3		no	no			Use Airline
BROMOCHLOROMETHANE	CH2 Br Cl	74-97-5	Liquid	no	ppm	200.00		2000.0	68.1	-86.5		no	no	AX		
BROMOETHANE	C2 H5 Br	74-96-4	Liquid	no	ppm	200.00		2000.0	38.4	-118.6	<-15.6	yes	no	AX		
BROMOETHYLENE	C2 H3 Br	593-60-2	Gas	YES	ppm	5.00			15.8	-135.5		no	no	AX		
BROMOFORM	C H Br3	75-25-2	Liquid	no	ppm	0.50		850.0	149.5	8.3		yes	yes	A		
BROMOMETHANE	C H3 Br	74-83-9	Gas	YES	ppm	5.00			3.6	-93.6		no	yes	AX		
BROMOTRIFLUOROMETHANE	C Br F3	75-63-8	Gas	no	ppm	1000.00		40000.0	-59.0	-130.8		no	no			Use Airline
1,3-BUTADIENE	C4 H6	106-99-0	Liquid	YES	ppm	MEL	10.000	20000.0	-4.4	-108.9	-85	yes	no	AX		
BUTAN-1-OL	C4 H10 O	71-36-3	Liquid	no	ppm	50.00		1400.0	117.2	-89.5	35.00	yes	yes	A		
BUTAN-2-OL	C4 H10 O	78-92-2	Liquid	no	ppm	100.00		2000.0	99.5	-115.0	24.00	no	no	A		
BUTAN-2-ONE	C4 H8 O	78-93-3	Liquid	no	ppm	200.00		3000.0	79.6	-86.3	-1.00	yes	no	A		
BUTANE	C4 H10	106-97-8	Gas	YES	ppm	600.00			-0.5	-138.4		no	no	AX		
2-BUTOXYETHANOL	C6 H14 O2	111-76-2	Liquid	no	ppm	25.00		700.0	171.0	-75.0	61.7	yes	yes	A	P3	
BUTYL ACETATE	C6 H12 O2	123-86-4	Liquid	no	ppm	150.00		1700.0	126.5	-77.9	27.00	yes	no	A		
SEC-BUTYL ACETATE	C6 H12 O2	105-46-4	Liquid	no	ppm	200.00		1700.0	112.0	-146.0	19.00	no	no	A	P3	
TERT-BUTYL ACETATE	C6 H12 O2	540-88-5	Liquid	no	ppm	200.00		1500.0	97.0	-74.0	1.00	no	no	A		
BUTYL ACRYLATE	C7 H12 O2	141-32-2	Liquid	no	ppm	10.00			146.8	-64.6	37.00	yes	no	A		
n-BUTYL ALCOHOL	as Butan-1-ol	71-36-3	Liquid	no	ppm	50.00		1400.0	117.2	-89.5	35.00	yes	yes	A		
sec-BUTYL ALCOHOL	as Butan-2-ol	78-92-2	Liquid	no	ppm	100.00		2000.0	99.5	-115.0	24.00	no	no	A		
tert-BUTYL ALCOHOL	as 2-Methylpropan-2-ol	75-65-0	Liquid	no	ppm	100.00		1600.0	82.4	25.6	11.00	no	no	A		
N-BUTYLAMINE	C4 H11 N	109-73-9	Liquid	no	ppm	5.00		300.0	77.8	-49.1	-12.00	no	yes	A		
N-BUTYL CHLOROFORMATE	C5 H10 CL O2	592-34-7	Liquid	no	ppm	1.00			138.0		32.00	no	no	A		
BUTYL-2,3-EPOXYPROPYL ETHER	C7 H14 O2	2426-08-6	Liquid	no	ppm	25.00		250.0	163.9		54.00	yes	no	A		
n-BUTYLGLYCIDYL ETHER	C7 H14 O2	2426-08-6	Liquid	no	ppm	25.00		250.0	163.9		54.4	yes	no	A		
BUTYL LACTATE	C7 H14 O3	138-22-7	Liquid	no	ppm	5.00			188.0	-49.0	61.00	no	no	A	P3	
2-SEC-BUTYLPHENOL	C10 H14 O	89-72-5	Liquid	no	ppm	5.00			227.0	16.0	107.2	yes	yes	A		
CADMIUM & CADMIUM COMPOUNDS EXCEPT CADMIUM OXIDE FUME & CADMIUM SULPHIDE PIGMENTS	Cd	7440-43-9 (METAL)	Solid	YES	mg/m3	MEL	0.025		765.0	321.0		no	no		P3	
CADMIUM OXIDE FUME (AS CD)	Cd O	1306-19-0	Solid	YES	mg/m3	MEL	0.025		Dec	1500.0		no	no		P3	
CADMIUM SULPHIDE PIGMENTS RESPIRABLE DUST (AS CD)	Cd S	1306-23-6	Solid	no	mg/m3	MEL	0.03	40.0		1750.0		no	no		P	

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
CAESIUM HYDROXIDE	Cs H O	21351-79-1	Solid	no	mg/m3	2.00				272.3		no	no		P	
CALCIUM CARBONATE	C O3 Ca	1317-65-3	Solid	no	mg/m3	4.00			Dec	825<		no	no		P	
CALCIUM CYANAMIDE	C N2 Ca	156-62-7	Solid	no	mg/m3	0.50			Sublims	1340.0		yes	yes		P3	
CALCIUM HYDROXIDE	Ca H2 O2	1305-62-0	Solid	no	mg/m3	5.00			Dec			no	no		P	
CALCIUM OXIDE	Ca O	1305-78-8	Solid	no	mg/m3	2.00		25.0	2850.0	2614.0		yes	yes		P	
CALCIUM SILICATE	Ca2 Si O3	1344-95-2	Solid	no	mg/m3	4.00				1540.0		no	no		P	
CAMPHOR , SYNTHETIC	as Borman-2-one	76-22-2	Solid	no	ppm	2.00		200.0	204.0	179.8		no	no	A	P	
e-CAPROLACTAM	"as 1,6,Hexanolactam"	105-60-2	Solid	no	ppm	5.00			268.3	68.9	138.9	yes	yes	A	P	
CAPTAFOL (ISO)	C10 H9 Cl4 N O2 S	2425-06-1	Solid	YES	mg/m3	0.10			Dec	160.0		yes	yes	A	P	
CAPTAN (ISO)	C9 H8 Cl3 N O2 S	133-06-2	Solid	YES	mg/m3	5.00			Dec	175.0		no	no	A	P3	
CARBADOX (INN)				YES												REFER
CARBARYL (ISO)	C12 H11 N O2	63-25-2	Solid	YES				100.0	0.0	142.0		no	no	A	P	
CARBOFURAN (ISO)	C12 H15 N O3	1563-66-2	Solid	no	mg/m3	0.10				151.0		no	no	A	P	
CARBON BLACK	C	1333-86-4	Solid	no	mg/m3	3.50		1750.0				yes	no		P	
CARBON DIOXIDE	C O2	124-38-9	Gas	no	ppm	5000.00		40000.0	-78.5	-57.0		no	no			Use Airline
CARBON DISULPHIDE	C S2	75-15-0	Liquid	no	ppm	MEL	10.000	500.0	46.2	-111.5	-20.00	no	yes	B	P3	
CARBON MONOXIDE	C O	630-08-0	Gas	no	ppm	30.00		1200.0	-192.0	-199.0		no	no			Use Airline
CARBON TETRABROMIDE	C Br4	558-13-4	Solid	no	mg/m3	1.40			190.0	90.0		no	no	A	P	
CARBON TETRACHLORIDE	C Cl4	56-23-5	Liquid	YES	ppm	2.00			76.7	-23.0		yes	yes	A		
CARBONYL CHLORIDE	as Phosgene	75-44-5	Gas	no	ppm	0.02		2.0	7.6	-118.0		no	no	B	P3	
CATECHOL	as Pyrocatechol	120-80-9	Solid	no	mg/m3	23.00			245.5	105.0	127	yes	yes	A	P	
CELLULOSE	n/a	9004-34-6	Solid	no	mg/m3	4.00			Dec	260.0		no	no		P	
CEMENT	as Portland Cement	65997-15-1	Solid	no	mg/m3	4.00		5000.0				yes	yes		P	
CHLORDANE (ISO)	C10 H6 Cl8	57-74-9	Solid	YES	mg/m3	0.50			175.0	106.0		no	yes	A	P	
CHLORINATED BIPHENYLS (42% CHLORINE)	C12 H5 Cl5	53469-21-9	Liquid	YES	mg/m3	0.10			350.0	-16.6		yes	yes	A	P3 or	Use SCBA
CHLORINATED BIPHENYLS (54% CHLORINE)	C12 H5 Cl5		Liquid	YES	mg/m3	0.10			350.0			yes	yes	A	P3 or	Use SCBA
CHLORINE	Cl2	7782-50-5	Gas	no	ppm	0.50		10.0	-34.6	-101.0		yes	yes	B		
CHLORINE DIOXIDE	Cl O2	10049-04-4	Gas	no	ppm	0.10		5.0	9.9	-59.5		no	no	B		
CHLORINE TRIFLUORIDE	Cl F3	7790-91-2	Gas	no	ppm	0.10		20.0	11.3	-83.0		yes	no	B		
CHLOROACETALDEHYDE	C2 H3 Cl O	107-20-0	Liquid	no	ppm	1.00		45.0	85.0	-16.0	87.8	yes	yes	A		
2-CHLOROALLYL DIETHYLDITHIOCARBAMATE				YES										A	P	
CHLOROALKANES (C10 - C13)			Solid	no										A	P	
2-CHLOROACETOPHENONE	C8 H7 Cl O	532-27-4	Solid	no	mg/m3	0.32		15.0	237.0	57.0		yes	no	A	P	
1-CHLORO-2,3-EPOXY-PROPANE	C3 H5 Cl O	106-89-8	Liquid	YES	ppm	MEL	0.500		117.9	-25.6		yes	yes	A		
CHLOROACETYL CHLORIDE	C2 H2 Cl2 O	79-04-9	Liquid	no	ppm	0.05			106.0	-21.8		yes	no	A	P3	
CHLOROBENZENE	C6 H5 Cl	108-90-7	Liquid	no	ppm	50.00		1000.0	132.0	-45.0	28.00	no	no	A		
CHLOROBROMOMETHANE	as Bromochloromethane	74-97-5	Liquid	no	ppm	200.00		2000.0	68.1	-86.5		yes	no	AX		
2-CHLOROBUTA-1,3-DIENE	C4 H5 Cl	126-99-8	Liquid	YES	ppm	10.00			60.0	-130.0	-20	yes	yes	AX	P3	
CHLORODIMETHYL ETHER	Cl C2 H5 O	107-30-2	Liquid	YES					59.0	-103.0		yes		AX		
CHLORODIFLUOROMETHANE	C H Cl F2	75-45-6	Gas	no	ppm	1000.00			-40.8	-146.0		no	no			Use Airline
CHLOROETHANE	C2 H5 Cl	75-00-3	Liquid	no	ppm	1000.00		3800.0	12.3	-136.4	-50	no	no	AX		
2-CHLOROETHANOL	C2 H3 Cl O	107-07-3	Liquid	no	ppm	1.00		7.0	129.0	-67.5	55.00	no	yes	A		
CHLOROETHYLENE	as Vinyl Chloride	75-01-4	Gas	YES	ppm	MEL	7.000		-13.4	-1538.0	-78	yes	no	AX		
CHLOROFORM	C H Cl3	67-66-3	Liquid	YES	ppm	2.00			61.0	-63.5		no	no	AX		
CHLOROMETHANE	C H3 Cl	74-87-3	Gas	YES	ppm	50.00			-24.2	-97.1		no	no			Use Airline
1-CHLORO-4-NITROBENZENE	C6 H4 Cl N O2	100-00-5	Solid	YES	mg/m3	1.00			242.0	83.6	127.2	yes	yes	A	P	
CHLOROPENTAFLUOROETHANE	C2 Cl F5	76-15-3	Gas	no	ppm	1000.00			-38.0	-106.0		no	no			Use Airline
CHLOROPICRIN	as Trichloronitromethane	76-06-2	Liquid	no	ppm	0.10		2.0	112.0	-64.0		yes	yes	A		
b-CHLOROPRENE	as 2-Chlorobuta-1,3-diene	126-99-8	Liquid	YES	ppm	10.00			60.0	-130.0	-20	yes	yes	AX	P3	
3-CHLOROPROPENE	C3 H5 Cl	107-05-1	Liquid	no	ppm			250.0	44.5	-134.5	-20.00	yes	no	AX		
CHLOROSULPHONIC ACID	H Cl O3 S	7790-94-5	Solid	no	mg/m3	1.00			151.0	-80.0		yes	no	B	P	
2-CHLOROTOLUENE	C7 H7 Cl	95-49-8	Liquid	no	ppm	50.00		10.0	162.0	7.5	35.6	yes	yes	A		
2-CHLORO-6-(TRICHLOROMETHYL)PYRIDINE	C6 H3 Cl4 N	1929-82-4	Solid	no	mg/m3	10.00				63.0		yes	yes	A	P3	
CHLORPYRIFOS (ISO)	C9 H11 Cl3 N O3 P S	2921-88-2	Solid	no	mg/m3	0.20			160.0	42.0		yes	yes	A	P	
CHROMIUM	Cr	7440-47-3	Solid	no	mg/m3	0.50		250.0	2672.0	1857.0		no	no		P	
CHROMIUM (II) COMPOUNDS (AS CR)	Cr		Solid	no	mg/m3	0.50		250.0				no	no		P	
CHROMIUM (III) COMPOUNDS (AS CR)	Cr	n/a	Solid	no	mg/m3	0.50		250.0				no	no		P	
CHROMIUM (VI) COMPOUNDS (AS CR)	Cr		Solid	YES	mg/m3	MEL	0.050					no	no		P	
CHROMIUM TRIOXIDE	Cr O3	1333-82-0	Solid	YES					n/a	196.0					P	
CLARIFIED OILS (PETROLEUM)																
CATALYTIC CRACKED	n/a			YES										A	P	
HYDRODESULFURISED CATALYTIC CRACKED	n/a			YES										A	P	
COAL DUST, IN MINES	n/a		Solid	no	mg/m3	2.00						no	no		P	

