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Employability skill	What this skill means	How you can develop this skill
Communication	Speaking clearly, listening, understanding, asking questions, reading, writing and using body language.	<ul style="list-style-type: none"> • Liaise with others when organising work activities. • Ask questions to clarify understanding.
Teamwork	Working well with other people and helping them.	<ul style="list-style-type: none"> • Ensure communications are appropriate for other team members. • Provide assistance to team members to get the task completed.
Planning and organising	Planning what you have to do. Planning how you will do it. Doing things on time.	<ul style="list-style-type: none"> • Read work instructions and organise materials required for task. • Incorporate safety requirements into every work task before you begin.
Initiative and enterprise	Thinking of new ways to do something. Making suggestions to improve work.	<ul style="list-style-type: none"> • Learn from own experience and improve techniques used on tasks. • Share tips about work improvements with co-workers.
Problem-solving	Working out how to fix a problem.	<ul style="list-style-type: none"> • Calculate quantities of materials. • Report faulty equipment and organise replacements.
Self-management	Looking at work you do and seeing how well you are going. Making goals for yourself at work.	<ul style="list-style-type: none"> • Reflect on own work activity. • Organise time effectively.
Technology	Having a range of computer skills. Using equipment correctly and safely.	<ul style="list-style-type: none"> • Use mobile phone or computer to obtain further information or instruction. • Use water-proofing equipment safely as recommended.
Learning	Learning new things and improving how you work.	<ul style="list-style-type: none"> • Find out about new waterproofing technology or materials/products. • Undertake tasks which are not familiar.

Introduction: Preparing surfaces for waterproofing application

Waterproofing tasks are required on a variety of construction sites from basements, stairwells and car parks through to bathrooms, kitchens and patios. There may be above ground and underground situations where water or moisture must be prevented from either entering the structure or leaking from a structure. Surfaces that require waterproofing must be treated with materials that are going to be appropriate for the task as well as compatible with the substrate surface.

A wide variety of waterproofing products are available. Often a manufacturer makes several different products and can recommend the best product or combination of products for a specific task. Manufacturers may also recommend proven methods of preparation to ensure their products work as intended.

Depending on the substrate, surface preparation could include pressure blasting to remove contaminants, or washing with acid. The removal of other materials and fittings may also be required along with repairing defects in the substrate. Some defects may have to be referred to a structural engineer for accurate determination of how best to repair the surface while other defects can be addressed by the team on-site. Good communication among all those working on the waterproofing task is the key to identifying the most appropriate way to proceed.

Once the work is underway, the work area must be protected from dirt, dust and site traffic to ensure it remains as clean as possible. Many waterproofing products rely on thorough preparation of the area prior to their application to ensure a high-quality end result and minimise failure of the product. Material safety data sheets (MSDS) and work instructions identify the safe application procedures to use.

Section 1.3: Identifying and implementing signage and barricade requirements

Workplace signage and barricades are used to protect and warn workers, site visitors and the public of any hazards. Barriers also protect materials from damage caused by site traffic and/or machinery. Pre-planning the type and quantity of signage and what sort of barricades may be required enables efficient commencement of work at a site. When planning to prepare surfaces for waterproofing the following situations may require signage and barricades:

- a secure storage location for materials that minimises obstruction to traffic movement around site
- directional signage to provide smooth traffic flow
- barriers to protect other workers from possible injury through contact with materials
- special allowances for dangerous goods or hazardous materials, including providing correct signage for the safe storage of these items.

For example, preparing a surface for waterproofing may require the use of hazardous substances such as acid etching compounds or cleaning and degreasing agents. Some of these substances may be classed as flammable liquids and hazardous substances and require appropriate signage and barricades.



Find out more

Resource	Why it is useful
Safetyquip <i>Site safety</i> www.safetyquip.com.au/downloads/SiteSafety.pdf	This document provides extensive information related to signs and barricades that might be used on a worksite.
Seton Australia <i>Signs and labels – danger signs</i> www.seton.net.au/templates/signs_danger.cfm	This web page provides examples of safety signs that might be used to identify the use and storage of hazardous chemicals when waterproofing.

Section task 1.3

1. Describe in one or two sentences what actions you may take at your worksite in relation to signage and barricades if you are using flammable liquids while preparing a surface for waterproofing.
2. In one or two sentences explain why it is important to plan the type and quantity of signage or barricades required before work starts.

Section 1.4: Selecting and checking the required tools and equipment

Choosing the correct tools and ensuring they are in a serviceable condition during the planning and preparation stages of the task minimises delays and injuries that may be caused through using faulty equipment.

The following actions should always occur prior to commencement of a work task:

- understand the specific requirements of task
- select tools and equipment recommended for the task in workplace instructions or on documentation supplied by the manufacturer
- complete any workplace forms that might be required prior to using certain equipment
- make a visual check of equipment to ascertain safe working condition.

There are a variety of tools that require visual checking for serviceability. If these tools are not in working order they may be replaced, manually adjusted or sharpened. Tools and equipment in this category include:

- brooms and buckets
- brushes and rollers
- hammers and chisels
- scissors and cutting blades
- straight edges and spirit levels, dumpy levels, laser and water levels
- moisture meters, tapes and rules
- caulking guns, trowels and floats.



