



**AUTHORISATION: Signature**

**Date**

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**Introduction**

These procedures provide the structure upon which the Company can base its strategy and methodology for complying with the requirements of the Regulations for the Control of Substances Hazardous to Health (COSHH) on its construction sites and other workplaces.

It is the responsibility of the Site Supervisor or the Director to ensure that the appropriate COSHH Risk Assessments are carried out. This procedure contains general guidance on the main hazards from substances which are used on site and the types of controls which may be appropriate. As every site is different, this guidance must be applied in a manner appropriate to the particular site, the type of work and the particular substances being used.

If in any doubt about the controls which should be applied on any particular work then the advice of the HS&E Co-ordinator or the Company's Health and Safety Consultants should be obtained.

**Requirements of the Regulations**

The COSHH Regulations apply to any activity in which a substance hazardous to health is used. Effectively this covers all substances used on a site. Some substances in use on a site carry orange hazard labels to indicate particular hazards. However, because a particular substance does not carry such a label it should not be assumed to be non-hazardous - the regulations may still apply. The regulations also apply to substances generated by the work being carried out e.g. dust from angle grinders, welding fumes and woodworking dust. The regulations also apply to hazards from biological agents and micro-organisms, the most common of which is the risk of Weil's disease from rats on site.

The basic requirements of the regulations are as follows:-

- to assess the risks from the use of substances prior to any work being carried out
- to provide controls to reduce the risks to an acceptable level
- to ensure that such controls are implemented and used
- to monitor to ensure that such controls are working correctly
- to record the results of any such assessments and ensure that these results are passed on to those persons who might be exposed to substances hazardous to health via such means as training
- to ensure that those people using the substances are aware of the risks, what the appropriate controls are and how to use them
- to provide arrangements to deal with any accidents, incidents and emergencies arising from uncontrolled releases, spillages and fires concerning substances hazardous to health.

In certain situations it may be appropriate to carry out some measurements of exposure to substances or to have some form of medical surveillance carried out on those exposed. The nature of the work carried out by the Company makes this unlikely for most sites.



If in any doubt then the advice of the HS&E Co-ordinator or the Company's Health and Safety Consultants should be obtained.

### **COSHH Risk Assessment**

Risk assessment is a decision making process. In this case the decision is about how to reduce exposure to substances by choice of substances used, the ways in which they are used and the controls which may be applied. One of the principles behind the use of risk assessment is that the time and effort which goes into making an assessment should be commensurate with the levels of risk involved in the activity. An assessment for the use of small amounts of adhesive may be made quickly and easily. An assessment of dust exposure when tunnelling in granite would be much more complex and involved.

To make any decision it is necessary to have information. Four main sources of information are available on the risks of the substances in use on the site. These are:-

**Material Safety Data Sheets** which are supplied by the manufacturers of the substances. These will normally arrive before or with the consignment of the substance. If you do not receive one then the supplier should be contacted. They have a duty to provide you with this information. This is the prime source of information on most of the substances used.

**Labels on containers.** Some hazard information and risk and safety phrases are printed on the labels of containers.

**Guidance included in this procedure.** Simple guidance on the main types of substance used on the Company's sites and the types of controls which are appropriate are included at the end of this procedure.

**HSE publications.** HSE publishes some specific information about particular hazards and risks. Where this is available it should be consulted.

A copy of the Material Safety Data Sheet for all substances used on the site should be obtained and kept in the site COSHH File.

Data sheets provide information on the hazards of a substance. The purpose of the assessment is to consider the risks when that substance is used in a particular activity. If one substance is used for a number of different activities then it may be necessary to make a number of risk assessments.

### **Drawing up the Risk Assessment**

COSHH risk assessments are recorded using the proforma detailed in Appendix 1 to this procedure. The following information is recorded:

**Contract:** The contract number and title of the site on which the work is being undertaken.

**Substance or activity:** This is a simple description, which should be sufficient for anyone reasonably familiar with construction work to identify the process which is being referred to.

**Method of use:** This is a simple description of the activities being carried out. Where appropriate this can be cross-referenced to the method statement.



**Drawing up the  
Risk Assessment**

**Assessment reference:** The assessments associated with a particular project or site are given consecutive numbers for cross-referencing.

**Substances to which exposure may occur:** List the substances used. For each of these a Material Safety Data Sheet should be available. If the substance carries a hazard warning then the appropriate box should be ticked.