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
COAL TAR PITCH VOLATILES (AS CYCLOHEXANE SOLUBLES)	n/a		Solid	no	mg/m3							no	no	A	P3	
COBALT AND COMPOUNDS (AS CO)	Co	7440-48-4	Solid	no	mg/m3	MEL	0.10	20.0	2870.0	1495.0		no	no		P	
COKE (COAL TAR)																
HIGH TEMPERATURE PITCH	n/a			YES										A	P	
MIXED COAL - HIGH TEMPERATURE PITCH	n/a			YES										A	P	
LOW TEMPERATURE, HIGH TEMPERATURE PITCH	n/a			YES										A	P	
COLOPHONY	as Rosin core solder fume			no	mg/m3	MEL	0.05							A	P	
COPPER, DUSTS AND MISTS	Cu	7440-50-8	Solid	no	mg/m3	1.00		100.0	2567.0	1083.0		no	no		P3	
COPPER, FUME	Cu	7440-50-8	Solid	no	mg/m3	0.20		100.0	2567.0	1083.0		no	no		P3	
COTTON DUST	n/a	n/a	Solid	no	mg/m3	MEL	2.500	100.0				no	no		P2/P3	
CRESOLS (ALL ISOMERS)	C7 H8 O	1319-77-2	Liquid	no	ppm	5.00		250.0	191.0	12.0		yes	yes	A	P3	
CRISTOBALITE	O2 Si	14808-60-7	Solid	YES	mg/m3	0.30			2230.0	1723.0		no	no		P	
CRYOFLUORANE (INN)	C2 Cl2 F4	76-14-2	Gas	no	ppm	1000.00		15000		-94.0		no	no			Use Airline
CRYSTALLINE SILICA (RESPIRABLE)	as Cristobalite	14808-60-7	Solid	YES	mg/m3	0.30			2230.0	1723.0		no	no		P	
CUMENE	C9 H12	98-82-8	Liquid	no	ppm	25.00		900.0	153.0	-96.0	35.60	yes	yes	A		
CYANAMIDE	C H2 N2	420-04-2	Solid	no	mg/m3	2.00			140.0	42.0		yes	no		P	
CYANIDES, EXCEPT HYDROGEN CYANIDE, CYANOGEN & CYANOGEN CHLORIDE, (AS -CN)	C-N	57-12-5	Solid	no	mg/m3	5.00						no	yes	B	P	
CYANOGEN	as Oxalonitrile	460-19-5	Gas	no	ppm	10.00			-21.2	-27.9		no	no			Use Airline
CYANOGEN CHLORIDE	C Cl N	506-77-4	Liquid	no	ppm	0.30			12.7	-6.0		yes	no			Use Airline
CYCLOHEXANE	C6 H12	110-82-7	Liquid	no	ppm	100.00		1300.0	80.7	6.5	-18.00	no	no	A		
CYCLOHEXANOL	C6 H12 O	108-93-0	Liquid	no	ppm	50.00		400.0	161.1	25.1	68.00	no	no	A		
CYCLOHEXANONE	C6 H10 O	108-94-1	Liquid	no	ppm	25.00		700.0	155.6	-45.0	43.00	no	yes	A		
CYCLOHEXENE	C6 H10	110-83-8	Liquid	no	ppm	300.00		2000.0	83.0	-103.5	-20.00	no	no	A		
CYCLOHEXYLAMINE	C6 H13 N	108-91-8	Liquid	no	ppm	10.00			134.5	-17.7	32.00	no	yes	A		
CYCLONITE (RDX)	as Hexahydro-1,3,5-trinitro-1,3,5-triazine	121-82-4	Solid	no	mg/m3	1.50				205.0		no	yes		P	
CYHEXATIN (ISO)	C18 H34 O SN	13121-70-5	Solid	no	mg/m3	5.00		80.0	227.8	195.0		no	no		P	
2,4-D (ISO)	C8 H6 CL2 O3	94-75-7	Solid	no	mg/m3	10.00		100.0	160.0	138.0		no	yes		P3	
DGE	as Bis(2,3-epoxypropyl)ether	2238-07-5	Solid	YES	mg/m3	0.10			260.0		63.9	yes	yes	A	P3	
DDM	as 4,4'-Methylenedianiline	101-77-9	Solid	YES	mg/m3	MEL	0.08		398.0	92.0		yes	no	A	P	
DDT	as 1,1,1-Trichlorobis (chlorophenyl) ethane	50-29-3	Solid	YES	mg/m3	1.00			110.0	109.0	72.2	no	no		P	
DDVP	as Dichlorovos	62-73-7	Liquid	no	ppm	0.10		100.0	140.0		>79.4	no	yes	A	P3	
2,4-DES	C8 H7 Cl2 O5 S Na		Solid	no	mg/m3	10.00				245.0		no	yes		P	
DMDT	as Methoxychlor	72-43-5	Solid	YES	mg/m3	10.00			Dec	80.0		no	no		P	
DERRIS, COMMERCIAL	as Rotenone	83-79-4	Solid	no	mg/m3	5.00		2500.0	Dec	165.0		yes	yes		P	
DIACETONE ALCOHOL	as 4-Hydroxy-4-methylpentan-2-one	123-42-2	Liquid	no	ppm	50.00		1800.0	164.0	-44.0	57.8	no	no	A		
DIALKYL 79 PHTHALATE	C22-26 H34 38-O4	n/a		no	mg/m3	5.00									P3	
DIALLYL PHTHALATE	C14 H14 O4	131-17-9	Liquid	no	ppm	5.00			290.0	-70.0		no	no		P3	
2,2'-DIAMINODIETHYLAMINE	C4 H14 N3	111-40-0	Liquid	no	ppm	1.00			207.0	-39.0	97.8	no	yes	A	P3	
4,4'-DIAMINODIPHENYLMETHANE	(4-H6 N C6) C7 H7	101-77-9	Solid	YES	mg/m3	MEL	0.08		300.0	34.0		yes	no	A	P3	
1,2-DIAMINOETHANE	N2 H8 C2	107-15-3	Liquid	no	ppm	10.00		1000.0	116.0					A		
DIAMMONIUM PEROXODISULPHATE (MEASURED AS [S2-O8])	N2 H8 S2 O8	7727-54-0	Solid	no	mg/m3	1.00									P3	
o-DIANISIDINE	2(2-(C H3 0) C6 H6 N2)	199-90-4	Solid	YES						137.2	206				P3	
o-DIANISIDINE SALTS	Various		Solid	YES											P3	
DIARSENIC TRIOXIDE	A S2 O3		Solid	YES						312.3					P3	
DIATOMACEOUS EARTH, NATURAL, RESPIRABLE DUST	SiO2	68855-54-9	Solid	no	mg/m3	1.20		3000.0	2230.0	1710.0		no	no		P	
DIAZINON (ISO)	C12 H21 N2 O3 P S	333-41-5	Liquid	no	mg/m3	0.10			140.0			yes	yes	A	P3	
DIAZOMETHANE	C H2 N2	334-88-3	Gas	YES	ppm			2.0	-23.0	-145.0		no	no	B	P3	
DIBENZ(a,h)ANTHRACENE	C22 H14	65996-93-2	Solid	YES	mg/m3				n/a	205.0				A	P	
DIBENZOYL PEROXIDE	C14 H10 O4	94-36-0	Solid	no	mg/m3	5.00		1500.0	Dec	104.0	80	yes	yes	A	P	
DIBISMUTH TRITELLURIDE	Bi2 Te3	1304-82-1	Solid	no	mg/m3	1.00				573.0		yes	yes		P3	
DIBISMUTH TRITELLURIDE, SELENIUM DOPED	Bi2 Te3	n/a	Solid	no	mg/m3	5.00				573.0		yes	yes		P3	
DIBORANE	H6 B2	19287-45-7	Gas	no	ppm	0.10		15.0	-92.5	-165.5		yes	no			Use Airline
DIBORON TRIOXIDE	B2 O3	1303-86-2	Solid	no	mg/m3	10.00		2000.0	1860.0	450.0		no	no		P3	
DIBROM	as Naled	300-76-5	Solid	no	mg/m3	3.00		200.0	Dec	27.0		yes	yes	A	P3	
1,2-DIBROMO-3-CHLOROPROPANE	Br2 C3 H5 Cl	96-12-8	Liquid	YES	ppm				195.5	6.1		yes	yes	A	P	
1,2-DIBROMO-2,2DICHLOROETHYLMETHYL PHOSPHATE	C4 H7 Br2 Cl2 O4 P	300-76-5	Solid	no	mg/m3	3.00		200.0	Dec	27.0		yes	yes	A	P	
DIBROMODIFLUOROMETHANE	C Br2 F2	75-61-6	Liquid	no	ppm	100.00		2000.0	24.5	-141.0		yes	yes	AX		
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	Br2 C2 H4	106-93-4	Liquid	YES	ppm	MEL	0.50		131.0	10.0		yes	yes	A		

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DIBUTYL HYDROGEN PHOSPHATE	C8 H19 O4 P	107-66-4	Liquid	no	ppm	1.00		30.0	100.0			yes	yes	A	P3	
Di-n-BUTYL PHOSPHATE	as Dibutyl hydrogen phosphate	107-66-4	Liquid	no	ppm	1.00		30.0	100.0			yes	yes	A	P3	
DIBUTYL PHTHALATE	C16 H22 O4	84-74-2	Liquid	no	mg/m3	5.00		4000.0	340.0	-370	157.2	no	no	A	P3	
6,6'-DI-TERT-BUTYL-4,4'-THIODI-M-CRESOL	C22 H30 O2 S	96-69-5	Solid	no	mg/m3	10.00				150.0	215.5	no	no		P	
DICHLOROACETYLENE	C2 Cl2	7572-29-4	Liquid	YES	ppm	0.10			32.0	-65.0		no	no			Use SCBA
1,2-DICHLOROBENZENE	C6 H4 Cl2	95-50-1	Liquid	no	ppm	50.00		200.0	180.5	-17.0	66.1	yes	no	A		
1,4-DICHLOROBENZENE	C6 H4 Cl2	106-46-7	Solid	YES	ppm	25.00			174.0	53.1	65.6	yes	no	A		
3,3'-DICHLOROBENZIDINE	H10 N2 C12 Cl2	91-94-1	Solid	YES					420.0			yes	yes			Use Airline
3,3'-DICHLOROBENZIDINE SALTS	Various	91-94-1	Solid	YES					420.0			yes	yes			Use Airline
1,4-DICHLOROBUT-2-ENE	C4 H6 Cl2			YES					22.5	-48.0						Use SCBA
DICHLORODIFLUOROMETHANE	C Cl2 F2	75-71-8	Gas	no	ppm	1000.00		15000.0	-29.8	-158.0		no	no			Use Airline
1,3-DICHLORO-5,5-DIMETHYLHYDANTOIN	C5 H6 Cl2 N2 O2	118-52-5	Solid	no	mg/m3	0.20		5.0		132.2	134.4	yes	yes	ABE	P3	
DICHLORODIPHENYLTRICHLOROETHANE	as 1,1,1-Trichlorobis (chlorophenyl) ethane	50-29-3	Solid	YES	mg/m3	1.00			110.0	109.0	72	yes	yes		P	
1,1-DICHLOROETHANE	C2 H4 Cl2	75-34-3	Liquid	no	ppm	200.00		3000.0	57.3	-98.0	-16.7	yes	yes	AX		
1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	C2 H4 Cl2	107-06-2	Liquid	YES	ppm	MEL	5.0		83.5	-40.0	13.3	yes	yes	A		
1,1-DICHLOROETHYLENE	C2 H2 CL2	75-35-4	Liquid	YES	ppm	MEL	10.000		37.0	-122.1	-10	yes	yes	AX		
1,2-DICHLOROETHYLENE, CIS:TRANS ISOMERS 60:40	C2 H2 Cl2	540-59-0	Liquid	no	ppm	200.00		1000.0	55.0	-55.0	45.00	yes	yes	AX		
DICHLOROFLUOROMETHANE	C H Cl2 F	75-43-4	Gas	no	ppm	10.00		5000.0	9.0	-135.0		no	no			Use Airline
DICHLOROMETHANE	C H2 Cl2	75-09-2	Liquid	no	ppm	MEL	100.000	5000.0	40.0	-95.1		yes	yes	AX or SX		EITHER
2,2'-DICHLORO-4,4'-METHYLENE-DIANILINE (MbOCA)	C13 H12 Cl2 N2	101-14-4	Solid	YES	mg/m3	MEL	0.005		130.7	110.0		no	yes	A	P3	
2,2'-DICHLORO-4,4'-METHYLENE DIANILINE SALTS	Various		Solids	YES										A	P3	
2,4-DICHLOROPHENOXYACETIC ACID	C8 H6 Cl2 O3	94-75-7	Solid	no	mg/m3	10.00		100.0	160.0	138.0		no	yes		P3	
1,3-DICHLORO-2-PROPANOL	Cl C2 H4			YES										A	P3	
1,2-DICHLOROTETRA-FLUOROETHANE	as Cryofluorane	76-14-2	Gas	no	ppm	1000.00		15000.0	4.0	-94.0		no	no			Use Airline
DICHLORVOS (ISO)	C4 H7 Cl2 O4 P	62-73-7	Liquid	no	mg/m3	0.92		100.0	140.0		>79.4	no	yes	A	P3	
DICYCLOHEXYL PHTHALATE	C20 H26 O4	84-61-7	Liquid	no	ppm	5.00				66.0		no	no	A	P3	
DICYCLOPENTADIENE	C10 H12	77-73-6	Solid	no	mg/m3	27.00			170.0	33.0	39.00	yes	no	A	P	
DICYCLOPENTADIENYLIRON	as Ferrocene	102-54-5	Solid	no	mg/m3	10.00			249.0	172.5		no	no	A	P3	
DIELDRIN (ISO)	C12 H8 Cl6 O	60-57-1	Solid	YES	mg/m3	0.25			Dec	176.0		no	yes	A	P3	
DIETHANOLAMINE	as 2,2'-Iminodiethanol	111-42-2	Liquid	no	ppm	3.00			271.0	28.0	137	no	no	A	P3	
DIETHYLAMINE	C4 H11 N	109-89-7	Liquid	no	ppm	10.00		200.0	56.0	-19.0	-26	no	no	K		
2-DIETHYLAMINOETHANOL	C6 H15 N O	100-37-8	Liquid	no	ppm	10.00		100.0	163.0	-70.0	52.2	yes	yes	K		
DIETHYLENE GLYCOL	as 2,2'-Oxydiethanol	111-46-6	Liquid	no	ppm	23.00			245.0	-10.5		no	no	A		
DIETHYLENE TRIAMINE	as 2,2'-Iminodi(ethylamine)	111-40-0	Liquid	no	ppm	1.00			207.0	-39.0	97.8	no	yes	A	P3	
DIETHYL ETHER	C4 H10 O	60-29-7	Liquid	no	ppm	400.00		1900.0	34.6	-116.0	-20.00	yes	no	AX		
DI-(2-ETHYLHEXYL) PHTHALATE	as Bis(2-ethylhexyl) phthalate	117-81-7	Liquid	YES	ppm	5.00			386.0	-50.0	215.5	no	no	A	P3	
DIETHYL KETONE	as Pentan-3-one	96-22-0	Liquid	no	ppm	200.00			101.7	-39.8	12.00	no	no	A		
DIETHYL PHTHALATE	C10 H14 O4	84-66-2	Liquid	no	ppm	5.00			298.0	-41.0	161	no	no	A	P3	
DIETHYL SULPHATE	C4 H10 O4 S	64-67-5		YES	ppm	MEL	0.050						yes	AB	P3	
DIFLUOROCHLOROMETHANE	as Chlorodifluoromethane	75-45-6	Gas	no	ppm	1000.00			-40.8	-146.0		no	no			Use Airline
DIFLUORODIBROMOMETHANE	as Dibromodifluoromethane	75-61-6	Liquid	no	ppm	100.00		2000.0	24.5	-141.0		no	no	AX		
DIFLUORODICHLOROMETHANE	as Dichlorodifluoromethane	75-71-8	Gas	no	ppm	1000.00		15000.0	-29.8	-158.0		no	no			Use Airline
DIGLYCIDYL ETHER	as Bis (2,3-epoxypropyl) ether	2238-07-5	Liquid	YES	mg/m3	0.10			260.0		63.9	no	no	A	P3	
o-DIHYDROXYBENZENE	as Pyrocatechol	120-80-9	Solid	no	mg/m3	23.00			245.5	105.0	127.2	yes	yes	A	P	
m-DIHYDROXYBENZENE	as Resorcinol	108-46-3	Solid	no	mg/m3	46.00			280.0	109.0	127.2	yes	yes	A	P	
p-DIHYDROXYBENZENE	as Hydroquinone	123-31-9	Solid	no	mg/m3	2.00		50.0	285.0	173.0	165	yes	yes	A	P	
1,2-DIHYDROXYETHANE	C2 H6 O2	107-21-1	Liquid	no	mg/m3	10.00			197.8	-12.8	111.1	yes	yes	A	P3	
DIISOBUTYL KETONE	as 2,6-Dimethylheptan-4-one	108-83-8	Liquid	no	ppm	25.00		500.0	168.0	-42.0	49.00	yes	yes	A		
DIISOBUTYL PHTHALATE	C16 H22 O4	84-69-5	Liquid	no	mg/m3	5.00			295.0	-35.0		no	no	A	P3	
DIISODECYL PHTHALATE	C28 H46 O4	26761-40-0	Liquid	no	mg/m3	5.00			252.0	-53.0		no	no	A	P3	
DIISONONYL PHTHALATE	C26 H42 O4	28553-12-0	Liquid	no	mg/m3	5.00						no	no	A	P3	
DIISOOCTYL PHTHALATE	C24 H38 O2	27554-26-3	Liquid	no	mg/m3	5.00			386.0	-55.0		no	no	A	P3	
DIISOPROPYLAMINE	C6 H15 N	108-18-9	Liquid	no	ppm	5.00		200.0	84.0	-61.0	-7.00	yes	yes	K		
DIISOPROPYL ETHER	C6 H14 O	108-20-3	Liquid	no	ppm	250.00		500.0	68.0	-60.0	-20.00	no	no	A		
Di-LINEAR 79 PHTHALATE	C8 H4 O4 (C14_18-H30_38)	n/a		no	mg/m3	5.00									P3	
DIMETHOXYMETHANE	C3 H8 O2	109-87-5	Liquid	no	ppm	1000.00		2200.0	41.0	-105.0	-20.00	yes	yes			Use Airline
N,N-DIMETHYLACETAMIDE	C4 H9 N O	127-19-5	Liquid	no	ppm	10.00		300.0	164.0	-20.0	70.0	no	yes	A		
DIMETHYLAMINE	C2 H7 N	124-40-3	Gas	no	ppm	2.00		500.0	7.0	-93.0		yes	yes	K		
DIMETHYLAMINOETHANOL	C4 H11 N O	108-01-0	Liquid	no	ppm	2.00			134.0	-59	31.0	yes	yes	A		
N,N-DIMETHYLANILINE	C8 H11 N	121-69-7	Liquid	no	ppm	5.00		100.0	193.0	2.5	61.1	yes	yes	A		
3,3'-DIMETHYLBENZIDINE	H16 N2 C14	119-93-7	Solid	YES	mg/m3				300.0	128.9		yes	yes	A	P3	
3,3'-DIMETHYLBENZIDINE - SALTS	Various		Solid	YES	mg/m3										P3	
1,3-DIMETHYLBUTYL ACETATE	C8 H16 O2	108-84-9	Liquid	no	ppm	50.00		500.0	146.0	-64.0	50	yes	yes	A		

