CSCS CARD TRAINING

QNUK Level 1 Award in Health & Safety in a Construction Environment

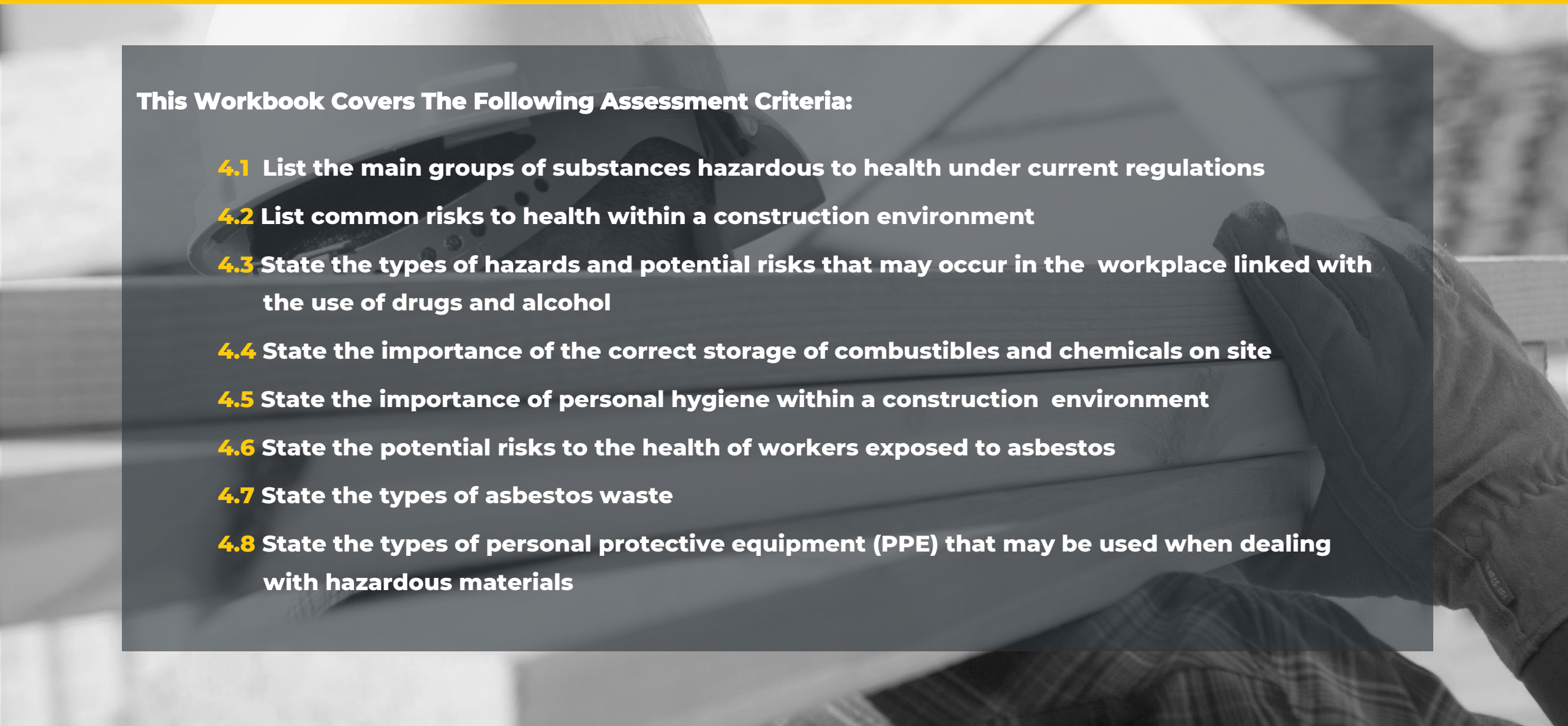
UNIT 04

Know the Risks to Health Within a Construction Environment

supporting safer sites

Unit 04: Know the Risks to Health Within a Construction Environment

Assessment Criteria: Summary



This Workbook Covers The Following Assessment Criteria:

4.1 List the main groups of substances hazardous to health under current regulations

4.2 List common risks to health within a construction environment

4.3 State the types of hazards and potential risks that may occur in the workplace linked with the use of drugs and alcohol