**Routes of exposure and assessment of risk:** From your knowledge of the hazards of the substances and the nature of the activity identify the possible effects of exposure by each of the three possible routes:

- Inhaling particles or vapours
- Contact of the substance with the skin
- Accidental ingestion of the substances

**Controls:** For each of the control methods listed below, record using a tick or cross the feasibility, presence and adequacy of the control method for the process being assessed and note any comments or improvements required. Adequate control is defined in terms of exposure by inhalation to a limited range of substances. This can only be verified by measurement of exposure when the task is actually being undertaken. Such measurements are not a practical proposition under most circumstances. Adequate control is therefore based on knowledge of the activity, experience and application of good practice. Good practice is to control all exposure to substances to as low a level as is reasonably practicable. A good test of adequate control is to consider whether, in the light of the information you have obtained about the substances being used, you would have any concerns at all carrying out the work with the controls specified. If in any doubt about the adequacy of the controls then the company Health and Safety Adviser should be consulted. The possible types of controls are ranked in the order in which they should be considered. Where a particular type of control is not applicable to a particular process then this should be noted. Do not leave any of the options blank. Where possible, control should be achieved by using the methods as high up the list as possible. The use of personal protective equipment, respirators, gloves etc should be considered as a last resort. The types of control to consider are:

**Primary:**

- **Elimination:** Why are we carrying out this process in this way? Is an alternative method of achieving the same thing possible?
- **Substitution:** Are alternative substances available or alternative forms of the same substance which may reduce the risks?
- **Specialist training:** If an operator is required to have specific training on a particular process to carry out the work, then this should be recorded.



**Drawing up the  
Risk Assessment**

**Secondary:**

- **Enclosure:** Is it possible to enclose the process to prevent contact between the operators and the substances in use? Alternatively, is it possible to reduce the number of operators who are exposed by use of enclosure?
- **Suppression:** Is it possible to carry out dusty operations using water as a suppressant, or any other method?
- **Local ventilation:** Is the use of localised extraction systems an option?
- **General ventilation:** In confined areas, forced ventilation may be appropriate. Alternatively, processes may be moved to an area where general ventilation is improved.
- **Gloves:** Where gloves are required, the make and type must be specified.
- **Overalls:** Where chemical-resistant overalls are required, the make and type must be specified.
- **Respiratory equipment:** Where respiratory equipment is required then the make and type must be specified and must be of a make approved by the HSE.
- **Footwear:** If specialist resistant footwear is required then this should be recorded.
- **Specialist training:** If an operator is required to have specific training on a particular process to carry out the work then this should be recorded.
- **Improvements required:** Summarise any steps which must be taken to ensure adequate control before the process can be carried out.

**Maintenance and monitoring of controls:** Where local ventilation systems are used, these should be visually checked on a weekly basis and fully inspected every 14 months. Advice should be obtained from the company Health and Safety Adviser in these cases. Other non-disposable protective equipment should normally be inspected before use. All respiratory protective equipment must also be checked thoroughly on a monthly basis, and where filter changes are required these, and the monthly checks, must be recorded. Where monitoring in the form of workplace measurements or supervision is required, then this is to be recorded.

**Training of operators:** The risk assessment record is used as the basis of the information, instruction and training of operators in the hazards associated with a particular operation and the controls which are required. This training is recorded on the COSHH training record which is appended to the assessment.



**Drawing up the  
Risk Assessment**

In particular the operators must receive suitable and sufficient training in the use of all control measures specified such as local exhaust ventilation and personal protective equipment.

Where possible the numbers of operators using substances hazardous to health should be minimised. This will reduce the amount of training required and improve the levels of control.

Where possible the variety of substances in use on the site should be minimised. When a particular substance is no longer in use it should be disposed of. Do not keep surplus stock of redundant substances on site.

Where the use of particular controls for carrying out a process have been specified in the assessment, then both the Company and the employees have a legal duty to take all reasonable steps to ensure that they are actually used in practice. Always ensure that the controls specified are practicable for use in the intended process.

**Arrangements to  
deal with  
accidents,  
incidents and  
emergencies  
with substances  
hazardous to  
health.**

The COSHH Regulations require the Company to produce written arrangements to deal with any accidents, incidents and emergencies arising from uncontrolled releases, spillages and fires concerning substances hazardous to health.

Events which may trigger the emergency actions may include :

- Any serious fire which could give rise to a serious risk to health due to combustion products of substances hazardous to health used on site
- Any serious spillage or flood of materials hazardous to health
- Any failure to contain biological or carcinogenic substances on site
- Any process failure which may result in the emission of toxic fumes
- Any threatened significant exposure of operators above exposure limits due to failure of control measures such as local ventilation.