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DIMETHYLCARBAMOYL CHLORIDE	C3 H6 N O Cl	79-44-7	Liquid	YES					165.0	-32.8	68.3	yes	yes	A	P3	
DIMETHYL ETHER	H6 C2 O	115-10-6	Gas	no	ppm	400.00			-24.0	-141.0						Use Airline
NN-DIMETHYLETHYLAMINE	C4 H11 N	598-56-1	Liquid	no	ppm	10.00			45.0	-68.0	61.1	no	no	K		
DIMETHYLFORMAMIDE	C3 H7 N O	68-12-2	Liquid	no	ppm	10.00		500.0	153.0	-60.0	57.8	yes	yes	A		
2,6-DIMETHYLHEPTAN-4-ONE	C9 H18 O	108-83-8	Liquid	no	ppm	25.00		500.0	168.0	-42.0	49.00	yes	yes	A		
1,2-DIMETHYLHYDRAZINE	C2 H8 N2		Liquid	YES					81.0			yes	yes	K		
NN-DIMETHYLHYDRAZINE	C2 H8 N2	57-14-7	Liquid	YES					63.0		-15.00	yes	yes	K		
DIMETHYLNITROSAMINE	C2 H6 N2 O	62-75-9	Liquid	YES					154.0			no	no	A	P3	
DIMETHYL PHTHALATE	C10 H10 O2	131-11-3	Liquid	no	mg/m3	5.00		2000.0	284.0	5.6	146.1	yes	no		P	
DIMETHYL SULFAMOYL CHLORIDE				YES										A	P	
DIMETHYL SULPHATE	C2 H6 S O4	77-78-1	Liquid	YES	ppm	MEL	0.050		188.0	-27.0	83.3	yes	yes	A	P3	
DINICKEL TRIOXIDE	Ni2 O3		Solid	YES											P3	
DINITROBENZENE, ALL ISOMERS	C6 H4 N2 O4	25154-54-5	Solid	no	mg/m3	1.00			300.0	89.0		no	yes	A	P3	
DINITRO-o-CRESOL	as 2-Methyl-4,6-dinitrophenol	534-52-1	Solid	no	mg/m3	0.20		5.0	312.0	87.5		no	yes		P	
DINONYL PHTHALATE	C26 H42 O4	84-76-4	Solid	no	mg/m3	5.00						no	no		P	
Di-sec-OCTYL PHTHALATE	as Bis(2-ethylhexyl) phthalate	117-81-7	Liquid	YES	ppm	5.000			385.0	-55	215.5	yes	no	A	P3	
1,4-DIOXANE, TECH. GRADE	C4 H8 O2	123-91-1	Liquid	YES	ppm	25.000			101.0	12	12.7	yes	yes	A	P3	
DIOXATHION (ISO)	C12 H26 O6 P2 S4	78-34-2	Liquid	no	mg/m3	0.20				-20.0		yes	yes	A	P	
DIPHENYL	as Biphenyl	92-52-4	Solid	no	mg/m3	1.30		100.0	256.0	71.0	112.8	yes	no	A	P	
DIPHENYLAMINE	C12 H11 N	122-39-4	Solid	no	mg/m3	10.00			302.0	53.0	152.8	yes	yes	A	P	
DIPHENYL ETHER (VAPOUR)	C12 H10 O	101-84-8	Liquid	no	ppm	1.00		100.0	259.0	28.0	115	yes	yes	A	P3	
DIPHOSPHORUS PENTASULPHIDE	P2 S5	1314-80-3	Solid	no	mg/m3	1.00		250.0	514.0	286.0		yes	yes	B	P	
DIPHOSPHORUS PENTOXIDE	P6 O15	1314-56-3	Solid	no	mg/m3	2.00									P	
DIPOTASSIUM PEROXODISPULPHATE (MEASURED AS S2O8)	H2 K2 O8 S2	7727-21-1	Solid	no	mg/m3	1.00				100.0		no	no	B	P	
DIQUAT DIBROMIDE (ISO)	C12 H12 Br2 N2	85-00-7	Solid	no	mg/m3	0.50			Dec	355.0		yes	yes		P	
DISODIUM DISULPHITE	Na2 S2 O5	7681-57-4	Solid	no	mg/m3	5.00			Dec	150.0		yes	yes	B	P	
DISODIUM(5-[4'-((2,6-HYDROXY-3-((2-HYDROXY-5-SULHOPHENYL)AZO)PHENYL)AZO) PHENYL)AZO)(1,1'-BIPHENYL)-4YL)AZO)SALICYLATO(4))CUPRATE(2-)			Solid	YES											P	
DISODIUM PEROXODISULPHATE (MEASURED AS S2O8)	Na2 O8 S2	7775-27-1	Solid	no	mg/m3	1.00				0.0		no	no	B	P	
DISODIUMTETRABORATE, ANHYDROUS	B4 O7 2Na	1330-43-4	Solid	no	mg/m3	1.00			1575.0	741.0		no	no		P3	
DISODIUMTETRABORATE, DECAHYDRATE	B4 O7 2Na 20H 10O	1303-96-4	Solid	no	mg/m3	5.00			320.0	75.0		yes	yes		P3	
DISODIUM TETRABORATE, PENTAHYDRATE	B4 O7 2Na 10H 5O	11130-12-4	Solid	no	mg/m3	1.00						no	no		P3	
DISTILLATES (COAL TAR) - VARIOUS	n/a		Liquid	YES										A	P	
DISTILLATES (PETROLEUM) - VARIOUS	n/a		Liquid	YES										A	P	
DISULFOTON (ISO)	C8 H19 O2 P S3	298-04-4	Liquid	no	mg/m3	0.10				>24.4	>82.2	yes	yes	ABE	P	
DISULPHUR DICHLORIDE	S2 Cl2	10025-67-9	Liquid	no	ppm	1.00		5.0	135.6	-80.0	118.3	yes	yes	B	P3	
DISULPHUR DECAFLUORIDE	F10 S2	5714-22-7	Liquid	no	ppm	0.025		1.0	29.0	-92.0		yes	yes	B	P3	
2,6-DITERTIARY-BUTYL-PARA-CRESOL	C15 H24 O	128-37-0	Solid	no	mg/m3	10.00			265.0	70.0	127.2	yes	yes		P	
6,6-DI-TERT-BUTYL-4,4-THIODO-M-CRESOL	C22 H30 O2 S	96-69-5	Solid	no	mg/m3	10.00				150.0	215.5	yes	yes		P	
DIURON (ISO)	C9 H10 Cl2 N2 O	330-54-1	Solid	no	mg/m3	10.00			180.0	159.0		yes	yes		P3	
DIVANADIUM PENTAOXIDE (AS V)	O5 V2	1314-62-1	Solid	no	mg/m3	MEL	0.05	35.0	1750.0	690.0		yes	yes		P	
DIVINYLBENZENE	C10 H10	108-57-6	Liquid	no	ppm	10.00			200.0	-67.0	76	yes	yes	A		
DUSTS	n/a		Solid	no	mg/m3	4.00						no	no		P	
EGDN	as Ethylene dinitrate	628-96-6	Liquid	no	mg/m3	1.30		75.0	197.0	-22.3	215	yes	yes	A	P	
EMERY	Al2 O3	1302-74-5	Solid	no	mg/m3	4.00			2980.0	2015.0		yes	yes		P	
ENDOSULFAN (ISO)	C9 H6 Cl6 O3 S	115-29-7	Solid	no	mg/m3	0.10			Dec	106.0		yes	yes		P3	
ENDRIN (ISO)	C12 H8 Cl6 O	72-20-8	Solid	no	mg/m3	0.10		2.0	Dec	245.0		yes	yes		P3	
ENFLURANE	C3 H2 F5 Cl O	13838-16-9	Liquid	no	ppm	50.00			84.7			yes	no			Use Airline
ENGINE EXHAUST EMISSIONS	n/a		Gas	no												Use Airline
EPICHLOROHYDRIN	as 1-Chloro-2,3-epoxypropane	106-89-8	Liquid	YES	ppm	MEL	0.500		116.7	-47.8	33.9	yes	yes	A		
1,2-EPOXYPROPANE (PROPYLENE OXIDE)	C3 H6 O	75-56-9	Liquid	YES	ppm	MEL	5		34.3	-112.1	-37.2	yes	yes	AX		
2,3-EPOXYPROPYL ISOPROPYL ETHER	C6 H12 O2	4016-14-2	Liquid	no	ppm	50.00		400.0	132.0		33.3	yes	yes	A		
ERIONITE				YES												REFER
ETHANE	C2 H6	74-84-0	Gas	no	ppm				-88.6	-183.3		no	no			Use Airline
ETHANE-1,2-DIOL	C2 H6 O2	107-21-1	Liquid	no	mg/m3	10.00			198.9	-11.5	111.1	yes	yes	A	P3	
ETHANETHIOL	C2 H6 S	75-08-1	Liquid	no	ppm	0.50		500.0	35.0	-144.4	-48.30	yes	yes	AX		
ETHANOL	C2 H6 O	64-17-5	Liquid	no	ppm	1000.00		3300.0	78.5	-117.3	12.00	yes	yes	A		
ETHANOLAMINE	as 2-Aminoethanol	141-43-5	Liquid	no	ppm	3.00		30.0	170.0	10.3	85.5	yes	yes	A		
ETHER	as Diethyl ether	60-29-7	Liquid	no	ppm	400.00		1900.0	34.6	-116.0	-45.00	yes	yes	AX		
2-ETHOXYETHANOL	C4 H10 O2	110-80-5	Liquid	no	ppm	MEL	10.000	500.0	135.0	-90.0	-43.30	yes	yes	A		