4.4 State the importance of the correct storage of combustibles and chemicals on site

4.5 State the importance of personal hygiene within a construction environment

4.6 State the potential risks to the health of workers exposed to asbestos

4.7 State the types of asbestos waste

4.8 State the types of personal protective equipment (PPE) that may be used when dealing with hazardous materials

Unit 04: Know the Risks to Health Within a Construction Environment

Assessment Criteria 4.1: List the main groups of substances hazardous to health under current regulations

Legislation

The Control of Substances Hazardous to Health Regulations 2002 (COSHH) requires employers to control substances that are hazardous to health..

The Main Groups of Substances Hazardous to Health Under Current Regulations:

- Chemicals
- Fumes
- Dusts
- Vapours
- Mists
- Gases
- Biological agents (germs/ parasites/ viruses)

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Assessment Criteria 4.1: List the main groups of substances hazardous to health under current regulations

Common Hazardous Substances Used On a Construction Site & The Group They Fall Into

The Control of Substances Hazardous to Health Regulations 2002 (COSHH) requires employers to control substances that are hazardous to health..

Hazardous Substance	Group
Paint, glue, resins	Chemicals
Welding, hot rubber, soldering	Fumes
Silica , cement	Dust
Adhesives or paints or inks	Vapours
paint sprays and acid mists	Mists
Carbon dioxide, propane	Gases
Leptospirosis from exposure to rat urine	Biological Agents

The Control of Substances Hazardous to Health Regulations 2002 (COSHH) Cover Activities Which May Expose Workers to Construction Dust.

Construction dust is not just a nuisance; it can seriously damage your health and some types can eventually even kill.

Regularly breathing these dusts over a long time can therefore cause life-changing lung diseases.

Water – water damps down dust clouds. However, it needs to be used correctly.

This means enough water supplied at the right levels for the whole time that the work is being done. Just wetting the material beforehand does not work.

Leptospirosis

Leptospirosis is caused by contact with rats urine onsite. It is also known as Weils disease it typically causes mild flu-like symptoms, such as headache and chills.

COSHH Does Not Cover The Following Because They Have Their Own Specific Regulations:

- Lead
- Asbestos
- Radioactive substances

Toilet And Washing Facilities Onsite:

Employers are required by law to provide:

- Hot and cold running water
- Enough soap or other washing agents
- Enough toilets and washbasins for those expected to use them

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Assessment Criteria 4.2: List common risks to health within a construction environment

Common Risks to Health Within a Construction Environment:

- **Back and joint** injuries such as breaks, fractures and sprains through manual handling & repetitive work
- **Stress** due to overwork or injury
- **Asbestosis** caused by exposure to Asbestos
- **Cancer** caused by exposure to certain chemicals & sunlight
- **Dermatitis** through contact with dusts, detergents and cement
- **Respiratory diseases** such as **asthma**, **cancers** and **silicosis** caused by exposure to dusts, vapours, fumes or mists
- **Hand arm vibration syndrome/white finger** and **skeletal problems** caused by exposure vibrating tools and repetitive actions
- **Occupational deafness** and **tinnitus** caused by exposure to noise
- **Poisoning** through ingestion or absorbing chemicals, gases like C02 or toxic substances

Danger From ‘Sharps’ Injuries

'Sharps' are needles, blades (such as scalpels) and could cause an injury by cutting or pricking the skin. Sharps contaminated with an infected patient's blood can transmit more than 20 diseases, including hepatitis B, C and human immunodeficiency virus (HIV).

What to Do if You Receive a Sharps Injury:

- Encourage the wound to gently bleed, ideally holding it under running water
- Wash the wound using running water and plenty of soap
- Don't scrub or suck the wound
- Dry the wound and cover it with a waterproof plaster or dressing
- Seek urgent medical advice (for example from your Occupational Health Service) as fective prophylaxis (medicines to help fight infection) are available
- Report the injury to your employer

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Assessment Criteria 4.3: The types of hazards and potential risks linked with the use of drugs & alcohol

Danger From Bird Droppings

Construction workers may be exposed to guano / bird droppings on some sites. If you find bird droppings where you are working you should inform your employer as these can be hazardous to your health.

