



Australian Government

MSMOPS202 Fabricate polymer products

Release: 1

MSMOPS202 Fabricate polymer products

Modification History

Release 1. Supersedes and is equivalent to MSAPMOPS202A Fabricate polymer materials

Application

This unit of competency covers the skills and knowledge required to fabricate products using polymer materials to a specified shape and resolve routine problems using defined procedure.

This unit of competency applies to operators who are involved in the fabrication of polymer materials, typically sheet, pipe or rod, into specified shapes, and applies to an individual working alone or as part of a team or group and working in liaison with other shift team members.

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	Check work requirements	1.1	Identify work requirements
		1.2	Check materials and equipment meet requirements for job
		1.3	Interpret plans, patterns, designs or specifications
		1.4	Recognise requirements which may not be in accordance with usual practice
		1.5	Ask questions of appropriate person to confirm unusual

		practice
		1.6 Identify hazards associated with the job and apply appropriate hazard controls
		1.7 Complete records as required
2	Conduct pre-fabrication operations as required	2.1 Set up tools, jigs, fixtures and equipment ready for job
		2.2 Identify materials, patterns and consumables required
		2.3 Check hazard controls are operational and appropriate
		2.4 Mark out/lay out job for fabrication taking account of directional properties of polymer as appropriate
		2.5 Undertake other pre-fabrication requirements in accordance with procedures
		2.6 Identify non-conformances and report to appropriate personnel
3	Form materials to shape	3.1 Arrange materials in order prior to forming
		3.2 Form and fix material into shape as required
		3.3 Measure and check product is to specifications, making adjustments as required
		3.4 Trim and finish joints and fabricated product as required
4	Resolve routine problems	4.1 Identify likely faults that occur during the operation/task
		4.2 Identify and take action on causes of routine faults in accordance with procedures
		4.3 Ensure appropriate records are maintained
		4.4 Identify non-routine problems and report to designated person

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.

Work requirements Work requirements will be determined from one or more of the following:

- job/shop orders
- plans/specifications
- procedures
- other processes used in an enterprise

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:

- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- temporary instructions
- any similar instructions provided for the smooth running of the plant

Polymer fabrication

Polymer fabrication includes one or more of the following:

- forming processes, such as bending, heating, holding in a jig fixture or other methods of achieving the required shape
- mechanical, chemical, thermal or other fixing methods

Tools and equipment

Tools and equipment include one or more of the following:

- power saws, jig saws and thermal cutting devices
- drilling, riveting, bolting and stitching
- hand tools

- relevant personal protective equipment (PPE)

Hazards

Hazards include one or more of the following:

- heat, smoke, dust or other atmospheric hazards
- equipment failures
- industrial (machinery, equipment and product)
- equipment or product mass
- noise, rotational equipment or vibration
- hazardous products and materials
- unauthorised personnel
- sharp edges, protrusions or obstructions, swarf and scrap
- slippery surfaces, spills or leaks
- extreme weather
- fibres (airborne and handled)
- manual handling
- power tools, leads and power supplies
- other hazards that might arise

Routine problems

Routine problems must be resolved by applying known solutions.

Routine problems are predictable and include one or more of the following:

- pattern incorrect
- marking errors
- wear and breakage
- loss of power or drives
- controller sequence and timer issues
- sequencing problems

Known solutions are drawn from one or more of:

- procedures
- training
- remembered experience

Non-routine problems must be reported according to according to relevant procedures.

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>

Assessment Requirements for MSMOPS202 Fabricate polymer products

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Performance Evidence

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

- check the requirements of the job
- identify hazards associated with the job/work environment and apply appropriate hazard controls
- prepare for the fabrication as required
- complete the fabrication to specification
- apply known solutions to routine problems.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- hazards and hazard controls specific to the types of fabrication undertaken
- different types of materials used and their behaviour when joined
- different forming and joining equipment used and suitability for materials
- types and causes of known problems for the types of fabrication undertaken
- corrective action appropriate to the problem cause.

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 operations
 - will typically include a supervisor/third-party report 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
 - will typically include the use of appropriate industrial equipment and responding to problems
 - 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 one or more of:
 - walk-throughs
 - pilot plant operation
 - demonstration of skills
 - 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.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- As a minimum, assessors must satisfy the Standards for Registered Training Organisations 2015 assessor requirements.

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