trend® tool technology

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
2-ETHOXYETHYL ACETATE	C6 H12 O3	111-15-9	Liquid	no	ppm	MEL	10.000	500.0	156.0	-61.0	51.00	yes	yes	A		
ETHYL ACETATE	C4 H8 O2	141-78-6	Liquid	no	ppm	200.00		2000.0	77.1	-83.6	-4.00	yes	yes	A		
ETHYL ACRYLATE	C5 H8 O2	140-88-5	Liquid	YES	ppm	5.00			99.4	-71.0	9	yes	yes	A		
ETHYL ALCOHOL	as Ethanol	64-17-5	Liquid	no	ppm	1000.00		3300.0	78.5	-117.3	12.00	yes	yes	A		
ETHYLAMINE	C2 H7 N	75-04-7	Liquid	no	ppm	2.00		600.0	16.6	-81.0	-17.20	yes	yes	K		
ETHYL AMYL KETONE	as 5-Methylheptan-3-one	541-85-5	Liquid	no	ppm	25.00		100.0	157.0	-56.7	58.9	yes	yes	A		
ETHYLBENZENE	C8 H10	100-41-4	Liquid	no	ppm	100.00		800.0	136.2	-95.0	12.8	yes	yes	A		
ETHYL BROMIDE	as Bromoethane	74-96-4	Liquid	no	ppm	200.00		2000.0	38.4	-118.6	<15.5	yes	yes	AX		
ETHYL BUTYL KETONE	as Heptan-3-one	106-35-4	Liquid	no	ppm	50.00		1000.0	147.0	-39.0	46.1	yes	yes	A		
ETHYL CHLORIDE	as Chloroethane	75-00-3	Gas	no	ppm	1000.00		3800.0	12.3	-136.4		no	no	AX		
ETHYL CHLOROFORMATE	C3 H5 Cl O2	541-41-3	Liquid	no	ppm	1.00			95.0	-80.6	16.00	no	no	A		
ETHYL CYANOACRYLATE		7085-85-0		no	mg/m3	1.500						yes		A	P	
ETHYLENE	C2 H4	74-85-1	Gas	no	ppm				-103.7	-169.0		no	no			Use Airline
ETHYLENE CHLOROHYDRIN	as 2-Chloroethanol	107-07-3	Liquid	no	ppm	1.00		7.0	129.0	-67.5	60.00	yes	yes	A		
ETHYLENEDIAMINE	C2 H8 N2	107-15-3	Liquid	no	ppm	10.00		1000.0	116.5	8.5	33.9	yes	yes	A		
ETHYLENE DIBROMIDE	C2 H4 Br2	106-93-4	Liquid	YES	ppm	MEL	0.500		131.3	9.8		yes	yes	A		
ETHYLENE DICHLORIDE	as 1,2-Dichloroethane	107-06-2	Liquid	YES	ppm	MEL	5.00		83.5	-35.5	13.3	yes	yes	A		
ETHYLENE DINITRATE	C2 H4 N2 O6	628-96-6	Liquid	no	mg/m3	1.30		75.0	197.0	-22.3	215	yes	yes	A		
ETHYLENE GLYCOL	as Ethane-1,2-diol	107-21-1	Liquid	no	mg/m3	10.00			198.9	-11.5	111.1	yes	yes	A	P3	
ETHYLENE GLYCOL DINITRATE	as Ethylene dinitrate	628-96-6	Liquid	no	mg/m3	1.30		75.0	197.0	-22.3	215	yes	yes	A		
ETHYLENE GLYCOL MONOBUTYL ETHER	as 2-Butoxyethanol	111-76-2	Liquid	no	ppm	25.000		700.0	171.0	-77.2	61.7	yes	yes	A	P3	
ETHYLENE GLYCOL MONOETHYL ETHER ACETATE	as 2-Ethoxyethyl acetate	111-15-9	Liquid	no	ppm	MEL	10.000	500.0	156.0	-61.0	51.00	yes	yes	A		
ETHYLENE GLYCOL MONOETHYL ETHER	as 2-Ethoxyethanol	110-80-5	Liquid	no	ppm	MEL	10.000	500.0	136.0	-70.0	40.00	yes	yes	A		
ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE	as 2-Methoxyethyl acetate	110-49-6	Liquid	no	ppm	MEL	5.000	200.0	145.0	-65.0	48.9	yes	yes	A		
ETHYLENE GLYCOL MONOMETHYL ETHER	as 2-Methoxyethanol	109-86-4	Liquid	no	ppm	MEL	5.000	200.0	125.0	-85.1	38.9	yes	yes	A		
ETHYLENEIMINE	C2 H5 N	151-56-4	Liquid	YES					56.1	-71.7	-11.1	yes	yes			Use Airline
ETHYLENE OXIDE	C2 H4 O	75-21-8	Liquid	YES	ppm	MEL	5.000	80.0	13.2	-111.0	-28.9	yes	yes	AX		
ETHYL ETHER	as Diethyl ether	60-29-7	Liquid	no	ppm	400.00		1900.0	34.6	-116.0	-45.00	yes	yes	AX		
ETHYL FORMATE	C3 H6 O2	109-94-4	Liquid	no	ppm	100.00		1500.0	54.5	-80.5	-20.00	yes	no	AX		
2-ETHYLHEXYL CHLOROFORMATE	Cl1 C7 O2 H12	24468-13-1		no	ppm	1.00						no	no	A	P3	
ETHYLIDENE DICHLORIDE	as 1,1-Dichloroethane	75-34-3	Liquid	no	ppm	200.00		3000.0	57.3	-98.0	-16.7	yes	yes	AX		
ETHYL MERCAPTAN	as Ethanethiol	75-08-1	Liquid	no	ppm	0.50		500.0	35.0	-144.4	-48.30	yes	yes	AX		
4-ETHYLMORPHOLINE	C6 H13 N O	100-74-3	Liquid	no	ppm	5.00		100.0	138.3	-62.8	32.2	yes	yes	A	P3	
ETHYL SILICATE	as Tetraethyl orthosilicate	78-10-4	Liquid	no	ppm	10.00		700.0	165.0	-82.8	37.2	yes	yes	A		
EXTRACTS (PETROLEUM)																
- LIGHT PARAFFINIC DISTILLATE SOLVENT	n/a			YES										A	P	
-LIGHT VACUUM GAS OIL SOLVENT	n/a			YES										A	P	
- HEAVY NAPHTHENIC DISTILLATE SOLVENT	n/a			YES										A	P	
-HEAVY PARAFFINIC DISTILLATE SOLVENT	n/a			YES										A	P	
-LIGHT NAPHTHENIC DISTILLATE SOLVENT	n/a			YES										A	P	
FENCHLORPHOS (ISO)	C8 H8 Cl3 O3 P S	299-84-3	Solid	no	mg/m3	10.00		300.0	Dec	41.0		yes	no	A	P	
FERBAM (ISO)	C9 H18 N3 S6 Fe	14484-64-1	Solid	no	mg/m3	10.00		800.0	Dec	>180		yes	yes		P	
FERROCENE	C10 H10 Fe	102-54-5	Solid	no	mg/m3	10.00			249.0	172.5		yes	yes	A	P	
FERROUS FOUNDRY PARTICULATE	n/a		Solid	no	mg/m3	MEL	4.000								P3	
FLOUR DUST	n/a		Solid	no	mg/m3	MEL	10.000								P	
FLUORIDE (AS F)	F	16984-48-8	Solid	no	mg/m3	2.50						no	no		P	
FLUORINE	F2	7782-41-4	Gas	no	ppm	1.00		25.0	-188.1	-219.6		yes	yes	B		
FLUORODICHLOROMETHANE	as Dichlorofluoromethane	75-43-4	Gas	no	ppm	10.00		5000.0	9.0	-135.0		no	no			Use Airline
FLUOROTRICHLOROMETHANE	as Trichlorofluoromethane	75-69-4	Liquid	no	ppm	1000.00		2000.0	23.7	-111.0		no	yes			Use Airline
FORMALDEHYDE	C H2 O	50-00-0	Liquid	Yes	ppm	MEL	2.000		-21.0	-92.0		yes	no	AX/B/E		EITHER
FORMAMIDE	C H3 N O	75-12-7	Liquid	no	ppm	20.00			210.0	2.7	154.4	yes	yes	A	P3	
FORMIC ACID	C H2 O2	64-18-6	Liquid	no	ppm	5.00		30.0	106.7	8.7	50	yes	yes	E	P3	
FUEL OILS - VARIOUS	n/a			YES										A	P	
2-FURALDEHYDE	C5 H4 O2	98-01-1	Liquid	no	ppm	MEL	2.000	100.0	161.7	-36.6	60	yes	yes	A		
FURFURAL	C5 H4 O2	98-01-1	Liquid	no	ppm	MEL	2.000	100.0	161.7	-36.6	60	yes	yes	A		
FURFURYL ALCOHOL	C5 H6 O2	98-00-0	Liquid	no	ppm	5.00		75.0	170.0	-14.0	65	yes	yes	A		
GERMANE	Ge H4	7782-65-2	Gas	no	ppm	0.20			-89.0	-166.1		no	no			Use Airline
GERMANIUM TETRAHYDRIDE	as Germane	7782-65-2	Gas	no	ppm	0.20			-89.0	-166.1		no	no			Use Airline
GLUTARALDEHYDE	C5 H8 O2	111-30-8	Liquid	no	ppm	MEL	0.050		121.1	-13.9		yes	yes	A	P3	
GLYCEROL, MIST	C3 H8 O3	56-81-5	Liquid	no	ppm	10.00			290.0	17.8	190	yes	yes	A	P3	
GLYCEROL TRINITRATE	C3 H5 O9 N3	55-63-0	Liquid	no	mg/m3	1.90		75.0	50.0	13.0		no	yes	A	P3	

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
GLYCOL ETHERS	as 2-Butoxyethanol	111-76-2	Liquid	no	ppm	25.00		700.0	171.6	-77.0	61.7	yes	yes	A		
GLYCOL MONOETHYL ETHER	as 2-Ethoxyethanol	110-80-5	Liquid	no	ppm	MEL	10.000	500.0	136.0	-90.0	43.30	yes	yes	A		
GRAIN DUST	n/a		Solid	no	mg/m3	MEL	10.000					no	no		P	
GRAPHITE	C	7440-44-0	Solid	no	mg/m3	4.00			Sub	3650.0		no	no		P	
GUTHION	as Azinphos-methyl (ISO)	86-50-0	Solid	no	mg/m3	0.20		10.0	Dec	72.9		yes	no	A	P3	
GYPSUM	Ca S O6 H4	10101-41-4	Solid	no	mg/m3	4.00				128.0		yes	yes		P	
HFC-134A	"as 1,1,1,2-Tetrafluoroethane"	811-97-12		no	ppm	1000.00										Use Airline
HALOGENO-PLATINUM COMPOUNDS	n/a		Solids	no	mg/m3	MEL	0.002	4.0				yes	yes		P3	
HALOTHANE	C2 F3 H Cl Br	151-67-7	Liquid	no	ppm	10.00			50.0	-117.8		yes	yes			Use Airline
γ-HCH (ISO)	as γ-BHC (ISO)	58-89-9	Solid	no	mg/m3	0.10		50.0	323.3	112.8		yes	yes	A	P	
HELIUM	He	7440-59-7	Gas	no	ppm				-269.0	-272.0		no	no			Use Airline
HAFNIUM	Hf	7440-58-6	Solid	no	mg/m3	0.50		250.0	4600.0	2230.0		yes	yes		P	
HEPTAN-2-ONE	C7 H14 O	110-43-0	Liquid	no	ppm	50.00		800.0	151.4	-35.5	38.9	yes	yes	A		
HEPTAN-3-ONE	C7 H14 O	106-35-4	Liquid	no	ppm	50.00		1000.0	147.0	-39.0	46.1	yes	yes	A		
HEXACHLOROBENZENE	C6 Cl6	118-74-1	Solid	YES					322.0	230.0	242	yes	yes	A		
γ-HEXACHLOROCYCLOHEXANE	as γ-BHC	58-89-9	Solid	no	mg/m3	0.10		50.0	323.3	112.8		yes	yes	A	P	
HEXACHLOROETHANE	C2 Cl6	67-72-1	Solid	YES	mg/m3	4.00			Sub	187.0		yes	yes	A	P3	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	C3 H6 N6 O6	121-82-4	Solid	no	mg/m3	1.50				205.0	EXPL	yes	yes		P	
HEXAMETHYLPHOSPHORIC TRIAMIDE	[(CH3)2N]3PO	680-31-9	Liquid	YES					232.8	6.1	104.4	yes	yes	A	P	
N-HEXANE	C6 H14	110-54-3	Liquid	no	ppm	20.00		1100.0	69.0	-139.4	-21.70	yes	yes	A		
1,6-HEXANOLACTAM	N H11 C6 O	105-60-2	Solid	no	ppm	5.00			268.3	68.9	138.9	yes	yes	A	P	
HEXAN-2-ONE	C6 H12 O	591-78-6	Liquid	no	ppm	5.00		1600.0	128.0	-57.0	25.00	yes	yes	A		
HEXONE	as 4-Methylpentan-2-one	108-10-1	Liquid	no	ppm	50.00		500.0	117.0	-84.7	17.8	yes	yes	A		
HEXYLENE GLYCOL	as 2-Methylpentan-2,4-diol	107-41-5	Liquid	no	ppm	25.00			198.0	-50.0	98.3	yes	yes	A		
HYDRAZINE	H4 N2	302-01-2	Liquid	YES	ppm	MEL	0.020		113.5	2.0	37.2	yes	yes	K	P3	
HYDRAZINE SALTS	Various			YES										K	P3	
HYDRAZOBENZENE	C12 H12 N2	60-34-4	Solid	YES						131.0				AK	P	
HYDRAZOIC ACID (AS VAPOUR)	H N3	7782-79-8	Liquid	no	ppm	0.10			37.0	-80.0		no	no	K	P3	
HYDROCARBON SOLVENTS	Various			no										A	P	
HYDROCARBON C26-55, AROMATIC RICH	n/a			YES										A	P	
HYDROGEN	H2	1333-74-0	Gas	no	ppm				-253.0	-259.0	-10	no	no			Use Airline
HYDROGEN BROMIDE	H Br	10035-10-6	Gas	no	ppm	3.00 (ST)		30.0	-67.0	-88.5		yes	yes	B	P3	
HYDROGEN CHLORIDE	H Cl	7647-01-0	Gas	no	ppm	1.00		50.0	-84.9	-114.8		yes	yes	B	P3	
HYDROGEN CYANIDE	H C N	74-90-8	Liquid	no	ppm	MEL	10.000	50.0	26.0	-14.0	-17.80	no	no	B	P3	
HYDROGEN FLUORIDE (AS F)	H F	7664-39-3	Liquid	no	ppm	3.00 (ST)		30.0	19.5	-83.1		yes	yes	B	P3	
HYDROGEN PEROXIDE	H2O2	7722-84-1	Liquid	no	ppm	1.00		75.0	141.0	-11.1		yes	yes	B	P3	
HYDROGEN SELENIDE (AS SE)	H2 Se	7783-07-5	Gas	no	ppm	0.05		1.0	-41.3	-66.1		yes	no			Use Airline
HYDROGEN SULPHIDE	H2 S	7783-06-4	Gas	no	ppm	10.00		100.0	-60.7	-85.5		yes	no	B		
HYDROQUINONE	C6 H6 O2	123-31-9	Solid	no	mg/m3	2.00		50.0	285.0	170.0	165	yes	yes	A	P	
4-HYDROXY-4-METHYL-PENTAN-2-ONE	C6 H12 O2	123-42-2	Liquid	no	ppm	50.00		1800.0	164.0	-44.0	51.7	yes	yes	A		
2-HYDROXYPROPYL ACRYLATE	C6 H10 O3	999-61-1	Liquid	no	ppm	0.50			191.1		65	yes	yes	A		
IGE	as 2,3-Epoxypropyl isopropyl ether	4016-14-2	Liquid	no	ppm	50.00		400.0	137.0		33.3	yes	yes	A		
IPDI	as Isocyanates - all	4098-71-9	Liquid	no	ppm	MEL	0.020			-60.0	155	yes	yes			Use Airline
2,2'-IMINODIETHANOL	C4 H11 N O2	111-42-2	Solid	no	ppm	3.00			271.0	28.0	137.2	yes	yes	A	P3	
2,2'-IMINODI(ETHYLAMINE)	C4 H13 N3	111-40-0	Liquid	no	ppm	1.00			207.0	-39.0	97.8	yes	yes	A	P3	
INDENE	C9 H8	95-13-6	Liquid	no	ppm	10.00			181.6	-1.7	78.00	yes	yes	A		
INDIUM AND COMPOUNDS (AS IN)	In	7440-74-6	Solid	no	mg/m3	0.10			2080.0	156.6		yes	yes		P	
IODINE	I2	7553-56-2	Solid	no	ppm	0.10		2.0	184.3	113.5		yes	yes	B	P	
IODOFORM	C H I3	75-47-8	Solid	no	mg/m3	9.80			210.0	120.0		yes	yes	A	P	
IODOMETHANE	C H3 I	74-88-4	Liquid	YES	ppm	MEL	2.000		42.5	-66.5		yes	yes	AX		
IRON OXIDE, FUME (AS FE)	Fe2 O3	1309-37-1	Solid	no	mg/m3	5.00		2500.0		1565.0		no	no		P3	
IRON PENTACARBONYL	as Pentacarbonyliron	13463-40-6	Liquid	no	ppm	0.01			102.8	-21.0	-15	yes	no	A	P3	
IRON SALTS (AS FE)	Various	n/a	Solid	no	mg/m3	1.00						yes	yes		P	
ISOAMYL ACETATE	as Isopentyl acetate	123-92-2	Liquid	no	ppm	50.00		1000.0	142.0	-78.3	25.00	yes	yes	A		
ISOAMYL ALCOHOL	as 3-Methylbutan-1-ol	123-51-3	Liquid	no	ppm	100.00		500.0	132.0	-117.2	43.00	yes	yes	A		
ISOAMYL METHYL KETONE	as 5-Methylhexan-2-one	110-12-3	Liquid	no	ppm	50.00			144.0	-74.0	36.1	yes	yes	A		
ISOBUTYL ACETATE	C6 H12 O2	110-19-0	Liquid	no	ppm	150.00		1300.0	118.0	-99.0	17.80	yes	yes	A		
ISOBUTYL ALCOHOL	as 2-Methylpropan-1-ol	78-83-1	Liquid	no	ppm	50.00		1600.0	108.0	-108.0	27.00	yes	yes	A		
ISOBUTYL METHYL KETONE	as 4-Methylpentan-2-one	108-10-1	Liquid	no	ppm	50.00		500.0	117.0	-84.7	17.8	yes	yes	A		
ISOCYANATES, ALL (AS NCO)	see special section - page 10	n/a	Liquid	no	ppm	MEL	0.020					no	no			Use Airline
ISOFLURANE	C3 F5 H2 Cl O	26675-46-7		no	ppm	50.00										Use Airline