Hazards & Risks Linked to Drugs & Alcohol

Drugs & alcohol even in small amounts, below legal limits can affect health and safety and productivity as follows:

- Reduce co-ordination, reaction speeds and balance and concentration
- Affect judgement and mood & mental health
- Reduce concentration & the effectiveness of senses
- Increase hostility and risk of violence
- Cause drowsiness and overconfidence

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Assessment Criteria 4.4: State the importance of the correct storage of combustibles and chemicals on site

The Importance of The Correct Storage of Combustibles & Chemicals On Site

Many solids, liquids and gases can catch fire and burn. It only takes a source of ignition, which may be a small flame or an electrical spark, together with air. It is important to store combustible materials and chemicals properly to:

- Reduce the risk of fires and explosions
- Reduce fatalities and accidents
- Reduce environmental damage
- Prevent unplanned exposure to the workforce

Correct storage of chemicals and combustibles:

Current legislation and guidelines require chemicals and combustibles to be stored as follows:

- In their original container and labelled correctly
- Away from ignition sources

- In designated, well ventilated areas
- Away from the immediate work area
- Only in the minimum volume required
- Away from emergency escape routes
- Accessible to those authorized to use

Dealing with spills

Spills involving hazardous materials e.g. diesel, should be reported to your supervisor and are normally contained to prevent their spread & then cleaned up by trained workers (dependent on emergency procedure):

- Temporary diking (ditches)
- Sand bags, dry sand, earth
- Absorbent pads

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Assessment Criteria 4.4: State the importance of the correct storage of combustibles and chemicals on site

Fire Safety

Fires need three things to start – a source of ignition, a source of fuel and oxygen:

Sources of Ignition Include

- Heaters
- Lighting
- Naked flames
- Electrical equipment
- Smokers' materials,
- Anything else that can get very hot or cause sparks

Sources of Ignition Include

- Wood/paper
- Plastic
- Rubber
- Foam
- Waste/ rubbish
- Chemicals

Sources of Oxygen Include

- The air around us

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Assessment Criteria 4.4: State the importance of the correct storage of combustibles and chemicals on site

Fire Extinguishers

On building sites employers should identify sources of fuel and ignition and establish general fire precautions including, means of escape, warning and fighting fire, based on a fire risk assessment.

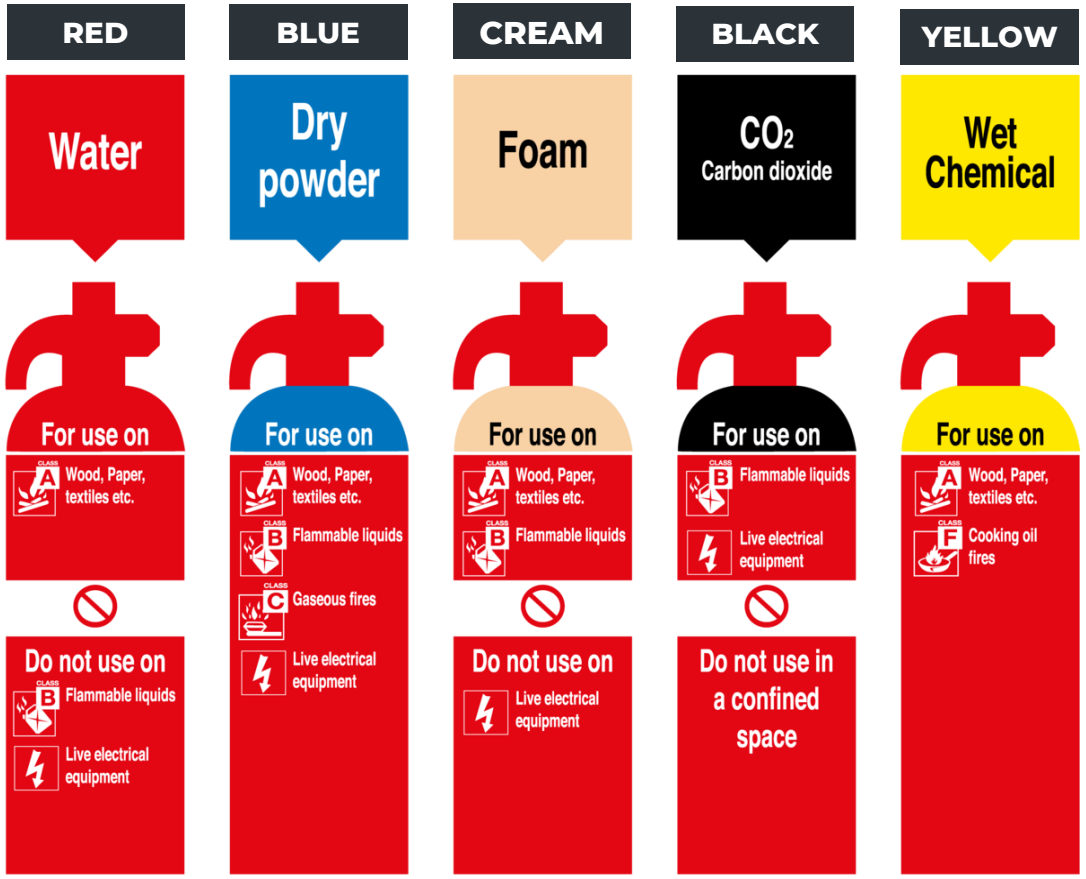
Fire extinguishers should not be used by people who have not been trained.

