



Australian Government

PMAOPS105 Select and prepare materials

Release: 1

PMAOPS105 Select and prepare materials

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.

1 Identify and locate materials

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| 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 |

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| | | 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 |

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>

Assessment Requirements for PMAOPS105 Select and prepare materials

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria, and include the ability to:

- identify job requirements and safe work procedures
- identify and operate equipment
- identify hazards and apply hazard control procedures
- complete required workplace forms
- communicate with team and supervisors
- measure and prepare materials to meet requirements
- identify and dispose of waste materials according to work health and safety (WHS) and environmental requirements.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- types and application of measuring equipment relevant to job/work environment
- classes of compatible and incompatible chemicals and implications in job/work environment
- types of materials in plant and their storage requirements
- routes of entry of chemicals to the body (basic only)
- procedures for safe handling and storage of chemicals and hazardous substances relevant to job/work environment
- types and application of personal protective equipment (PPE) relevant to job/work environment
- labelling requirements (dangerous goods codes, classification numbers and packaging group numbers)
- HAZCHEM symbols and codes relevant to the job/work environment
- organisation procedures relevant to job/work environment
- hazards that may arise in the job/work environment, and:
 - their possible causes
 - potential consequences
 - appropriate risk controls
- environmental requirements related to waste disposal.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.
- The collection of performance evidence:
 - should occur over a range of situations which include typical disruptions to normal, smooth operation of an operating plant
 - will typically include a supervisor/third-party report or other evidence, focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
 - must include the use of an appropriate industrial item of equipment
 - may use industry-based simulation for all or part of the unit particularly where safety, lack of opportunity or significant cost is an issue.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment in a simulated environment should use evidence collected from demonstration of skills and one or more of:
 - walk-throughs
 - pilot plant operation
 - industry-based case studies/scenarios
 - 'what ifs'.
- Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition, the assessor or anyone acting in subject matter expert role in assessment must demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they must assess with a subject matter expert who does meet these requirements.

- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment
 - appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
 - appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions
- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on-the-job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work

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