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
ISOOCTYL ALCOHOL (MIXED ISOMERS)	C8 H18 O	26952-21-6	Liquid	no	ppm	50.00			186.0	-76.1	82.2	yes	yes	A		
ISOPENTYL ACETATE	C7 H14 O2	123-92-2	Liquid	no	ppm	50.00		1000.0	142.0	-78.3	25.00	yes	yes	A		
ISOPHORONE	as 3,5,5-Trimethylcyclohex-2-enone	78-59-1	Liquid	no	ppm	5.00		200.0	214.0	-8.0	84.4	yes	yes	A		
ISOPHORONE DIISOCYANATE	Isocyanate	4098-71-9	Liquid	no	ppm	MEL	0.020			-60.0	155	yes	yes			Use Airline
ISOPROPYL ACETATE	C5 H10 O2	108-21-4	Liquid	no	ppm	200.00 (ST)		1800.0	89.0	-69.0	2.20	yes	yes	A		
ISOPROPYL ALCOHOL	as Propan-2-ol	67-63-0	Liquid	no	ppm	400.00		2000.0	82.5	-88.5	12.00	yes	yes	A		
ISOPROPYL BENZENE	as Cumene	98-82-8	Liquid	no	ppm	25.00		900.0	152.2	-96.0	35.50	yes	yes	A		
ISOPROPYL CHLOROFORMATE	C4 H7 O2 Cl	108-23-6	Liquid	no	ppm	1.00			114.0	15.8	14.00	yes	no	A	P3	
ISOPROPYL ETHER	as Diisopropyl ether	108-20-3	Liquid	no	ppm	250.00		1400.0	68.0	-60.0	-27.80	yes	yes	A		
ISOPROPYL GLYCIDYL ETHER	as 2,3-Epoxypropyl isopropyl ether	4016-14-2	Liquid	no	ppm	50.00		400.0	137.2		33.3	yes	yes	A		
KAOLIN	Al4 Si4 O18 H8	1332-58-7	Solid	no	mg/m3	2.00						no	no		P	
KETENE	C2 H2 O	463-51-4	Gas	no	ppm	0.50		5.0	-56.0	-150.0		yes	yes			Use Airline
LPG (LIQUEFIED PETROLEUM GAS)	Mix : C3 H6;C3 H8;C4 H8;C4 H10	68476-85-7	Gas	no	ppm	1000.00		2000.0	>-42			no	no	AX		
LEAD HYDROGEN ARSENATE	Pb H4 As2 O8			YES						140.0					P3	
LEAD AND COMPOUNDS (EXCEPT LEAD ALKYLS)	Pb	7439-92-1	Solid	no	mg/m3	MEL	0.150	100.0	1740.0	327.5		yes	no		P3	
LEAD ALKYLS	Various			no	mg/m3	MEL	0.100							A	P3	
LIMESTONE	n/a	1317-65-3	Solid	no	mg/m3	4.00			Dec	825+		yes	yes		P	
LINDANE	C12 H6	58-89-9	Solid	no	mg/m3	0.10		50.0	323.3	112.8		yes	yes	A	P	
LITHIUM HYDRIDE	LiH	7580-67-8	Solid	no	mg/m3	0.025		0.5	Dec	680.0		yes	yes		P	
LITHIUM HYDROXIDE	LiOH	1310-65-2	Solid	no	mg/m3	1.00 (ST)			924.0	450.0		yes	no		P	
MDA	as 4,4'-Methylenedianiline	101-77-9	Solid	YES	ppm	MEL	0.010		397.7	92.2	190	yes	no	A	P3	
MDI	Isocyanate	101-68-8	Solid	no	ppm	MEL	0.020	7.0	313.9	37.2	198.9	yes	no			Use Airline
MEK	as Butan-2-one	78-93-3	Liquid	no	ppm	200.00		3000.0	79.6	-86.3	-8.80	yes	yes	A		
MIKB	as 4-Methylpentan-2-one	108-10-1	Liquid	no	ppm	50.00		500.0	117.0	-84.7	17.8	yes	yes	A		
MAGNESITE	MgCO3	546-93-0	Solid	no	mg/m3	4.00			Dec	350.0		yes	yes		P	
MAGNESIUM OXIDE, FUME AND DUST (AS MG)	MgO	1309-48-4	Solid	no	mg/m3	4.00		750.0	3600.0	2800.0		yes	no		P3	
MALATHION (ISO)	C10 H19 O6 P S2	121-75-5	Liquid	no	mg/m3	10.00		250.0	80.0	2.9	>162.8	yes	yes	A	P3	
MALEIC ANHYDRIDE	C4 H2 O3	108-31-6	Solid	no	mg/m3	MEL	1.000	10.0	202.0	52.8	103.3	yes	yes	A	P3	
MANGANESE, FUME (AS MN)	Mn	7439-96-5	Solid	no	mg/m3	1.00		500.0	1962.0	1244.0		no	no		P3	
MANGANESE AND COMPOUNDS (AS MN)	Mn	7439-96-5	Solid	no	mg/m3	5.00		500.0	1962.0	1244.0		no	no		P	
MANGANESE CYCLOPENTADIENYL TRICARBONYL	as tricarbonyl(eta-cyclopentadienyl) manganese	12079-65-1	Solid	no	mg/m3	0.20			Sub	75.0		no	yes	A	P	
MANGANESE TETROXIDE	as Trimanganese tetraoxide	1317-35-7	Solid	no	mg/m3	1.00				1563.9		no	no		P	
MAN-MADE MINERAL FIBRE	n/a		Solid	no	mg/m3	MEL	5.000					yes	yes		P	
MARBLE	CaCO3	1317-65-3	Solid	no	mg/m3	4.00			Dec	825+		yes	yes		P	
MbOCA	as 2,2'-Dichloro-4,4'-methylenedianiline	101-14-4	Solid	YES	mg/m3	MEL	0.005			110.0		yes	yes	A	P3	
MEQUINOL (INN) (P-METHOXYPHENOL)	C7 H8 O2	150-76-5	Solid	no	mg/m3	5.00			246.0	57.2	132.2	yes	yes		P	
MERCAPTOACETIC ACID	C2 H4 O2 S	68-11-1	Liquid	no	ppm	1.00			123.0	-16.5	>110	yes	yes	A	P	
MERCURY ALKYLS (AS HG)	Hg	n/a	Solid	no	mg/m3	0.01		2.0				yes	yes	Hg	P3	
MERCURY & ITS INORGANIC DIVALENT COMPOUNDS	Hg	7439-97-6	Liquid	no	mg/m3	0.025		10.0	357.0	-38.9		yes	yes	Hg	P3	
MESITYLENE	as Trimethylbenzenes	25551-13-7	Liquid	no	ppm	25.00			165.0	-45.0	50	yes	yes	A		
MESITYL OXIDE	as 4-Methylpent-3-en-2-one	141-79-7	Liquid	no	ppm	15.00		1400.0	130.0	-46.5	30.5	yes	yes	A		
METAL WORKING FLUIDS	n/a			no										A	P3	
METHACRYLIC ACID	C4 H6 O2	79-41-4	Liquid	no	ppm	20.00			163.0	16.0	77.00	yes	yes	A	P3	
METHACRYLONITRILE	C4 H5 N	126-98-7	Liquid	no	ppm	1.00			90.3	-35.8	1.00	yes	yes	AB	P3	
METHANE	C H4	74-82-8	Gas	no	ppm				-164.0	-182.0	-10	no	no			Use Airline
METHANETHIOL	C H4 S	74-93-1	Gas	no	ppm	0.50		150.0	6.0	-123.0	-18.00	yes	yes			Use Airline
METHANOL	C H4 O	67-56-1	Liquid	no	ppm	200.00		6000.0	64.5	-97.7	11.00	yes	yes	AX		
METHOMYL (ISO)	C5 H10 N2 O S	16752-77-5	Solid	no	mg/m3	2.50				78.0		yes	yes		P	
METHOXYCHLOR (ISO)	C16 H15 CL3 O2	72-43-5	Solid	YES	mg/m3	10.00			Dec	80.0		no	no		P	
2-METHOXYETHANOL	C3 H8 O2	109-86-4	Liquid	no	ppm	MEL	5.000	200.0	125.0	-85.1	38.9	yes	yes	A		
2-METHOXYETHYL ACETATE	C5 H10 O3	110-49-6	Liquid	no	ppm	MEL	5.000	200.0	143.0	-65.0	48.9	yes	yes	A		
p-METHOXYPHENOL	as Mequinol (INN)	150-76-5	Solid	no	mg/m3	5.00			246.0	53.0	132.2	yes	yes		P3	
1-METHOXYPROPAN-2-OL	C4 H10 O2	107-98-2	Liquid	no	ppm	100.00			118.0	-95.0	33.00	yes	yes	A		
METHYL ACETATE	C3 H6 O2	79-20-9	Liquid	no	ppm	200.00		3100.0	56.9	-98.0	-10.00	yes	yes	AX		
METHYL ACRYLAMIDOMETHOXYACETATE (CONTAINING >=0.1% ACRYLAMIDE)	C3 H5 O N			YES						84.0				AK	P	
METHYL ACRYLAMIDOGLYCOLATE (CONTAINING >=0.1% ACRYLAMIDE)	C3 H5 O N			YES						84.0				AK	P	
METHYL ACRYLATE	C4 H6 O2	96-33-3	Liquid	no	ppm	10.00		250.0	81.0	-76.5	-3.00	yes	yes	A		
METHYLAL	as Dimethoxymethane	109-87-5	Liquid	no	ppm	1000.00		2200.0	41.0	-105.0	-32.20	yes	yes			Use Airline

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Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
METHYL ALCOHOL	as Methanol	67-56-1	Liquid	no	ppm	200.00		6000.0	64.5	-97.9	11.00	yes	yes	AX		
METHYLAMINE	C H5 N	74-89-5	Gas	no	ppm	10.00		100.0	-6.3	-93.5	-10.00	yes	yes	K		
METHYL-n-AMYL-KETONE	as Heptan-2-one	110-43-0	Liquid	no	ppm	50.00		800.0	151.4	-35.5	38.9	yes	yes	A		
N-METHYLANILINE	C7 H9 N	100-61-8	Liquid	no	ppm	0.50		100.0	195.0	-57.0	79.4	no	no	A		
2-METHYLAZIRIDINE	C3 H7 N	75-55-8	Liquid	YES	ppm				66.7	-65.0	-4	yes	yes	K		
METHYL BROMIDE	as Bromomethane	74-83-9	Gas	YES	ppm	5.00			3.6	-93.6		yes	yes	AX		
3-METHYLBUTAN-1-OL	C5 H12 O	123-51-3	Liquid	no	ppm	100.00		500.0	132.0	-117.2	43.00	yes	yes	A		
METHYLBUTYL ACETATE	C7 H14 O2	626-38-0	Liquid	no	ppm	50.00		1000.0	120.5	-78.0	31.60	yes	yes	A		
METHYL-t-BUTYL ETHER	C5 H12 O	1634-04-4		no	ppm	25.00			55.0	-109.0	-28.0	yes	yes	AX		
METHYL-n-BUTYL KETONE	as Hexan-2-one	591-78-6	Liquid	no	ppm	5.00		1600.0	128.0	-57.0	25.00	yes	yes	A		
METHYL CHLORIDE	as Chloromethane	74-87-3	Gas	YES	ppm	50.00			-24.2	-97.1		yes	yes			Use Airline
METHYL CHLOROFORM	as 1,1,1-Trichloroethane	71-55-6	Liquid	no	ppm	200.00		700.0	74.1	-30.4		yes	yes	A		
METHYL-2-CYANOACRYLATE	C5 H5 N O2	137-05-3		no	ppm	0.30 (ST)					78.9	yes	yes	A	P	
METHYLCYCLOHEXANE	C7 H14	108-87-2	Liquid	no	ppm	400.00 (TLV)		1200.0	100.9	-126.0	-4.00	no	no	A		
METHYLCYCLOHEXANOL	C7 H14 O	25639-42-3	Liquid	no	ppm	50.00		500.0	155.0	-50.0	65	yes	yes	A		
2-METHYLCYCLOHEXANONE	C7 H12 O	583-60-8	Liquid	no	ppm	50.00		600.0	165.0	-14.0	47.8	yes	yes	A		
METHYLCYCLOPENTADIENYL MANGANESE,TRICARBONYL (as Mn)	as Tricarbonyl (methylcyclopentadienyl)-manganese	12108-13-3	Liquid	no	mg/m3	0.20			231.7	2.2	110	yes	yes	A	P	
2-METHYL-4,6-DINITROPHENOL	C7 H6 N2 O5	534-52-1	Solid	no	mg/m3	0.20		5.0	312.0	87.5		no	no		P	
4,4'-METHYLENEBIS-(2-CHLOROANILINE)	C13 H12 Cl2 N2	101-14-4	Solid	YES	mg/m3	MEL	0.005			110.0		yes	yes	A	P3	
METHYLENE CHLORIDE	as Dichloromethane	75-09-2	Liquid	YES	ppm	MEL	100.000		40.0	-95.1		yes	yes	AX/SX		EITHER
4,4'-METHYLENEDI-o-TOLUIDINE				YES												REFER
4,4'-METHYLENE-DIPHENYL DIISOCYANATE	Isocyanate	101-68-8	Liquid	no	mg/m3	MEL	0.020					no	no			Use Airline
4,4'-METHYLENEDIANILINE (MDA)	C13 H14 N2	101-77-9	Solid	YES	mg/m3	MEL	0.080		396.0	92.0	190	yes	no	A	P	
METHYL ETHYL KETONE	as Butan-2-one	78-93-3	Liquid	no	ppm	200.00		3000.0	79.6	-86.3	-9.00	yes	yes	A		
METHYL ETHYL KETONE PEROXIDES (MEKP)	C8 H16 O4	1338-23-4	Liquid	no	ppm	0.20			117.7			yes	yes	A	P3	
METHYL FORMATE	C2 H4 O2	107-31-3	Liquid	no	ppm	100.00		4500.0	31.5	-99.0	-18.90	yes	no	AX		
5-METHYLHEPTAN-3-ONE	C8 H16 O	541-85-5	Liquid	no	ppm	25.00		100.0	157.0	-56.7	58.9	yes	yes	A		
5-METHYLHEXAN-2-ONE	C7 H14 O	110-12-3	Liquid	no	ppm	50.00			144.0	-74.0	36.1	yes	yes	A		
METHYL IODIDE	as Iodomethane	74-88-4	Liquid	YES	ppm	MEL	2.00		42.8	-66.7		yes	yes	AX		
METHYL ISOAMYL KETONE	as 5-Methylhexan-2-one	110-12-3	Liquid	no	ppm	50.00	2.00		144.0	-74.0	36.1	yes	yes	A		
METHYL ISOBUTYL CARBINOL	as 4-Methylpentan-2-ol	108-11-2	Liquid	no	ppm	25.00		400.0	132.0	-90.0	41.1	yes	yes	A		
METHYL ISOBUTYL KETONE	as 4-Methylpentan-2-one	108-10-1	Liquid	no	ppm	50.00		500.0	117.0	-84.7	17.8	yes	yes	A		
METHYL ISOCYANATE	Isocyanate	624-83-9	Liquid	no	mg/m3	MEL	0.020	7.5	59.4	-45.0	-7.2	yes	yes			Use Airline
METHYL MERCAPTAN	as Methanethiol	74-93-1	Gas	no	ppm	0.50		150.0	6.0	-123.0	-18.00	yes	yes			Use Airline
METHYL METHACRYLATE	C5 H8 O2	80-62-6	Liquid	no	ppm	100.00		1000.0	101.0	-47.8	10.00	yes	yes	A		
METHYL PARATHION	as Parathion-methyl (ISO)	298-00-0	Solid	no	mg/m3	0.20			142.8	37.2		yes	yes	A	P	
2-METHYLPENTANE-2,4-DIOL	C6 H14 O2	107-41-5	Liquid	no	ppm	25.00			198.0	-50.0	98.3	yes	yes	A		
4-METHYLPENTAN-2-OL	C6 H14 O	108-11-2	Liquid	no	ppm	25.00		400.0	132.0	-90.0	41.1	yes	yes	A		
4-METHYLPENTAN-2-ONE	C6 H12 O	108-10-1	Liquid	no	ppm	50.00		500.0	117.0	-84.7	17.8	yes	yes	A		
4-METHYLPENT-3-EN-2-ONE	C6 H10 O	141-79-7	Liquid	no	ppm	15.00		1400.0	130.0	-46.7	30.6	yes	yes	A		
4-METHYL-M-PHENYLENEDIAMINE	1,2 H4 N2 4 C7 H6		Solid	YES					265.0	99.0				A	P	
4-METHYL-M-PHENYLENE DIISOCYANATE	Isocyanate		Liquid	no	mg/m3		0.020					no	no			Use Airline
2-METHYLPROPAN-1-OL	C4 H10 O	78-83-1	Liquid	no	ppm	50.00		1600.0	108.0	-108.0	27.00	yes	yes	A		
2-METHYLPROPAN-2-OL	C4 H10 O	75-65-0	Liquid	no	ppm	100.00		1600.0	82.4	25.6	11.00	yes	yes	A		
METHYL PROPYL KETONE	as Pentan-2-one	107-87-9	Liquid	no	ppm	200.00		1500.0	102.0	-77.8	7.00	yes	yes	A		
1-METHYL-2-PYRROLIDONE	C5 H9 N O	872-50-4	Liquid	no	ppm	25.00			202.0	-24.0		no	no	A	P3	
METHYL SILICATE	as Tetramethyl orthosilicate	681-84-5	Liquid	no	ppm	1.00			121.0	-2.2	96.1	yes	no	A		
a-METHYLSTYRENE	C9 H10	98-83-9	Liquid	no	ppm	100.00 (ST)			163.4	-23.0		yes	no	A		
METHYLSTYRENES, ALL ISOMERS EXCEPT a-METHYLSTYRENE	C9 H10	25013-15-4	Liquid	no	ppm	100.00		400.0	170.5	-76.7	52.8	yes	yes	A		
N-METHYL-N,2,4,6-TETRANITROANILINE	C7 H5 N5 O8	479-45-8	Solid	no	mg/m3	1.50		750.0	180.0	131.0	Exp	yes	yes		P	
METHYL-tert-BUTYL ETHER	C5 H12 O	1634-04-4	Liquid	no	ppm	25.00			55.0	-109.0	-28	yes	yes	AX		
MEVINPHOS (ISO)	C7 H13 O6 P	7786-34-7	Liquid	no	ppm	0.01		4.0	Dec	7.0	175	yes	yes	A	P3	
MICA (RESPIRABLE DUST)	n/a	12001-26-2	Solid	no	mg/m3	0.80		1500.0				yes	no		P	
MINERAL WOOL	as man made fibre		Solid	no	mg/m3		5.000					yes	yes		P	
MOLYBDENUM COMPOUNDS (AS MO)	Mo	7439-98-7	Solid	no	mg/m3	5.00		5000.0	4825.0	2622.0		yes	no		P	
MONOCHLOROACETIC ACID	C2 H3 Cl O2	79-11-8	Liquid	no	ppm	0.30			187.9	56.2		yes	yes	A	P3	
MORPHOLINE	C4 H9 N O	110-91-8	Liquid	no	ppm	20.00		1400.0	128.9	-4.9	36.7	yes	yes	A		
NALED (ISO)	C4 H7 Br2 Cl2 O4 P	300-76-5	Solid	no	mg/m3	3.00		200.0	Dec	27.0		yes	yes	A	P	
NAPHTHALENE	C10 H8	91-20-3	Solid	no	mg/m3	53.00		250.0	217.9	80.0	78.9	yes	yes	A	P	
2-NAPHTHYLAMINE	H9 N C10	91-59-8	Solid	YES					306.0	111.0	157.2	no	yes	A	P3	