Before tackling a fire with a fire extinguisher make sure you or someone else has raised the fire alarm and that you have a safe evacuation route.

Do not tackle a fire unless it is safe to do so and identified as something you should do the fire risk assessment.

It is also essential that the right type of extinguisher is used for the fire.

Know The Fire Extinguishers Colour Codes



Fire Wardens

Every business needs specially trained individuals who ensure no stray spark causes a fire and who conduct a safe evacuation of everyone on the premises in a fire emergency. These responsible persons are called fire wardens or fire marshals.

What to do in the Event of a Fire

Your employer is legally required to inform you about what to do in the event of a fire as soon as you start working for them. In the event of a fire you will normally be asked to follow signage along an escape route to an assembly point a safe distance away from the site.

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Assessment Criteria 4.5: State the importance of personal hygiene within a construction environment

Importance of personal hygiene in a construction environment

Personal hygiene is an essential part of maintaining health and safety of workers onsite and should routinely be practiced by everyone.

When workers should wash their hands

- Before eating
- After visiting the toilet
- Regularly throughout the working day
- After handling chemicals and substances

How good hand washing practice helps to protect workers through preventing

- Dermatitis
- Accidental ingestion of toxic substances
- Transmission of infectious diseases

Unit 04: Know the Risks to Health Within a Construction Environment

Assessment Criteria 4.6: State the potential risks to the health of workers exposed to asbestos

Asbestos

Asbestos can be found in any building built before the year 2000 and causes around 5000 deaths every year.

Consequences of Disturbing Asbestos

When materials that contain asbestos are disturbed or damaged, fibres are released into the air and if inhaled they can cause serious diseases.

- Lung cancer
- Mesothelioma (a cancer which affects the lining of the lungs and lower digestive tract)
- Asbestosis is a serious scarring condition of the lung
- Pleural thickening (lining of the lung thickens))

Unit 04: Know the Risks to Health Within a Construction Environment

Assessment Criteria 4.6: State the potential risks to the health of workers exposed to asbestos

Symptoms of Asbestos Related Disease:

- Shortness of breath
- A persistent, dry cough
- Loss of appetite with weight loss
- Fingertips and toes that appear wider/rounder than normal (clubbing)
- Chest tightness or pain

Most Common Types of Asbestos:

- **White** asbestos (chrysotile)
- **Blue** asbestos (crocidolite)
- **Brown** asbestos (amosite)

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Assessment Criteria 4.7: State the types of asbestos waste

Onset Time of Asbestos Related Diseases:

It can take from 10 to 40 years or more for symptoms of an asbestos-related condition to appear.

