

Handle Concreting Materials

CPCCCO2021



SAFE WORK METHOD STATEMENTS (SWMS)

- Safe work method statements (SWMS) assist a PCBU to consider how certain activities will be carried out safely. The following should be noted:
- SWMS must be easy to understand, signed and dated;
- SWMS must be amended if there is a change in the activity and a copy must be given to the principal contractor;
- All persons affected by changes must be advised of amendments to the work method statement.

JOB SAFETY ANALYSIS (JSA)

- A job safety analysis is a procedure which helps integrate accepted safety and health principles and practices into a particular task or job operation. In a JSA, each basic step of the job is to identify potential hazards and to recommend the safest way to do the job.
- Identifies hazards and potential hazards that may be encountered while working.

WORK INSTRUCTIONS

- **Work Instructions** are documents that clearly and precisely describe the correct way to perform certain tasks that may cause inconvenience or damage if not done in the established manner. That is, describe, dictate or stipulate the steps that must be followed to correctly perform any specific activity or **work**.

TRAFFIC CONTROL PLAN (TCP)

- **Traffic control plans** (TCP's) are detailed drawings that show the layout of temporary road signs and devices to warn and guide **traffic** past, around and through the work site safely. A TCP is part of a work health and safety (WHS) requirement of a worksite
- Outline requirements for site isolation and signage for vehicles.

EMERGENCY PROCEDURES

- Even if control measures have been put in place, a leak, spill or uncontrolled release of a hazardous chemical may still occur. Emergency procedures should be established, and used, if appropriate, to enable the source of a release to be safely identified and repairs to be made. All persons not directly concerned with the emergency should be excluded from the area of contamination.
- Outline what to do in the event of fires and other accidents.

Preparing an Emergency Response Plan

(to be planned before work commences so procedures can be followed without delay)

- The emergency response plan should be prepared in consultation with the workers at the workplace and emergency service agencies where appropriate.
The issues which should be addressed in an emergency plan include the following:
- Locations of first Aid Kit and fire extinguisher
- Phone numbers of key personnel i.e., fire department, doctors etc.
- Locations of the hazardous chemicals, personnel, equipment and emergency control rooms at the workplace, and
- Evacuation arrangements.

SAFETY DATA SHEET (SDS)

- A safety data sheet (SDS) – previously called material safety data sheet (MSDS) - provides information which allows for the safe handling and use of substance/materials in the workplace. It describes:
- The identity of the product e.g. formulation or chemical name
- The properties and uses of the product
- Health hazard information precautions for use
- Safe handling information
- First aid instructions
- Methods for safe disposal
- Identify materials/substances that the product is incompatible with
- It is important that all waste material is removed from the construction site. This may include; construction materials, oils and fuel, garbage materials such as empty containers, wrappings, excavated soils

PLANS

- Before commencing any job, you will usually receive specific work instructions which will include plans.
- The main purpose of plans is to provide a visual representations of the work to be undertaken. If there are hazards and discrepancies between plans and what is on site, a site manage, supervisor or project manager should be notified.

MANUFACTURER SPECIFICATIONS

- Manufacturer guidelines and specifications must always be followed. By law these must be made available/provided at the point of sale by the manufacturer. Manufacturer guidelines and specifications can be available for anything on site, but most likely for materials, tools, equipment, heavy machinery, hazardous substances etc.

MATERIAL SCHEDULE

- Identifies the materials required for a project.

The following documentation should be familiarised before work commences

- Codes of practice
- Safety manuals and instructions
- Safety legislation and regulations
- Site safety plans, policies and procedures
- Environmental legislations and regulations

<https://ncc.abcb.gov.au/>

NATIONAL
CONSTRUCTION CODE

Site Safety Plan
includes
emergency
procedures, points
of access,
hazards and risks
on site.

PPE

When undertaking work, eyes and face, hands, feet and body protection may need to be worn.

- Head - safety helmets, sun hats;
- Eyes/face - safety spectacles, goggles, face shields;
- Hearing - ear muffs, ear plugs;
- Airways/lungs - dust masks, respirators;
- Hands - gloves, barrier creams;
- Feet - safety boots and shoes, rubber boots;
- Body - clothing to protect from sun, cuts, abrasions and burns



- It is essential that tools and equipment are checked for serviceability, and any faults are rectified or reported prior to commencement. This requires you to follow all workplace protocols for rectification and reporting applicable to your organisation. These protocols will require you to complete forms, place signage on equipment, and report faults to supervisors.
- Remember: before you use any equipment identify if there is a maintenance schedule, ensure that there are no discrepancies and that it is signed off.