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Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
2-NAPHTHYLAMINE SALTS	Various			YES										A	P3	
1,5-NAPHTHYLENE DIISOCYANATE	Isocyanate	3173-72-6	Solid	no	mg/m3	MEL	0.020		262.8	127.2	155	yes	no			Use Airline
NEON	Ne	7440-01-9	Gas	no	ppm				-246.0	-249.0		no	no			Use Airline
NICKEL AND INORGANIC COMPOUNDS	Ni	7440-02-0	Solid	YES	mg/m3	MEL	0.100		2837.0	1555.0		no	yes		P3	
NICKEL CARBONYL	as Tetracarbonylnickel	13463-39-3	Liquid	YES	ppm	0.10 (ST)			43.0	-25.0	<-20	no	no			Use Airline
NICKEL DIOXIDE				YES											P3	
NICKEL MONOXIDE	Ni O		Solid	YES						1984.0					P3	
NICKEL ORGANIC COMPOUNDS (AS NI)	Ni		Solid	no	mg/m3	1.00						no	no	A	P3	
NICKEL SUBSULPHIDE	Ni3 S2		Solid	YES						790.0					P3	
NICKEL SULPHIDE	Ni S		Solid	YES						797.0					P3	
NICOTINE	C10 H14 N2	54-11-5	Liquid	no	mg/m3	0.50		5	247.0	-80.0	95	no	no	A	P3	
NITRAPYRIN	as 2-Chloro-6-(trichloromethyl) pyridine	1929-82-4	Solid	no	mg/m3	10.00				63.0		no	no	A	P3	
NITRIC ACID	H N O3	7697-37-2	Liquid	no	ppm	2.00		25.0	83.0	-42.0		yes	yes	E	P3	
NITRIC OXIDE	as Nitrogen monoxide	10102-43-9	Gas	no	ppm	25.00		100.0	-151.8	-163.6		yes	no	NO	cr	Use Airline
5-NITROACENAPHTHENE	C12 H9 N O2		Solid	YES						103.0				A	P	
4-NITROANILINE	C6 H6 N2 O2	100-01-6	Solid	no	mg/m3	6.00		300.0	332.0	146.0	198.9	yes	yes	A	P	
2-NITROANISOLE	N O3 C7 H7			YES					276.0	10.5				A	P	
NITROBENZENE	C6 H5 N O2	98-95-3	Liquid	no	ppm	1.00		200.0	210.0	6.0	87.8	yes	yes	A	P3	
4-NITROBIPHENYL	4-N O2 C12 H9	92-93-3	Solid	YES					340.0	114.0	143.3	no	no		P3	
NITROETHANE	C2 H5 N O2	79-24-3	Liquid	no	ppm	100.00		1000.0	114.0	-89.5	28.00	yes	yes	A	P3	
NITROFEN (ISO)				YES										AB	P	
NITROGEN	N2	7727-37-9	Gas	no	ppm				-196.0	-210.0		no	no			Use Airline
NITROGEN DIOXIDE	N O2	10102-44-0	Liquid	no	ppm	3.00		20.0	21.2	-9.0		yes	no	BE		
NITROGEN MONOXIDE	N O	10102-43-9	Gas	no	ppm	25.00		100.0	-151.8	-163.6		yes	no	NO	cr	Use Airline
NITROGEN TRIFLUORIDE	F3 N	7783-54-2	Gas	no	ppm	10.00		2000.0	-152.0	-184.0		no	no			Use Airline
NITROGLYCERINE	as Glycerol trinitrate	55-63-0	Liquid	no	ppm	0.20		7.5	50+	13.0	Expl	no	yes	A	P3	
NITROMETHANE	C H3 N O2	75-52-5	Liquid	no	ppm	100.00		750.0	101.2	-29.0	35.00	yes	yes	A	P3	
2-NITRONAPHTHALENE	N O2 C10 H7	581-89-5	Solid	YES						78.9		no	yes	A	P	
1-NITROPROPANE	C3 H7 N O2	108-03-2	Liquid	no	ppm	25.00		1000.0	131.8	-108.0	35.6	yes	no	A	P3	
2-NITROPROPANE	C3 H7 N O2	79-46-9	Liquid	YES	ppm	MEL	5.000		120.3	-93.0	23.9	yes	yes	A	P3	
n-NITROSODIMETHYLAMINE	C2 H6 N2 O	62-75-9	Liquid	YES					154.0			no	no	A	P3	
n-NITROSODIPROPYLAMINE	C6 H14 N2 O			YES					84.0					A	P3	
2,2'-(NITROSOIMINO) BISETHANOL				YES										A	P3	
NITROTOLUENE, ALL ISOMERS	C7 H7 N O2	n/a	Liquid	no	ppm	5.00		200.0	231.9	15.5		no	yes	A	P3	
NITROUS OXIDE	N2 O	10024-97-2	Gas	no	ppm	100.00			-88.3	-91.1		no	no	NO	cr	Use Airline
NONYPHENOLS		25154-52-3	Liquid	no					295.0	2.0	141	yes	yes	A	P	
OCTACHLORONAPHTHALENE	C10 CL8	2234-13-1	Solid	no	mg/m3	0.10			410.0	185.0		no	yes	A	P	
N-OCTANE	C8 H18	111-65-9	Liquid	no	mg/m3	1200.00		1000.0	125.6	-56.8	13.00	yes	yes	A		
OIL MIST, MINERAL		8012-95-1	Solid	no	mg/m3	5.00		2500.0	360.0	-17.8	193.3	yes	yes		P3	
OIL MIST, WATER			Liquid	no											P3	
ORTHOPHOSPHORIC ACID	H3 O4 P	7664-38-2	Solid	no	mg/m3	2.00 (ST)		1000.0	212.8	42.2		yes	yes		P	
OSMIUM TETRAOXIDE (AS OS)	O4 Os	20816-12-0	Solid	no	mg/m3	0.002		1.0	130.0	40.8		yes	yes	B	P3	
OXALIC ACID	C2 H2 O4	144-62-7	Solid	no	mg/m3	1.00		500.0	Sub	101.7		yes	yes		P	
OXALONITRILE	C2 N2	460-19-5	Gas	no	ppm	10.00			-21.2	-27.9		yes	yes			Use Airline
2,2'-OXYDIETHANOL	C4 H10 O3	111-46-6	Liquid	no	ppm	23.00			245.0	-10.5		no	no	A		
OZONE	O3	10028-15-6	Gas	no	ppm	0.20		5.0	-112.0	-193.0		yes	no	A		
PGDN	as Propylene dinitrate	6423-43-4	Liquid	no	ppm	0.20				-27.0		yes	yes	A	P3	
PVC (POLYVINYL CHLORIDE) (RESP. DUST)	(C2 H3 Cl)N	9002-86-2	Solid	no	mg/m3	4.00						no	no		P	
PARACETAMOL	C8 H9 N O2	103-90-2	Solid		mg/m3	10.00									P	
PARAFFIN WAX, FUME	CnH2n+2	8002-74-2	Solid	no	mg/m3	2.00				46.1	198.9	yes	yes	A	P	
PARAQUAT DICHLORIDE (ISO)	C12 H14 N2 2Cl	1910-42-5	Solid	no	mg/m3	0.08		1.0	Dec	300.0		yes	yes	A	P	
PARATHION (ISO)	C10 H14 N O5 P S	56-38-2	Liquid	no	mg/m3	0.10		10*	375.0	6.0	200	yes	yes	A	P3	
PARATHION-METHYL (ISO)	C8 H10 N O5 P S	298-00-0	Solid	no	mg/m3	0.20			143.8	37.2		yes	yes	A	P	
PENTACARBONYLIRON (AS FE)	C5 Fe O5	13463-40-6	Liquid	no	ppm	0.01			102.8	-21.0	-15	yes	no	A	P3	
PENTACHLOROPHENOL	C6 H Cl5 O	87-86-5	Solid	no	mg/m3	0.50		2.5	309.0	190.0		yes	yes	A	P	
PENTAERYTHRITOL (RESP DUST)	C5 H12 O4	115-77-5	Solid	no	mg/m3	4.00			Sub	260.0		yes	no		P	
PENTANE, ALL ISOMERS	C5 H14	109-66-0	Liquid	no	mg/m3	1200.00		1500.0	36.1	-129.7	-49.40	yes	yes	AX		
PENTAN-2-ONE	C5 H10 O	107-87-9	Liquid	no	ppm	200.00		1500.0	102.0	-77.8	7.00	yes	yes	A		
PENTAN-3-ONE	C5 H10 O	96-22-0	Liquid	no	ppm	200.00			101.7	-42.2	12.00	yes	yes	A		
PENTYL ACETATE	C7 H14 O2	628-63-7	Liquid	no	ppm	50.00		1000.0	149.4	-70.5	22.20	yes	yes	A		
PERCHLORDETHYLENE	as Tetrachloroethylene	127-18-4	Liquid	YES	ppm	50.00			121.0	-18.9		yes	yes	A		