The Company must draw up arrangements which will include :

- list of relevant substances hazardous to health on site
- foreseeable types of accidents, incidents and emergencies
- the special arrangements to deal with the incidents
- safety equipment and personal protective equipment to be used in the event of incidents
- first-aid facilities required
- authority, roles and responsibilities of people nominated to manage an incident
- procedures for employees to follow
- procedures for clearing up after incidents
- scope any frequency of safety drills for incidents
- special needs of any disabled employees

The arrangements must also include details of the warning and communications systems to be used, and the employer's actions to be taken for an incident.

The arrangements must be communicated to each employee and be kept displayed where all employees and external emergency services have access to them.





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**Types of Dust**

Construction can by its nature be a very dusty environment. Most dust created during construction is considered to be a nuisance rather than toxic. This means that although unpleasant, breathing in the dust is not going to cause physical or chemical changes to the body, which may result in illness. Good practice is to reduce exposure to any dust to a minimum. Exposure to nuisance dusts at levels which are not physically unpleasant are unlikely to be a risk to health.

Where exposure is occurring due to a dusty substance which is brought onto the site for a specific purpose, then the Material Safety Data Sheet for the material should be consulted for information on any specific hazards associated with the material.

Some construction processes may generate dusts which contain free silica. Exposure to silica can cause silicosis. This is a progressive disease which causes permanent disability and death. It is commonly found in miners where it may be known as "miner's lung". Silica occurs in a number of common rock types and is a major component of building sand. Work which generates dust from concrete, such as concrete cutting, scabbling etc can cause high silica exposure. Similarly any work such as tunnelling or stonemasonry on rocks containing silica can cause high exposure to silica dust. Take advice on the likely silica content of the rocks being encountered.

**The Risks**

As with any exposure to substances, the chances of ill effects occurring are related to the level and duration of exposure. With silica the size of the dust particles is also important. Shovelling building sand which is in relatively large particles should not lead to any exposure, whereas dust from an angle grinder used on concrete will produce small particles and high exposure.

Because the effects of silica exposure are long term and not immediately apparent to the exposed operators, significant exposure can occur without it being realised. It is therefore important that the possibility of exposure occurring is always kept in mind when organising tasks on site. Common operations with a risk of high silica exposure are tunnelling, any form of rock blasting or drilling and work with power tools on concrete.

**The Controls**

Where practicable any operations which involve risk of silica exposure should be carried out wet to prevent the dust being raised. Where possible any such operations should not be carried out in confined spaces. Where such operations are carried out ensure that the operators are aware of the risks. Levels of exposure, especially on operations involving hand tools, will vary dramatically depending on the way the operator works.

If other control measures are not possible, dust masks should be used. For information on the choice of Respiratory Protective Equipment and the training of operators in its use, please see Sheet 5 – Selection of Respiratory Protective Equipment and/or contact the HS&E Co-ordinator.



**General Guidance on COSHH**

**Sheet 2 - Dermatitis**

**What it is**

Dermatitis is a general term for various types of skin disease. It is the most common occupationally-related disease in the UK with an estimated 60,000-70,000 cases each year. It is unsightly and can be extremely painful. In some cases sufferers are unable to work because of the effects of dermatitis.

**The Causes**

Dermatitis can be caused by a very wide range of substances, from the natural yeasts on fruits to washing up liquid. Common skin sensitisers found in construction are oils and greases, cement products and solvent-based adhesives.

In some people, an allergic type reaction occurs when they are exposed to particular substances; they are said to have become "sensitised" to the material. It is not possible to predict who will become sensitised. Once sensitised, individuals will show an extreme reaction to very low levels of exposure and this is likely to occur for the rest of their lives.

**Prevention of  
Dermatitis**

The probability of becoming sensitised to any substance is related to the level and frequency of exposure. Sensitisation is most likely to occur after a single high-level exposure, even where the operator may have previously had numerous low-level exposures without any noticeable effect. Any measures to reduce the amount of contact between substances and the skin will therefore reduce the likelihood of dermatitis.

In construction it is clearly not practicable to totally prevent exposure to substances. Where significant exposure is foreseeable then correctly chosen gloves should be used. Notes on choosing and using gloves are given in Sheet 6 – Selection and use of Gloves.

Given that some exposure will occur the possibility of dermatitis can be significantly reduced by means of proper skin care. This means the use of appropriate hand cleansers, barrier creams and after work (emollient) creams. Of most importance is the thorough cleaning of the hands at the end of each work session. This will be easier if a suitable barrier cream has been applied prior to starting work. Barrier creams do not provide an invisible glove but do make it easier to effectively clean hands after work. Hands should be cleaned with an appropriate cleaner; under no circumstances should they be washed in petrol, solvent, sand etc. After thorough cleaning of the hands an after work cream should be used to replace the natural oils in the skin.