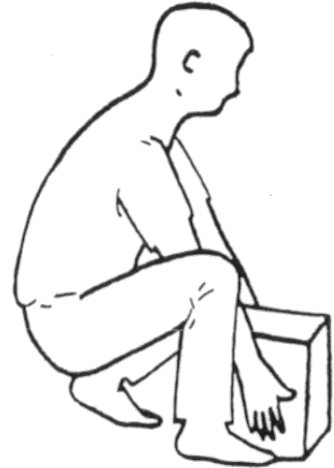


DEFECTIVE EQUIPMENT PROTOCOL



Manual handling techniques

- When lifting items, be sure to follow appropriate procedures to avoid injury
- Ensure the following:
 - Neck is upright
 - Back has natural curve
 - Feet are flat and facing the load
 - Shoulders are level
 - Knees are bent
 - Hands have a good grip around the load



Avoid rotation and side movement of the spine during lifting

- When planning to relocate a load, be sure to undertake a risk assessment which considers the products/goods/materials to be relocated
 - Identify the sizes and weights of items, calculating size to weight ratio
 - Consider the dangers of moving loose/liquid/hazardous items
 - Refer to SDS, where necessary
 - Consider the position of the load
 - Is the load at height or in a confined space?
 - Predict the effect of the relocation on the original load base
 - For example, the box might break
 - Consider your hand placement and estimate the point of balance
 - Are the items awkwardly shaped, difficult to grasp or slippery?

- When planning to relocate a load, be sure to undertake a risk assessment which considers the end destination and potential routes
 - Measure out distance to be covered, time allowed, and frequency of shifting operations
 - Consider the layout of the work area
 - Long distances or short timeframes may require the use of additional assistance (e.g. mechanical aids)
 - Compare the required clearance to move the load to the available space/layout
 - Items may need to be dismantled if there is insufficient clearance
 - Consider other potential route risks
 - Move obstacles in the way, if easy – otherwise an alternative route may need to be selected
 - Avoid areas that are unstable (e.g. slippery ground) or unsafe (e.g. poor lighting)
 - Determine traffic in the area – avoid busy areas, or schedule lifts at non-peak times
 - Weather may affect any outdoor movements

When receiving a delivery be sure to:

Check that all items are there and the condition to ensure no items are damaged.

Materials and components should be handled according to SDS requirements, stacked or stockpiled, stored and clear of access ways and handled and positioned ready for installation.

Be sure to consider the sequence in which items are to be used when stacking and stockpiling materials and components.

Concreting Materials and correct handling requirements

Aggregates

Use a shovel and place in to mixer as needed per mix.
Mix usually 1 part cement, 2 part sand, 4 part aggregate

Cement

Wear PPE as per SDS, shovel in, do not use bear hands.
Cement is a binder with other ingredients

Form release agents

Should be sprayed onto formwork before concrete is put in. Read SDS, wear PPE, may require environmental controls if spill occurs

Non-toxic materials

Is a material which has no harm, such as some cleaners, plastic, timber, straw and some paints

Sand

Use a shovel, wheel barrow, wear PPE

Water

Use clean water, hose or buckets or a water truck for dust suppression, water bottle for cutting.

Additives

Use as per SDS, wear PPE, used in a lot of different materials like cement, ie, accelerator, retarder

Curing compound

Curing is the process of controlling the rate of moisture loss from concrete ponding or spraying, wear PPE, follow site rules, use sprayers, hoses

Oxides

Add oxide for colour follow manufactures specifications, wear PPE, follow SDS. Follow instructions

Concreting Components

Concreting Components and correct handling requirements

Bar chairs

Put in after reo is in place.
Wear PPE. Follow site rules

Bracing

Used to reinforce boxing,
may be put in by 2 people,
wear PPE, follow plans.

Plastic membrane

Provides moisture barrier,
usually put in by painting or
spraying. Follow SDS,
manufactures specifications,
wear PPE

Reinforcement mesh

Cut to size placed in by 1 or 2
people depending on size.
Wear PPE, follow site rules

Spacers

Used to ensure enough
concrete cover around
structures. Come in different
sizes, shapes, place in by
hand. Wear PPE

Steel and timber formwork

Follow plans, wear PPE,
follow site rules, once
stripped, de-nail, clean and
restock ready for next time

Bar Steel

Comes in different size and
shape, wear PPE, may be
tied in. Follow plans, use
correct manual handling
technique

Decking

Follow plans, wear PPE, can
be done by 1 or 2 people
depending on size

Key Joints

Is a fixed installed joint. So
concrete will crack there
instead of middle of slab.
Follow plans, wear PPE, do
SWMS, use correct tools

Push-pull props

Used for temporary support.
Wear PPE, handled by 1 or 2
people depending on size.
Follow manufactures specs
and site rules

Reinforcement bars

Different width and lengths.
Use good manual handling
techniques, use mechanical
aids, wear PPE, stack as per
site requirements.

Support props

Used to help support
formwork. Wear PPE, follow
manufactures specs, follow
site rules

Barricading must be used when handling concrete materials as it reduces the risk of unauthorised personnel coming in contact with materials.

Safety signs should be placed at eye height, where it is visible and around the work area it relates to.

Dust suppression procedures are important to use on site to minimise the health risks to work personnel and others.

Dust suppression includes wetting down, covering, placing or creating wind barriers, limiting heavy equipment movement on site.

Clean Up

- When work is completed the site should be cleaned.
- Excess materials used should be recycled or returned to storage.
- Maintain plant, tools and equipment
- All tools and equipment used on the job should be cleaned in order to maintain them in good condition. They should be stored safely and correctly in accordance with the manufacturer's recommendations and standard work practices, so as not to damage them.
- Report faults in logbook and in site records
- All personal rubbish should be placed in a bag and disposed of in the site rubbish bin.

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