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PERCHLORYL FLUORIDE	Cl F O3	7616-94-6	Gas	no	ppm	3.00		100.0	-46.8	-146.0		no	no	B		
PHENACYL CHLORIDE	as 2-Chloroacetophenone	532-27-4	Solid	no	mg/m3	0.32		15.0	237.0	56.7	117.7	yes	yes	A	P3	
PHENOL	C6 H6 O	108-95-2	Solid	no	ppm	5.00		250.0	181.7	43.0	79.4	yes	yes	A	P3	
p-PHENYLENEDIAMINE	C6 H8 N2	106-50-3	Solid	no	mg/m3	0.10		25.0	267.0	146.0	155.5	no	yes		P3	
PHENYL-2,3-EPOXYPROPYL ETHER	C9 H10 O2	122-60-1	Liquid	YES	ppm	1.00			245.0	3.0	120	yes	yes	A		
PHENYLETHYLENE	as Styrene	100-42-5	Liquid	no	ppm	MEL	100.000	700.0	145.2	-30.6	32.00	yes	yes	A		
PHENYL HYDRAZINE	C6 H8 N2	100-63-0	Liquid	no	ppm				243.0	19.8		no	yes	A	P3	
2-PHENYLPROPENE	C9 H10	98-83-9	Liquid	no	ppm	100.00 (ST)		700.0	165.5	-23.0	53.9	yes	yes	A		
PHORATE (ISO)	C7 H17 O2 P S3	298-02-2	Liquid	no	mg/m3	0.05				-42.8	160	yes	yes	A	P	
PHOSDRIN	as Mevinphos (ISO)	7786-34-7	Liquid	no	ppm	0.01		4.0	Dec	21.0	175	yes	yes	A	P3	
PHOSGENE	C Cl2 O	75-44-5	Gas	no	ppm	0.02		2.0	8.3	-127.8		yes	no	B	P3	
PHOSPHINE	H3 P	7803-51-2	Gas	no	ppm	0.30 (ST)		50.0	-88.0	-133.0		no	no	B		
PHOSPHORIC ACID	as Orthophosphoric acid	7664-38-2	Solid	no	mg/m3	2.00 (ST)		1000.0	212.8	42.2		yes	yes		P	
PHOSPHORUS, YELLOW	P4	7723-14-0	Solid	no	mg/m3	0.10		5.0	280.0	44.0		yes	yes		P	
PHOSPHORUS OXYCHORIDE	as Phosphoryl trichloride	10025-87-3	Liquid	no	ppm	0.20			105.3	1.0		yes	yes	B	P3	
PHOSPHORUS PENTACHLORIDE	Cl5 P	10026-13-8	Solid	no	mg/m3	0.10		70.0	Sub	162.2		yes	yes	B	P3	
PHOSPHORUS PENTASULPHIDE	as Diphosphorus pentasulphide	1314-80-3	Solid	no	mg/m3	1.00		250.0	514.0	286.0		yes	yes	B	P	
PHOSPHORUS PENTOXIDE	as Diphosphorus pentoxide	1314-56-3		no	mg/m3	2.00 (ST)									P	
PHOSPHORUS TRICHLORIDE	Cl3 P	7719-12-2	Liquid	no	ppm	0.20		25.0	76.1	-112.2		yes	yes	B	P3	
PHOSPHORYL TRICHLORIDE	Cl3 O P	10025-87-3	Liquid	no	ppm	0.20			105.3	2.0		yes	yes	B	P3	
PHTHALIC ANHYDRIDE	C8 H4 O3	85-44-9	Solid	no	mg/m3	MEL	4.000	60.0	295.1	131.0	151.7	yes	yes	A	P3	
PICLORAM (ISO)	C6 H3 Cl3 N2 O2	1918-02-1	Solid	no	mg/m3	10.00			Dec	218.0		yes	yes	AB	P3	
PICRIC ACID	C6 H3 N3 O7	88-89-1	Solid	no	mg/m3	0.10		75.0	300+Exp	122.0	150	yes	yes		P	
PIPERAZINE DIHYDROCHLORIDE	C4 H10 N2 2Cl H	142-64-3	Solid	no	mg/m3	5.00				335.0		yes	yes		P	
PIPERIDINE	C5 H11 N	110-89-4	Liquid	no	ppm	1.00			106.0	-7.0	16.00	no	yes	A		
PLASTER OF PARIS (RESP. DUST)	Ca2S2H2O9	26499-65-0	Solid	no	mg/m3	4.00				162.2		yes	yes		P	
PLATINUM METAL	Pt	7440-06-4	Solid	no	mg/m3	5.00			3827.0	1772.0		no	no		P	
PLATINUM COMPOUNDS, SOLUBLE (AS PT)	Pt		Solid	no	mg/m3	0.002		4.0				yes	yes		P	
POLYCHLORINATED BIPHENYLS (PCB's)	C12 H(10-x) Clx	1336-36-3	Liquid	YES	mg/m3	MEL	0.100		325.0	-18.9		yes	no	A	P or	Use SCBA
POLYVINYL CHLORIDE (PVC) (RESP. DUST)	(C2 H3 Cl)N	9002-86-2	Solid	no	mg/m3	4.00						no	no		P	
PORTLAND CEMENT (RESP. DUST)	n/a	65997-15-1		no	mg/m3	4.00		5000.0							P	
POTASSIUM BROMATE	K Br O3	7758-01-2	Solid	YES					370.0	350.0		no	no		P	
POTASSIUM CHROMATE	K2 Cr O4	7789-00-6	Solid	YES	mg/m3					968.3		yes	yes		P	
POTASSIUM HYDROXIDE	KOH	1310-58-3	Solid	no	mg/m3	2.00 (ST)			1323.0	379.0		yes	no		P	
PROPANE	C3 H8	74-98-6	Gas	no	ppm			2100.0	-42.1			no	no			Use Airline
PROPANE-1,2-DIOL (TOTAL)	C3 H8 O2	57-55-6	Liquid	no	ppm	150.00			188.2	-59.0		no	no	A	P3	
1,3-PROPANESULTONE				YES										A	P	
n-PROPANOL	as Propan-1-ol	71-23-8	Liquid	no	ppm	200.00		800.0	97.5	-126.5	22.00	yes	yes	A		
PROPAN-1-OL	C3 H8 O	71-23-8	Liquid	no	ppm	200.00		800.0	97.5	-126.5	22.00	yes	yes	A		
PROPAN-2-OL	C3 H8 O	67-63-0	Liquid	no	ppm	400.00		2000.0	82.5	-88.5	12.00	yes	yes	A		
3-PROPANOLIDE (PROPIOLACTONE)	C3 H4 O2	57-57-8	Liquid	YES					161.7	-33.0	73.9	yes	yes	A	P	
PROPARGYL ALCOHOL	as Prop-2-yn-1-ol	107-19-7	Liquid	no	ppm	1.00			114.0	-52.0	36.1	no	yes	A		
PROPIONIC ACID	C3 H6 O2	79-09-4	Liquid	no	ppm	10.00			141.1	-15.0	52.2	yes	yes	A	P3	
PROPOXUR (ISO)	C11 H15 N O3	114-26-1	Solid	no	mg/m3	0.50			Dec	91.5	>148.9	no	no		P	
PROPRANOLOL	C16 H21 N O2	525-66-6		no	mg/m3	2.00								A	P3	
N-PROPYL ACETATE	C5 H10 O2	109-60-4	Liquid	no	ppm	200.00		1700.0	101.6	-92.0	12.70	yes	yes	A		
PROPYLENE	C3 H6	115-07-1	Gas	no	ppm				-48.0	-185.0		no	no			Use Airline
PROPYLENE DINITRATE	C3 H6 N2 O6	6423-43-4	Liquid	no	ppm	0.20				-7.7		yes	no	A	P3	
PROPYLENE GLYCOL	as Propane-1,2-diol	57-55-6	Liquid	no	ppm	150.00			188.2	-59.0		no	no	A	P3	
PROPYLENE GLYCOL DINITRATE	as Propylene dinitrate	6423-43-4	Liquid	no	ppm	0.20				-7.7		yes	no	A	P3	
PROPYLENE GLYCOL MONOMETHYL ETHER	as 1-Methoxypropan-2-ol	107-98-2	Liquid	no	ppm	100.00			120.0	-95.0	38.00	yes	yes	A		
PROPYLENE OXIDE	C3 H6 O	75-56-9	Liquid	YES	ppm	MEL	5.000		34.4	-112.0	-37	yes	yes	AX		
PROP-2-YN-1-OL	C3 H4 O	107-19-7	Liquid	no	ppm	1.00			114.0	-52.0	36	no	yes	A		
PULVERISED FUEL ASH (RESP. DUST)	n/a	n/a	Solid	no	mg/m3	4.00									P	
PYRETHRINS (ISO)	C21H28O3	8003-34-7	Solid	no	mg/m3	5.00		5000.0			82.2	no	yes		P	
PYRIDINE	C5 H5 N	110-86-1	Liquid	no	ppm	5.00		1000.0	115.0	-42.0	20	yes	yes	A	P3	
2-PYRIDYLAMINE	C5 H6 N2	502-29-0	Solid	no	mg/m3	2.00			210.6	58.1		no	no	A	P	
PYROCATECHOL	C6 H6 O2	120-80-9	Solid	no	mg/m3	5.00			245.5	105.0	127.2	yes	yes	A	P	
QUARTZ	S-O2	14808-60-7	Solid	YES	mg/m3	MEL	0.300		2230.0	1710.0		yes	no		P	
QUINONE	as p-Benzoquinone	106-51-4	Solid	no	mg/m3	0.45		100.0	Sub	115.5	37.8	yes	yes	A	P	
RDX	as Hexahydro-1,3,5-trinitro-1,3,5-triazine	121-82-4	Solid	no	mg/m3	1.50				205.0	Expl	yes	yes		P	

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
RESIDUAL OILS (PETROLEUM)	n/a			YES										A	P	
RESIDUES (PETROLEUM) - VARIOUS	n/a			YES										A	P	
RESIDUES, STEAM CRACKED, THERMALLY TREATED	n/a			YES										A	P	
RESORCINOL	C6 H6 O2	108-46-3	Solid	no	mg/m3	10.00			277.2	109.0	127	yes	yes	A	P	
RHODIUM (AS RH) METAL FUME AND DUST	Rh	7440-16-6	Solid	no	mg/m3	0.10		100.0	3727.0	1966.0		no	no		P	
RONNEL	as Fenchlorphos (ISO)	299-84-3	Solid	no	mg/m3	10.00		300.0	Dec	41.0		yes	no	A	P	
ROSIN CORE SOLDER PYROLYSIS PRODUCTS			Solid	no	mg/m3	0.05						yes	no	A	P3	
ROTENONE (ISO)	C23 H22 O6	83-79-4	Solid	no	mg/m3	5.00		2500.0	Dec	165.0		yes	yes		P	
ROUGE (RESP. DUST)	Fe2 O3	1309-37-1	Solid	no	mg/m3	4.00				1565.0		yes	yes		P	
RUBBER FUME	n/a		Solid	no	mg/m3	MEL	0.600					no	no		P	
RUBBER PROCESS DUST	n/a		Solid	no	mg/m3	MEL	6.000					no	no		P	
SELENIUM AND COMPOUNDS, EXCEPT HYDROGEN SELENIDE (AS SE)	Se	7782-49-2	Solid	no	mg/m3	0.10		1.0	685.0	200.0		yes	yes		P	
SILANE	H4 Si	7803-62-5	Gas	no	ppm	0.50			-112.0	-185.0		yes	yes			Use Airline
SILICA, AMORPHOUS (RESP. DUST)	O2 Si	7631-86-9	Solid	no	mg/m3	2.40		3000.0	2230.0	1710.0		yes	no		P	
SILICA, CRYSTALLINE, RESPIRABLE DUST	Si O2			no	mg/m3	MEL	0.3								P	
SILICA, FUSED (RESP. DUST)	O2 Si	60676-86-0	Solid	no	mg/m3	0.08						no	no		P	
SILICON (RESP. DUST)	Si	7440-21-3	Solid	no	mg/m3	4.00			2355.0	1410.0		yes	yes		P	
SILICON CARBIDE (not whiskers) (RESP. DUST)	C Si	409-21-2	Solid	no	mg/m3	4.00				2600.0		yes	yes		P	
SILICON TETRAHYDRIDE	as Silane	7803-62-5	Gas	no	ppm	0.50			-112.0	-185.0		yes	yes			Use Airline
SILVER , METALLIC	Ag	7440-22-4	Solid	no	mg/m3	0.10		10.0	2000.0	960.5		yes	yes		P	
SILVER, SOLUBLE COMPOUNDS (AS Ag)	Ag	7440-22-4	Solid	no	mg/m3	0.01		10.0				yes	yes		P	
SODIUM AZIDE (as NaN3)	N3 Na	26628-22-8	Solid	no	mg/m3	0.3 (ST)			Dec	275.0		yes	yes		P3	
SODIUM 2-(2,4-DICHLOROPHENOXY)ETHYL SULPHATE	C8 H7 Cl2 O5 S Na	136-78-7	Solid	no	mg/m3	10.00		500.0	Dec	245.0		yes	yes		P	
SODIUM FLUOROACETATE	C2 H2 F O2 Na	62-74-8	Solid	no	mg/m3	0.05		2.5	Dec	200.0		no	no		P	
SODIUM HYDROGENSULPHITE	H O3 S Na	7631-90-5	Solid	no	mg/m3	5.00			Dec			yes	yes		P	
SODIUM HYDROXIDE	Na O H	1310-73-2	Solid	no	mg/m3	2.00 (ST)		10.0	1390.0	318.4		yes	yes		P	
SODIUM METABISULPHITE	as Disodium disulphite	7681-57-4	Solid	no	mg/m3	5.00			Dec	>150		yes	yes		P	
SOFT WOOD DUST	n/a		Solid	YES	mg/m3	MEL	5.000					yes	no		P2/P3	
STARCH (RESP. DUST)	n/a	9005-25-8	Solid	no	mg/m3	4.00			Dec	Dec		yes	yes		P	
STIBINE	H3 Sb	7803-52-3	Gas	no	ppm	0.10		5.0	-18.3	-88.0		no	no			Use Airline
STRONTIUM CHROMATE	Sr Cr O4			YES											P3	
STRYCHNINE	C21 H22 N2 O2	57-24-9	Solid	no	mg/m3	0.15		3.0	Dec	268.0		no	no		P	
STYRENE	C8 H8	100-42-5	Liquid	no	ppm	MEL	100.000	700.0	145.2	-30.6	31.00	yes	no	A		
STYRENE OXIDE	C8 H8 O	96-09-3	Liquid	YES					194.0	-35.6	74	yes	yes	A		
SUBTILISINS		1395-21-7	Solid	no	mg/m3	0.00006						yes	yes		P	
SUCROSE	C12 H22 O11	57-50-1	Solid	no	mg/m3	10.00			Dec	160+		no	no		P	
SULFOTEP (ISO)	C8 H20 O5 P2 S2	3689-24-5	Liquid	no	mg/m3	0.20		10.0	136.0			yes	yes	AB	P3	
SULPHUR DIOXIDE	O2 S	7446-09-5	Gas	no	ppm	2.00		100.0	-10.0	-75.5		yes	no	E		
SULPHUR HEXAFLUORIDE	F6 S	2551-62-4	Gas	no	ppm	1000.00			Sub	-63.9		no	no			Use Airline
SULPHURIC ACID	H2 O4 S	7664-93-9	Liquid	no	mg/m3	1.00		15.0	290.0	10.4		yes	yes	E	P3	
SULPHUR MONOCHLORIDE	as Disulphur dichloride	10025-67-9	Liquid	no	ppm	1.00 (ST)		5.0	137.7	-77.2	118.3	yes	yes	B	P3	
SULPHUR PENTAFLUORIDE	as Disulphur decafluoride	5714-22-7	Liquid	no	ppm	0.025		1.0	29.0	-92.0		yes	yes	B	P3	
SULPHUR TETRAFLUORIDE	F4 S	7783-60-0	Gas	no	ppm	0.10			-40.6	-120.5		yes	yes			Use Airline
SULPHURYL DIFLUORIDE	F2 O2 S	2699-79-8	Gas	no	ppm	5.00		200.0	-55.4	-136.7		yes	no			Use Airline
2,4,5-T (ISO)	C8 H5 Cl3 O3	93-76-5	Solid	no	mg/m3	10.00		250.0		153.0		no	yes		P	
TDI	Isocyanate	584-84-9	Liquid	YES	mg/m3	MEL	0.020		251.1	21.7	126.7	yes	yes			Use Airline
TEDP	as Sulfotep (ISO)	3689-24-5	Solid	no	mg/m3	0.20		10.0	136.0			yes	yes	AB	P3	
TEPP (ISO)	C8 H20 O7 P2	107-49-3	Liquid	no	mg/m3	0.05		5.0	170.0	0.0		yes	no	A	P3	
TNT	as 2,4,6-Trinitrotoluene	118-96-7	Solid	no	mg/m3	0.50		500.0	240.0	80.1		yes	yes		P	
TALC (RESP. DUST)	H4-O24-Si8-Mg6	14807-96-6	Solid	no	mg/m3	1.00		1000.0		900+		yes	no		P	
TANTALUM	Ta	7440-25-7	Solid	no	mg/m3	5.00		2500.0	5425.0	2996.0		yes	yes		P	
TAR - VARIOUS				YES										A	P	
TELLURIUM & COMPOUNDS EXCEPT HYDROGEN TELLURIDE (AS TE)	Te	13494-80-9	Solid	no	mg/m3	0.10		25.0	990.0	450.0		no	yes		P	
TELLURIUM HEXAFLUORIDE (AS TE)	F6 Te	7783-80-4	Gas	no	ppm	0.02		1.0	Sub	-37.7		no	no			Use SCBA
TERPHENYLS (ALL ISOMERS)	C18 H14	26140-60-3	Solid	no	ppm	0.50			276.0	212.0		no	no		P3	
1,1,2,2-TETRABROMOETHANE	C2 H2 Br4	79-27-6	Liquid	no	ppm	0.50		8.0	246.0	0.0		yes	yes	A	P3	
TETRABROMOMETHANE	as Carbon Tetrabromide	558-13-4	Solid	no	mg/m3	1.40			190.0	90.0		yes	yes	A	P	
TETRACARBONYLNICKEL (AS NI)	C4 Ni O4	13463-39-3	Liquid	YES	ppm	0.10 (ST)			43.0	-25.0	<-20	no	no			Use SCBA
1,1,1,2-TETRACHLORO-2,2-DIFLUOROETHANE	C2 Cl4 F2	76-11-9	Solid	no	ppm	100.00		2000.0	91.5	40.6		yes	yes	A		