Some tools and equipment may require regular safety inspections and tagging to show the most recent inspection date and when the equipment is next due for a safety inspection. Equipment that requires more rigorous inspection to confirm it is in safe working condition includes:

- extension leads
- angle grinders, electric drills, electric screwdrivers and hammers
- floodlights and fans
- high-pressure water equipment
- vacuum cleaners, pumps, mixers and mixing apparatus.

All equipment should be inspected prior to starting work. If the equipment is not in safe working order it must be tagged as unserviceable and reported using workplace procedures to ensure it is fixed or replaced. Each workplace has its own procedures for reporting faults and employees need to be aware of these procedures. Reporting equipment faults to your supervisor may allow them to rectify the situation immediately.

Find out more

Resource	Why it is useful
CMI Lasers <i>Detailed guide to checking your dumpy level for accuracy and how to self-calibrate</i> www.cmiindustries.com.au/troubleshoot%20dumpy%20level%20calibration.pdf	This web document provides information about checking a level for serviceability and the importance of testing the level before use.
Gripset <i>Primer and waterproof bonding agent</i> www.gripset.com/construction/brochure/gripset_GP_pds.pdf	This product data sheet specifies the types of tools that should be used to apply this product, including brushes, trowels, floats and spatulas.

Section task 1.4

1. Suggest two information sources that may recommend appropriate materials, tools and equipment to be used for a job you are working on or have recently completed.
2. How would you report a fault with a piece of equipment or hand tool that you were preparing to use?

In ACTION

Ray's story

Ray and his team from The Waterproofers are to install the waterproofing system in several locations of a building site. There are varying surface areas where different waterproofing products and quantities are required.

The plans state that the structure may be subject to movement through settling after project completion and Ray knows that this influences his choice of product. The company has provided work instructions and a range of materials to be used in the project. Ray notes that one of the recommended products is a polyurethane sheeting membrane.

The product specifications recommend the membrane be used in conjunction with bond-breakers to assist the stretching that may occur at joints if the structure moves.

According to the site plans, a minimum of 50 square metres of product is required for the first area.

Due to the nature of the product, and the use of solvent-based products to secure the membrane, Ray and the team must use protective clothing, gloves and masks. They must also ensure there is adequate ventilation. Ray installs a portable exhaust system to remove fumes where the team is working and erects signage to restrict traffic and warn of hazardous materials.

Finally, Ray checks that there is adequate provision for removing waste as recommended by the manufacturer and as required by the site environmental plan.



Revision

- Work instructions can be obtained from a variety of sources including:
 - the workplace supervisor
 - plans, specifications, job sheets
 - manufacturers' information.
- Safety plans and procedures must be incorporated into the planning and preparation of work tasks.
- Signage and barricades must be used to protect workers, site visitors and members of the public. Appropriate placement of signage and barricades reduces risks and hazards.
- Appropriate tools and equipment must be selected for the job. Tools and equipment should be inspected and any faults or defects reported using the approved worksite process.
- Plans, specifications and manufacturers' instructions should be used to identify the materials required for the job and to calculate material requirements. Follow site procedures and manufacturer recommendations when handling materials.
- Environmental considerations should be included in the planning and preparation stages of the project and continue until after project completion. Any concerns related to the use of chemical-based materials, noise, dust and waste need to be addressed in the planning stage.

Are you ready?

Use this checklist to assess if you are ready for assessment activity 1.

I understand how to:

- ☐ Obtain, confirm and apply work instructions and operational details
- ☐ Follow safety requirements
- ☐ Identify and implement signage and barricade requirements
- ☐ Select and check the required tools and equipment
- ☐ Calculate material quantity requirements
- ☐ Identify, prepare and handle appropriate materials
- ☐ Identify and apply environmental requirements

Assessment activity 1

Planning and preparing

The following table maps the assessment activity for this chapter against the element and performance criteria of Element 1 in *CPCCWP2004A Prepare surfaces for waterproofing application*. The activity has been designed for all learners to complete.

Part	Element	Performance criteria
Whole activity	1	All

Prepare a checklist and additional work documents to help your team plan and prepare to undertake the following waterproofing task.

Work task

You and your co-workers are to install a new waterproofing product into the bathrooms of six newly constructed strata units. Each unit has two bathrooms with a floor area of 9 m² and 12 m² respectively. As the product also needs to be installed in the shower recesses and above the bath and basin on the walls, a further 15 m² of product is required for each bathroom.

The waterproofing product is a 1 mm thick membrane used to protect critical wet areas from water damage. It is made of a tough polyester fabric laminated to an aggressive rubberised adhesive. It is flexible enough to withstand structural movement and concrete shrinkage cracks of up to 7 mm. This makes it ideal for use beneath tiles. The product is non-toxic but does not break down over time, so waste must be carefully disposed of. Tiles and other materials can be laid immediately after the product application as there is no required curing time.

1. Your checklist needs to identify:
 - where to locate relevant work instructions
 - how to clarify any aspects of the work instructions that may not be clear
 - the process for calculating how much product is required for each of the bathrooms
 - the appropriate tools and equipment needed to install the product
 - signage and barricades required at the site
 - environmental practices to follow.
2. Prepare a set of safety policies, procedures and guidelines to assist the safe handling and disposal of materials on-site.
3. Provide a procedure for checking the serviceability of tools and equipment and a procedure for reporting faulty equipment.

Record your employability skills

When you have completed the assessment activity, make sure you record the employability skills you have developed in the table at the end of the workbook. Keep copies of material you have prepared as further evidence of your skills.