



Australian Government

PMAOPS105 Select and prepare materials

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to PMAOPS105C Select and prepare materials

Application

This unit of competency covers the skills and knowledge required to select and prepare materials for use in production processes.

This unit of competency applies to operators who are required to find the right materials, check them, measure and prepare them, if required, and deliver the materials to the process in the right condition.

A typical application of this unit of competency could be an operator preparing a range of chemicals or other substances for use in a batch process. The operator would visually inspect each item for deterioration or damage, and follow procedures to prepare materials. Once prepared, the operator would then assemble the materials for supply to production areas.

This competency applies where mixing, grinding, testing, etc are an incidental part of preparing materials for use in production.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Operations

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|--------------------------------------|-----|---|
| 1 | Identify and locate materials | 1.1 | Identify material requirements correctly from documentation |
| | | 1.2 | Identify type, quantity and quality of materials |
| | | 1.3 | Identify material hazards and handling procedures |

- 1.4 Locate and check materials to procedures
 - 1.5 Confirm availability of required quantity of materials
 - 1.6 Note and report material shortages

- 2 **Contribute to controlling hazards**
 - 2.1 Identify other hazards in work area
 - 2.2 Take action to control material hazards as per documentation
 - 2.3 Take appropriate action to control other hazards in the workplace

- 3 **Measure quantity of materials**
 - 3.1 Identify measuring requirements and select appropriate measuring equipment
 - 3.2 Measure and assemble required quantities
 - 3.3 Check material quantities required
 - 3.4 Complete required documentation and labelling
 - 3.5 Deliver materials to correct location

- 4 **Prepare materials as required**
 - 4.1 Check that hoppers, bins and holding tanks are free from contamination
 - 4.2 Identify classes of compatible and incompatible chemicals
 - 4.3 Prepare materials to procedures

- 5 **Store assembled materials**
 - 5.1 Identify the storage conditions required for the main classes of chemicals
 - 5.2 Identify materials that have special storage requirements
 - 5.3 Store and supply materials

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|---|-----------------------------------|-----|--|
| 6 | Dispose of waste materials | 6.1 | Correctly identify waste materials |
| | | 6.2 | Dispose of materials to procedures and work health and safety (WHS) and environmental requirements |

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Regulatory framework

The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used, and include one or more of the following:

- legislative requirements, including work health and safety (WHS)
- industry codes of practice and guidelines
- environmental regulations and guidelines
- Australian and other standards
- licence and certification requirements

Materials preparation

Materials preparation includes one or more of the following:

- pre-production measuring, assembling and identification of materials
- warming to melt waxy or other materials
- breaking up solid materials into pieces or smaller lumps
- passing materials through an in-line delumper
- blending a powder or liquid into a solution prior to use in the process
- blending powders prior to production
- dilution of solutions
- preparation of a solution for dosing into a process

Materials

Materials include one or more of the following:

- raw materials
- packaging materials
- consumables

Procedures

All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or more of the following:

- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant

Equipment

Equipment includes one or more of the following:

- buckets
- stirring paddle
- propeller or drum mixers
- delumpers
- hammers or axes
- measuring equipment, including scales, flow meters and graduated vessels
- hard hats
- goggles/glasses/face shields
- hearing protection (ear muffs and plugs)
- dusk masks/canister masks/self contained breathing apparatus (SCBA)/long range breathers
- gloves/gauntlets
- safety boots
- antistatic equipment
- overalls/aprons/acid jackets/pants
- handling aids
- other safety equipment

Material hazards and handling procedures

Material hazards and handling procedures include one or more of the following:

- labels
- safety data sheets (SDS)
- verbal direction from supervisor or other person
- other standard sources, such as:
 - enterprise procedures
 - HAZCHEM symbols and codes
 - spill containment and disposal procedures

Hazards

Hazards include one or more of the following:

- smoke, darkness and heat
- dust or other atmospheric hazards
- electricity
- gas
- gases and liquids under pressure
- structural hazards
- structural collapse
- equipment failures
- industrial (machinery, equipment and product)
- equipment or product mass
- noise, rotational equipment or vibration
- plant services (steam, condensate and cooling water)
- limited head spaces or overhangs
- working at heights, in restricted or confined spaces, or in environments subjected to heat, noise, dusts or vapours or other atmospheric hazards
- flammability and explosivity
- hazardous products and materials
- unauthorised personnel
- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- extreme weather
- other hazards that might arise

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>