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
1,1,2,2-TETRACHLORO-1,2-DIFLUOROETHANE	C2 Cl4 F2	76-12-0	Solid	no	ppm	100.00		2000.0	93.0	25.0		yes	yes	A		
TETRACHLOROETHYLENE	C2 Cl4	127-18-4	Liquid	YES	ppm	50.00			121.0	-19.0		yes	yes	A		
1,1,1,2-TETRAFLUOROETHANE (HFC134a)	C2 F4 H2	811-97-12		no	ppm	1000.00										Use Airline
TETRACHLOROMETHANE	as Carbon Tetrachloride	56-23-5	Liquid	YES	ppm	2.00			76.7	-23.0		yes	yes	A		
TETRACHLORONAPHTHALENES, ALL ISOMERS	C10 H4 Cl4	1335-88-2	Solid	no	mg/m3	2.00			315+	182.0	210	no	yes	A	P	
O,O,O',O'-TETRAETHYL DITHIO-PYROPHOSPHATE	as Sulfotep (ISO)	3689-24-5	Liquid	no	mg/m3	0.20		10.0	136.0			yes	yes	AB	P3	
O,O,O',O'-TETRAETHYL PYROPHOSPHATE	as TEPP (ISO)	107-49-3	Liquid	no	mg/m3	0.05		5.0	170.0	0.0		yes	no	A	P3	
TETRAETHYL ORTHOSILICATE	C8 H20 O4 Si	78-10-4	Liquid	no	ppm	10.00		700.0	169.0	-83.0	37.2	yes	no	A		
TETRAFLUORODICHLOROETHANE	as Cryofluorane (INN)	76-14-2	Gas	no	ppm	1000.00		15000.0	3.3	-94.0		no	no			Use Airline
TETRAHYDROFURAN	C4 H8 O	109-99-9	Liquid	no	ppm	100.00		2000.0	66.0	-108.5	-14.00	yes	no	A		
TETRAMETHYL ORTHOSILICATE	C4 H12 O4 Si	681-84-5	Liquid	no	ppm	1.00			121.0	-2.0	96	yes	no	A		
TETRAMETHYL SUCCINONITRILE	C8 H12 N2	3333-58-8	Solid	no	ppm	0.50		5.0	Sub	170.0		no	no		P3	
TETRASODIUM PYROPHOSPHATE	O7 P2 4Na	7722-88-5	Solid	no	mg/m3	5.00			Dec	988.0		yes	yes		P	
TETRYL	as N-Methyl-N,2,4,6-tetranitroaniline	479-45-8	Solid	no	mg/m3	1.50		750.0	180+	131.0	Exp	yes	yes		P	
THALLIUM, SOLUBLE COMPOUNDS (AS TL)	Tl	7440-28-0		no	mg/m3	0.10		15.0				no	no		P	
THIOACETAMIDE	C8 H5 N		Solid	YES						115.0						REFER
4,4'-THIOBIS (6-tert-BUTYL-m-CRESOL)	C22 H30 O2 S	96-69-5	Solid	no	mg/m3	10.00				150.0	215.6	no	no		P	
THIOGLYCOLLIC ACID	as Mercaptoacetic acid	68-11-1	Liquid	no	ppm	1.00			123.0	-16.5	>110	yes	yes	A	P3	
THIONYL CHLORIDE	Cl2 O S	7719-09-7	Liquid	no	ppm	1.00 (ST)			76.0	104.0		yes	yes	B	P3	
THIRAM (ISO)	C6 H12 N2 S4	137-26-8	Solid	no	mg/m3	5.00		100.0	Dec	155.0		yes	yes	A	P	
TIN COMPOUNDS, INORGANIC, EXCEPT SNH4 (AS SN)	Sn	7440-31-5	Solid	no	mg/m3	2.00		100.0	2507.0	232.0		yes	yes		P	
TIN COMPOUNDS, ORGANIC, EXCEPT CYHEXATIN (ISO) (AS SN)	Sn		Solid	no	mg/m3	0.10		25.0				yes	yes		P	
TITANIUM DIOXIDE (RESP. DUST)	Ti O2	13463-67-7	Solid	YES	mg/m3	4.00			2500.0	1840.0		no	no		P	
TOLUENE	C7 H8	108-88-3	Liquid	no	ppm	50.00		500.0	110.6	-95.0	4.00	yes	yes	A		
TOLUENE DIISOCYANATE	Isocyanate	584-84-9	Liquid	YES	mg/m3	MEL	0.020		251.0	22.0	127	yes	yes			Use Airline
p-TOLUENESULPHONYL CHLORIDE	C7 H7 S O2 Cl	98-59-9	Solid	no	mg/m3	5.00 (ST)				69.0		no	no	AB	P3	
O-TOLUIDINE	C7 H9 N	95-53-4	Liquid	YES	ppm	MEL	0.200		200.0	-14.0	85	yes	yes	A	P3	
o-TOLUIDINE BASED AZODYES	Various			YES										A	P3	
4-o-TOLYLAZO-o-TOLUIDINE				YES										A	P3	
1,4,7-TRI-(AZA)-HEPTANE	C4 H13 N3		Liquid	no	ppm	1.00			207.0	-39.0		no	no	A		
TRIBROMOMETHANE	as Bromoform	75-25-2	Liquid	no	ppm	0.50		850.0	149.5	8.3		yes	yes	A		
TRIBUTYL PHOSPHATE, ALL ISOMERS	C12 H27 O4 P	126-73-8	Liquid	no	mg/m3	5.00		30.0	289.0	-80.0	146	yes	yes	A	P3	
TRICARBONYL(ETA-CYCLOPENTADIENYL) MANGANESE (AS MN)	C8 H5 Mn O3	12079-65-1	Solid	no	mg/m3	0.10			Sub	76.0		no	yes	A	P	
TRICARBONYL(METHYLCYCLOPENTADIENYL) MANGANESE AS MN	C9 H7 Mn O3	12108-13-3	Liquid	no	mg/m3	0.20			231.6	2.0	110	Yes	yes	A	P	
TRICHLOROACETIC ACID	C2 H Cl3 O2	76-03-9	Solid	no	mg/m3	1.00			198.0	58.0		yes	yes	AE	P	
1,2,4-TRICHLOROBENZENE	C6 H3 Cl3	120-82-1	Liquid	no	ppm	1.00			213.0	17.0	105.6	yes	yes	A		
1,1,1-TRICHLOROBIS(CHLOROPHENYL)ETHANE	C14 H9 Cl5	50-29-3	Solid	YES	mg/m3	1.00			Dec	109.0	72	yes	yes		P	
1,1,1-TRICHLOROETHANE	C2 H3 Cl3	71-55-6	Liquid	no	ppm	200		700.0	74.1	-30.4		yes	yes	A		
TRICHLOROETHYLENE	C2 H Cl3	79-01-6	Liquid	YES	ppm	MEL	100.000		87.0	-73.0		yes	yes	A		
a,a,a-TRICHLOROTOLUENE	Cl3 C7 H5		Solid	YES					220.0	36.0				A	P	
TRICHLOROFLUOROMETHANE	C Cl 3F	75-69-4	Liquid	no	ppm	1000.00		2000.0	23.7	-111.0		no	yes			Use Airline
TRICHLOROMETHANE	as Chloroform	67-66-3	Liquid	YES	ppm	2.00			61.6	-63.5		yes	yes	AX		
TRICHLORONITROMETHANE	C Cl3 N O2	76-06-2	Liquid	no	ppm	0.10		2.0	112.0	-69.4		yes	yes	A		
2,4,5-TRICHLOROPHENOXYACETIC ACID	C8 H5 Cl3 O3	93-76-5	Solid	no	mg/m3	10.00		250.0	Dec	153.0		no	yes		P	
1,2,3-TRICHLOROPROPANE	C3 H5 Cl3	96-18-4	Liquid	YES	ppm	50.00			156.8	-14.4	71	yes	yes	A		
1,1,2-TRICHLOROTRIFLUOROETHANE	C2 Cl3 F3	76-13-1	Liquid	no	ppm	1000.00		2000.0	47.7	-35.0		no	yes			Use Airline
TRI-o-CRESYL PHOSPHATE	as Tri-o-tolylphosphate	78-30-8	Liquid	no	mg/m3	0.10		40.0	410.0	11.0	225	no	no		P3	
TRICYCLOHEXYLTIN HYDROXIDE	as Cyhexatin (ISO)	13121-70-5	Solid	no	mg/m3	5.00		80.0	228.0	195.0		yes	yes	A	P	
TRIDYMITE, RESPIRABLE DUST	Si O2	14808-60-7	Solid	YES	mg/m3	MEL	0.300		2230.0	1710.0		yes	no		P	
TRIETHYLAMINE	C6 H15 N	121-44-8	Liquid	no	ppm	10.00		200.0	89.0	-115.0	-7.00	yes	yes	A	K	EITHER
TRIFLUOROBROMOMETHANE	as Bromotrifluoromethane	75-63-8	Gas	no	ppm	1000.00		40000.0	-58.0	-156.0		no	no	or		Use Airline
TRIGLYCIDYL ISOCYANURATE (TGIC)	C12 H15 N3 O6	2451-62-9	Solid	no	mg/m3	MEL	0.100								P3	
TRIMANGANESE TETRAOXIDE	Mn3 O4	1317-35-7	Solid	no	mg/m3	1.00				1564.0		no	no		P	
TRIMELLITIC ANHYDRIDE	C9 H4 O5	552-30-7	Solid	no	mg/m3	MEL	0.040			161.0		yes	yes	A	P3	
TRIMETHYLAMINE	C3 H9 N	75-50-3	Gas	no	ppm	10.00			3.0	-117.0	-7.00	yes	yes	K		
TRIMETHYLBENZENES, ALL ISOMERS	C9 H12	25551-13-7	Liquid	no	ppm	25.00			169.0	-61.0		no	no	A		
3,5,5-TRIMETHYLCYCLOHEX-2-ENONE	C9 H14 O	78-59-1	Liquid	no	ppm	5.00 (ST)		200.0	215.0	-8.0	84.4	yes	yes	A		
TRIMETHYL PHOSPHITE	C3 H9 O3 P	121-45-9	Liquid	no	ppm	2.00			111.0	-78.0	27.7	yes	yes	A	P3	
2,4,6-TRINITROPHENOL	C6 H3 N3 O7	88-89-1	Solid	no	mg/m3	0.10		75.0	300.0	122.0	150	yes	yes		P	

Chemical Name	Gross Chemical Formula	CAS Number	Normal State	Carcin-ogen	Unit of M'ment	OES (8 hour TWA)	MEL (8 hour TWA)	IDLH	Boiling Point	Melting Point	Flash Point	Eye Irritant	Skin Irritant	Gas Filter	Particle Filter	Filter Colour
2,4,6-TRINITROTOLUENE	C7 H5 N3 O6	118-96-7	Solid	no	mg/m3	0.50		500.0	240.0	80.1		yes	yes		P	
TRIPHENYL PHOSPHATE	C18 H15 O4 P	115-86-6	Solid	no	mg/m3	3.00		1000.0	413.3	49.0	220	no	no	A	P	
TRIPOLI, RESPIRABLE DUST	Si O2		Solid	no	mg/m3	MEL	0.300					no	no		P	
TRI-O-TOLYL PHOSPHATE	C21 H21 O4 P	78-30-8	Liquid	no	mg/m3	0.10		40.0	410.0	11.0	225	no	no	A	P3	
TUNGSTEN & COMPOUNDS (AS W) (SOLUBLE)	W	7440-33-7	Solid	no	mg/m3	1.00			5927.0	3410.0		yes	yes		P	
TURPENTINE	C10 H16 (approx)	8006-64-2	Liquid	no	ppm	100.00		800.0	160.0	-50.0	35.00	yes	yes	A		
URANIUM COMPOUNDS, NATURAL, SOLUBLE (AS U)	U	7440-61-1	Solid	Yes	mg/m3	0.20			3818.0	1132.3		yes	yes		P3	
URETHANE (INN)	H2-nn H6 C3 O2		Solid	YES						46.0				A	P3	
VANADIUM PENTOXIDE	as Divanadium pentaoxide	1314-62-1	Solid	no	mg/m3	MEL	0.05	35.0	1750.0	690.0		yes	yes		P	
VINYL ACETATE	C4 H6 O2	108-05-4	Liquid	no	ppm	10.00			72.0	-93.0	-8.00	yes	yes	A		
VINYL BENZENE	as Styrene	100-42-5	Liquid	no	ppm	MEL	100.000	700.0	145.2	-30.6	31.00	yes	yes	A		
VINYL CHLORIDE (CHLOROETHYLENE)	C2 H3 Cl	75-01-4	Gas	YES	ppm	MEL	7000		-13.8			no	no	AX		
VINYLIDENE CHLORIDE	C2 H2 Cl2	75-35-4	Liquid	Yes	ppm	MEL	10.000		31.7	-122.1	-18.9	yes	yes	AX	P3	
VINYL TOLUENES, ALL ISOMERS	as Methylstyrenes	25013-15-4	Liquid	no	ppm	100.00		400.0	170.6	-76.7	52.8	yes	yes	A		
WARFARIN (ISO)	C19 H16 O4	81-81-2	Solid	no	mg/m3	0.10		100.0	Dec	161.0		no	no		P	
WELDING FUME	n/a		Solid	Yes	mg/m3	5.00						no	no		P3	
WHITE SPIRIT	n/a	8052-41-3	Liquid	no	ppm	100.00			140-190	<-40	25-72	yes	yes	A		
WOOD DUST (HARD WOOD)	n/a		Solid	Yes	mg/m3	MEL	5.000					yes	no		P	
WOOD DUST (SOFT WOOD)	n/a		Solid	Yes	mg/m3	MEL	5.000					yes	no		P	
WOOL PROCESS DUST	n/a			no	mg/m3	MEL	10.000								P2/P3	
XYLENE (ALL ISOMERS)	C8 H10	1330-20-7	Liquid	no	ppm	100.00			139.0	-48.0		yes	yes	A		
XYLIDINE, ALL ISOMERS	C8 H11 N	1300-73-8	Liquid	no	ppm	2.00		50.0	213.0	-36.0	96.7	no	no	AK		
YTTRIUM	Y	7440-65-5	Solid	no	mg/m3	1.00		500.0	2927.0	1500.0		yes	no		P	
ZINC CHLORIDE, FUME	Cl2 Zn	7646_85-7	Solid	no	mg/m3	1.00		50.0	732.0	223.9		yes	yes		P	
ZINC CHROMATES (INC. ZINC POTASSIUM CHROMATE)	Zn Cr O4 , Zn Cr2 O4 , Zn Cr2 O7			YES											P	
ZINC DISTEARATE (RESP. DUST)	C36 H70 O4 Zn	557-05-1	Solid	no	mg/m3	4.00				130.0	276.7	yes	yes		P	
ZINC OXIDE FUME	ZnO	1314-13-2	Solid	no	mg/m3	5.00		500.0		1975.0		no	no		P	
ZIRCONIUM COMPOUNDS (AS Zr)	Zr	7440-67-7	Solid	no	mg/m3	5.00		50.0	3577.2	1857.0		no	yes		P	

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