



Australian Government

MSTTF3004 Perform advanced welding of plastic materials

Release: 1

MSTTF3004 Perform advanced welding of plastic materials

Modification History

Release 1. Supersedes and is equivalent to LMTTF3004A Perform advanced welding of plastic materials

Application

This unit of competency covers the skills and knowledge required to perform high frequency welding of plastic materials using equipment within the safe operating parameters of the equipment used.

The unit of competency applies to the welding of plastic in the textile fabrication industry. Work may be conducted in a variety of environments, such as operational indoor or outdoor workplaces, and hazardous or exposed conditions.

Work may be conducted in small to large scale enterprises and may involve individual and team activities. Work is performed within defined procedures under direct supervision.

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

Pre-requisite Unit

MSTTF2014 Weld plastic materials

Competency Field

Textile fabrication

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1 Determine job requirements

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|-----|--|
| 1.1 | Follow standard operating procedures (SOPs) |
| 1.2 | Comply with work health and safety (WHS) requirements at all times |

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|---|---------------------------------------|-----|--|
| | | 1.3 | Use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | | 1.4 | Identify job requirements from specifications, drawings, job sheets or work instructions |
| 2 | Prepare for welding | 2.1 | Read and interpret workplace procedures and instructions |
| | | 2.2 | Determine nature of material to be welded and select an appropriate welding process |
| | | 2.3 | Establish a safe working environment, identify suitable electrical power outlets and plan work to maximise safety and productivity |
| | | 2.4 | Select appropriate hand-held or stationary manual welding equipment, check serviceability and follow correct 'on' procedures |
| | | 2.5 | Select and prepare appropriate supplementary hand and power tools for the job |
| 3 | Perform high frequency welding | 3.1 | Prepare surfaces of material for welding |
| | | 3.2 | Lay out material on working table or other suitable surface and anchor material to prevent movement |
| | | 3.3 | Adjust equipment temperature or operating frequency to prescribed settings |
| | | 3.4 | Lower screens or barriers, where fitted, prior to welding process |
| | | 3.5 | Keep operator and bystanders at an appropriate distance or suitably protected when high frequency welding is being undertaken |
| | | 3.6 | Operate welding equipment in accordance with WHS and workplace procedures |
| | | 3.7 | Examine weld area or test for correct fusion of materials, and remove work piece |
| | | 3.8 | Identify and address problems or faults |

4	Check quality of weld and finalise work	4.1	Inspect completed weld to verify that it meets the required standard
		4.2	Label or tag completed product and complete any necessary documentation in accordance with workplace procedures
		4.3	Clean work area, clean and return tools and equipment to safe storage, and perform normal basic maintenance, in accordance with workplace requirements and manufacturer specifications

Foundation Skills

This section describes those required skills (language, literacy and numeracy) 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.

Workplace procedures include one or more of the following:	• requirements prescribed by legislation, awards, agreements and conditions of employment • SOPs • work instructions • oral, written and visual communication • quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output • housekeeping • tasks related to environmental protection, waste disposal, pollution control and recycling • WHS practices
Australian Standards include:	• the relevant industry or Australian Standards that are current at the time this unit is being undertaken

Materials include the following:

- PVC
- vinyls
- clear plastics

Hand and power tools include the following:

- hammers
- rasps
- files
- portable sanders
- high frequency welder

WHS practices

WHS practices include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and include one or more of the following:

- manual handling techniques
- SOPs
- PPE
- safe materials handling
- taking of rest breaks
- ergonomic arrangement of workplaces
- following marked walkways
- safe storage of equipment
- housekeeping
- reporting accidents and incidents
- environmental practices

Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTTF3004A Perform advanced welding of plastic materials

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a203ec5c-de7d-406b-b3e1-8f1a9b76e92e>

Assessment Requirements for MSTTF3004 Perform advanced welding of plastic 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:

- reading and following work instructions, standard operating procedures (SOPs), safe work practices and other reference material
- applying relevant standards
- complying with all relevant safety requirements, including safe use of plastic welding equipment, hand and power tools and electrical equipment
- following work orders
- interpreting equipment and materials specifications and instructions needed for the plastic welding process
- preparing material to be welded and setting up welding equipment
- using high frequency welder on at least five (5) products and performing welds, according to workplace requirements, with a satisfactory degree of quality consistency
- performing normal operator maintenance of work area to enable work to be conducted safely and efficiently
- documenting and communicating work-related information including reporting of faults and other problems
- labelling or tagging completed product and completing any necessary documentation in accordance with workplace procedures.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- relevant Australian Standards
- specific work health and safety (WHS) requirements associated with hot air and hot wedge welding
- hazards associated with heated plastics
- plastic welding principles and techniques
- operations of a high frequency welder
- general operating principles of plastic welding equipment
- a range of plastic welding equipment, hand tools and power tools commonly used in the plastic welding process, and their appropriateness for particular applications

- operations of a high frequency welder
- power sources, such as single phase, three phase and weather-protected outlets
- materials and equipment specifications
- relevant quality standards for plastic welds
- WHS and environmental requirements of relevant industry and workplace procedures
- general housekeeping policies and procedures
- WHS practices, including hazard identification and control measures
- quality practices
- workplace procedures
- recording and reporting practices.

Assessment Conditions

- Assessors must:
 - satisfy the assessor competency requirements that are in place at the time of the assessment, as set by the VET regulator
 - have vocational competency in performing advanced welding of plastic materials, at least to the level being assessed, with relevant industry knowledge and experience.
- 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 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.

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