If any rashes or persistent irritation of the skin is noted then medical advice should be sought as soon as possible. Early treatment can prevent a much more serious problem occurring.



**General Guidance on COSHH**

**Sheet 3 - Oils, Resins and Greases**

**The Hazards**

Oils, resins and greases are used for a wide variety of purposes on sites of all types. Because they are such common materials it is widely assumed that they are relatively harmless. In fact all types of oil, resins and greases are capable of causing contact and allergic dermatitis. The level of the hazard depends on the types of substance being used. Generally the more refined oils present a lower hazard than less refined mixtures. Dirty oil, eg engine sump oil, presents a particular hazard and is known to be able to cause cancer.

The use of unrefined mineral oils has in the past led to skin cancer affecting the exposed skin of the hands and forearms. Oil soaked clothing and oily rags kept in overalls has caused scrotal cancer. The use of more modern refined oils and improved work practices have reduced this risk.

In addition to the dermatitis hazards, oils, especially dirty oils, can encourage bacterial growth which may lead to infection of cuts and abrasions.

**The Risks**

Any operator whose work involves skin contact with oil, resin or grease is at risk of contracting contact or allergic dermatitis.

The level of risk is directly dependent on the frequency, duration and extent of skin contact with the oils and greases, as well as the nature of the substance being used and individual predisposition.

**The Controls**

Reduce the extent, frequency and duration of all exposures to oils, resins and greases to the lowest extent practicable.

Where appropriate to the nature of the task being carried out, suitable gloves should be used.

Following exposure the skin should be thoroughly cleaned using an appropriate cleansing agent (not petrol, paraffin or sand) as soon as is practicable.

Any clothing or overalls which become soaked with oils, resin or grease should be removed and replaced as soon as practicable.



**General Guidance on COSHH**

**Sheet 4 - Portland Cement**

**The Hazards**

The use of cement can present two possible hazards:-

- Inhalation of cement dust.
- Skin contact with wet cement and/or concrete

Studies of workers involved in the manufacture of cement, where dust exposure is likely to be higher and more prolonged than exposure during construction works, have not shown any particular respiratory problems associated with such exposure.

Wet cement is highly alkaline (pH around 12.5) and as such can cause chemical burns to the skin.

**The Risks**

Any operator whose work involves skin contact with wet cement or concrete is at risk from chemical burns.

The level of risk is directly dependent on the frequency, duration and extent of skin contact with the cement. Particular risk is associated with wet cement getting underneath overalls or inside boots and consistently rubbing against the skin.

Exposure to cement dust does not give rise to any greater risk than exposure to nuisance dust.

**The Controls**

Reduce the extent, frequency and duration of all exposures to wet cement and cement dust to the lowest extent practicable.

Where appropriate to the nature of the task being carried out, suitable gloves should be used.

Following exposure the skin should be thoroughly cleaned.

Any clothing or footwear which becomes contaminated with wet cement on the inside should be removed and the affected area cleaned with large amounts of water immediately.



**General Guidance on COSHH**

**Sheet 5 - Selection of Respiratory Protective Equipment**

**Types of  
Respiratory  
Protective  
Equipment (RPE)**

RPE is a means of last resort for protecting operators and should be used only when other options have been exhausted. Various types of RPE are available, designed for protection against different substances and for use in different conditions. For most construction activities the only type of RPE which may be required would be for relatively short-term protection against non-toxic dusts.

If, following assessment, longer term protection using RPE is required, or the need to protect against either toxic dusts or fumes is identified, the Company safety advisers must be consulted.

For most construction site activity the most appropriate RPE is disposable filtering facepiece respirators. These are manufactured from filter material, which is moulded into a facepiece which covers the nose and mouth. The respirator is held in place with two adjustable straps and may or may not incorporate an exhalation valve.

Some jobs, such as where operators may be required to work in confined spaces where substances hazardous to health may be present, may require higher levels of respiratory protective equipment such as air-fed breathing apparatus. Where this is to be used all the operators who will use the equipment must have a test for facepiece fit performed.

**Approvals for  
RPE**

Where an assessment has shown that RPE is necessary then COSHH requires that it is of a type approved by the HSE and is CE marked. Disposable filtering facepiece respirators are available which do not have HSE approval or CE marking. These are normally designated as nuisance masks and are made of a thinner, stiffer material than approved masks, and often have only one holding strap. Non-approved respirators must not be used in any situation in which a risk assessment has shown that RPE is necessary.

**Protection  
Provided**

Disposable respirators come in three classes designated FFP1, 2, and 3. The higher the number, the better the protection provided. If used properly, the protection factors (ratio of contamination outside the respirator to inside the respirator) provided are up to 5, 10 and 50 times respectively.