Places Asbestos May be Found:

- Loose asbestos in ceiling or floor cavity
- Lagging
- Sprayed coatings on ceilings, walls and beams/columns
- Asbestos insulating board
- Floor tiles, textiles and composites
- Textured coatings
- Asbestos cement products
- Roofing felt
- Rope seals and gaskets
- Pipe insulation
- Rainwater gullies and downpipes

Unit 04: Know the Risks to Health Within a Construction Environment

Assessment Criteria 4.8: State the types of personal protective equipment (PPE) for hazardous materials

Types Of PPE & Their Possible Uses:

PPE is equipment that will protect the user against health or safety risks at work

Type of PPE	Possible Uses
High Visibility Clothing	To help prevent collision from plant and vehicles
Gloves	To protect the hands from contact with corrosive or sharp materials
Eye Protection	To protect from flying particles or splashes of corrosive liquids
Respiratory Protective Equipment (RPE)	To protect against inhaling substances. If this does not fit it will not work. Face fit checks should be carried out regularly in line with risk assessments.
Safety Helmets & footwear	To protect the head and feet from falling materials
Safety Harnesses	To prevent injury from falling when working at height
Hearing Protection	**To reduce noise to an acceptable level, when using power tools for example, while allowing for safety & communication**

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Assessment Criteria 4.8: State the types of personal protective equipment (PPE) for hazardous materials

Personal Protective Equipment at Work (PPE)

The construction industry reports the highest number of fatal injury accidents every year.

Even where engineering controls and safe systems of work have been applied, some hazards might remain.

These Include Injuries To:

- **The lungs**, e.g. From breathing in contaminated air
- **The head and feet**, e.g. From falling materials
- **The eyes**, e.g. From flying particles or splashes of corrosive liquids
- **The skin**, e.g. From contact with corrosive materials
- **The body**, e.g. From extremes of heat or cold

Where PPE is needed it must be the most appropriate for the identified risk and should only be issued where it further reduces the level of risk.

PPE is a safeguard of last resort since it only protects the **individual** wearer.

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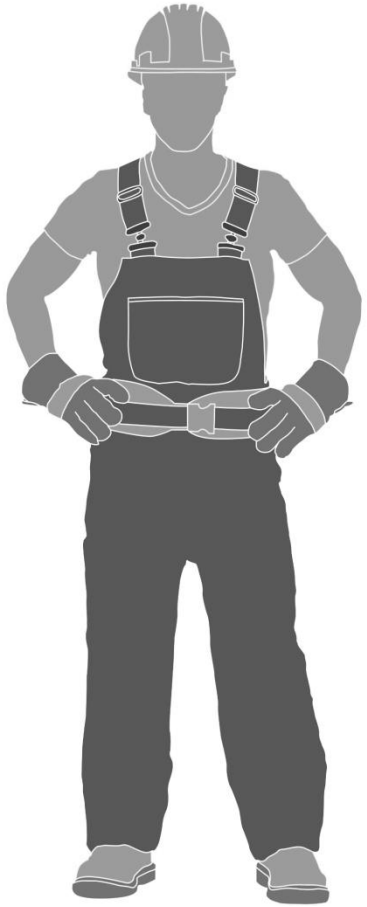
Assessment Criteria 4.8: State the types of personal protective equipment (PPE) for hazardous materials

Commonly Used PPE



- Head Protection
- High Visibility Clothing
- Foot Protection
- Eye Protection
- Breathing Mask
- Hearing Protection
- Gloves
- Harness & Lanyard

Dealing with Hazardous Materials & Waste

Waste is considered 'hazardous' under environmental legislation when it contains substances or has properties that might make it harmful to human health or the environment. This does not necessarily mean it is an immediate risk to human health, although some waste can be. Examples of hazardous waste onsite include:

Fluorescent Lighting Tubes

The major threat posed to both the environment and to personal health by fluorescent lamps is the potential of exposure to phosphor powder containing mercury.

Chemical Spills

Spills involving hazardous materials should first be contained to prevent spread of the material to other areas.

This may involve the use of temporary diking, sand bags, dry sand, earth or booms / absorbent pads.

You have now completed Unit 04 of your course

You should now attempt the practice questions before moving on to Unit 05