



Australian Government

MSMOPS244 Lay out and cut materials

Release: 1

MSMOPS244 Lay out and cut materials

Modification History

Release 1. Supersedes and is equivalent to MSAPMOPS244A Layout and cut materials

Application

This unit of competency covers the skills and knowledge required to cut materials to shape. It applies to materials used in plastics fabrication, rubber and other manufacturing industries.

This unit of competency applies to an operator who is involved in the fabrication of materials which first need to be cut into specified shapes. The operator will be required to lay out and cut materials to meet quality standards and workplace requirements and resolve routine problems according to procedures.

This unit of competency 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 product, 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

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| | | 1.5 | Ask questions of appropriate person to confirm unusual practice |
| | | 1.6 | Ensure housekeeping is to requirements |
| | | 1.7 | Identify and control hazards |
| | | 1.8 | Complete logs and records in accordance with procedures |
| 2 | Conduct pre-start checks as required | 2.1 | Set up tools, jigs, fixtures and equipment ready for production |
| | | 2.2 | Collect materials, patterns and consumables required |
| | | 2.3 | Identify non-conformances and report as required |
| 3 | Lay out and cut materials to shape in accordance with procedures | 3.1 | Develop 3-D or complex shapes into 2-D patterns |
| | | 3.2 | Place material ready to be cut and apply pattern |
| | | 3.3 | Allow for grain or other directionality in material to suit product |
| | | 3.4 | Cut material to pattern, marking points for further processes |
| | | 3.5 | Collect material which is able to be recycled or reused, separate and dispose of waste and scrap |
| 4 | Resolve routine problems | 4.1 | Recognise problems that occur |
| | | 4.2 | Resolve routine problems |
| | | 4.3 | Take appropriate action on other problems |
| | | 4.4 | Complete required records in accordance with procedures |

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

Work requirements

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

- job/shop orders
- plans/specifications
- procedures
- directions from authorised persons
- meetings (e.g. toolbox meeting)
- any similar instructions provided for the smooth running of the plant

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

Hazards

Hazards include one or more of the following:

- equipment failures
- industrial (machinery, equipment and product)
- equipment or product mass
- fire
- hazardous products and materials
- unauthorised personnel
- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- 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:

- pattern incorrect
- marking errors
- wear and breakage
- loss of power or drives
- controller sequence, 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

Tools and equipment

Tools and equipment include one or more of the following:

- guillotines
- power saws
- jig saws
- band saws
- thermal cutting devices
- hand tools
- relevant personal protective equipment (PPE)

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSAPMOPS244A Layout and cut materials

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 MSMOPS244 Lay out and cut 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 demonstrate the ability to:

- set up and operate equipment according to procedures
- select and prepare materials to meet job specifications
- identify hazards and apply relevant hazard controls
- lay out and cut one (1) complex shape, or multiple simple shapes which demonstrate at least two (2) of:
 - product with a simple 3-D shape
 - material with directional properties
- cut material requiring marking for future processing
- read and interpret typical product specifications, job sheets, procedures, basic machine control panels, material labels and safety information as provided to operators
- apply known solutions to routine problems
- complete workplace forms.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- hazards that may arise in the job/work environment and their controls
- factors which may affect product quality or production output and appropriate remedies
- different cutting, forming and joining equipment and suitability for materials
- controls of cutting equipment
- routine problems their cause and resolution.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence shall be 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
- 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.
- 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.
- As a minimum, assessors must satisfy the Standards for Registered Training Organisations 2015 assessor requirements.

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