**Use of RPE**

In general use of RPE should be limited to relatively short periods. Wearing RPE (particularly if no exhalation valve is fitted) in excess of approximately one hour is not recommended.

Use of disposable RPE should not cause breathing difficulties in most people. A minority of individuals with asthma or other respiratory difficulty may encounter problems using RPE, in which case medical advice on fitness for work of this type should be obtained.

The effectiveness of disposable RPE is significantly affected by facial hair or stubble. Users of RPE should therefore be clean shaven.

Before an operator is required to use RPE, they must receive basic training in the reasons for its use and when and how to use it.



**General Guidance on COSHH**

**Sheet 6 - Selection and use of Gloves**

**Types of Gloves**

Gloves are provided to protect against a number of different hazards e.g. abrasion and cut resistance, thermal comfort, protection against chemicals etc. Different designs and materials are necessary for the different purposes. A single type of protective glove is therefore unlikely to be suitable for all construction hazards.

The packaging of all industrial gloves contains information and pictograms which show what hazards a particular type of glove is designed to prevent and the results of testing of the gloves against European Standards.

In the case of specific chemical hazards, additional information on the performance of the glove against the specific chemical which is likely to be encountered is required. The manufacturers of gloves will normally advise on the best materials for handling a specific chemical. As a general rule gloves made of nitrile rubber have the best chemical resistance.

**Use of Gloves**

When specifying the use of gloves account must be taken of the possible loss of dexterity by their use. It is important not to introduce further hazards by the use of gloves.

If gloves become contaminated on the inside their use can cause contamination of the hands, aggravated by the physical contact of the glove on the skin. Gloves must always therefore be maintained in a clean condition.

**Inspection and Testing**

Gloves deteriorate with use and must therefore be inspected for cleanliness and integrity before use.

**Training of Operators**

Before an operator is required to use gloves for a specific task they must receive training in the reasons for their use, inspection and testing of the gloves and how to put them on and take them off without transferring contamination from the outside of the gloves to their hands.



**General Guidance on COSHH**

**Sheet 7 – Leptospirosis (Weil's Disease & Hardio)**

**Nature of  
Leptospirosis**

Leptospirosis is a type of infection which can be passed from animals to humans. There are two forms of Leptospirosis: (1) Weils disease - which is a serious and sometimes fatal infection which can be transmitted to humans by contact with urine from infected rats (2) Hardjo form which is transmitted from cattle to humans.

**The Symptoms**

The disease starts with flu-like symptoms accompanied by a severe and persistent headache.

**The Risks**

Anyone who is exposed to rats, or rat or cattle urine is at risk. Anyone who is in contact with canal or river water is also at risk.

The bacteria can get into the body through cuts and scratches and through the lining of the mouth, throat and eyes after contact with infected water.

**The Controls**

Control rats on the site. Do not touch dead rats with the hands. Keep all cuts and broken skin covered with waterproof plasters before and during any work in areas which may be contaminated.

Anyone whose work may mean that they come into contact with Leptospirosis should inform their doctor of the nature of their work, particularly if consulting about flu-like illness. Leptospirosis is much less severe if it is treated promptly.

Any outbreak of Leptospirosis must be reported to the HSE.

**Health  
Information**

Wherever Leptospirosis could be a potential problem with regard to any Company activity then this must be reflected in the Site Specific o Job Specific Risk Assessment and all of those persons employed on that site should be provided with appropriate induction training which covers these Risks and the Controls that need to be employed. This induction should be backed up by circulation of HSE/Company information leaflets and cards which further outline the Risks and Controls to employees



**General Guidance on COSHH**

**Sheet 8 - First Aid following Chemical Exposure**

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**First Aid**

First aid or treatment of chemical exposures is the same whatever the substance which has caused the problem. The treatment depends on the route of exposure:

**Skin exposure:**

If soreness or irritation occurs as the result of skin exposure, wash the affected area with clean running water for at least 15 minutes. If symptoms persist seek medical advice.

**Eye splashes:**

If the material is splashed into the eye, wash the affected eye with clean running water for at least 15 minutes. Seek medical advice.

**Swallowing  
(ingestion):**

If material is accidentally swallowed, do not make patient vomit, seek medical advice. The relevant material safety data sheet should be taken with the patient when seeking medical advice. The designated First Aider on site should be made aware of materials in use and the location of the corresponding product data sheets.

**Inhalation:**

Move patient to fresh air. If patient is unconscious, place in the recovery position and seek medical help immediately. If breathing has stopped, commence artificial resuscitation until help arrives.