



Australian Government

MSTTN2008 Conduct heat setting on technical textiles

Release: 1

MSTTN2008 Conduct heat setting on technical textiles

Modification History

Release 1. Supersedes and is equivalent to LMTTN2008B Conduct heat setting on technical textiles

Application

This unit of competency covers the skills and knowledge required to conduct heat-setting processes on technical textiles. Technical textiles are textile products that have been manufactured for special technical performance and applications.

The unit of competency applies to heat-setting operations on technical textiles. Heat setting is mainly conducted on synthetic technical textiles especially nylon and polyester. Heat setting is a process designed to give a technical textile dimensional stability or other permanent characteristic through heat-induced molecular change.

Work may be conducted in small to large scale enterprises and may involve individual and team activities.

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

Pre-requisite Unit

Nil

Competency Field

Technical textiles and non-wovens

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 |
| 1.3 | Use appropriate personal protective equipment (PPE) in accordance with SOPs |

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| | | 1.4 | Identify job requirements from specifications, drawings, job sheets or work instructions |
| 2 | Prepare for heat-setting process | 2.1 | Make appropriate checks to ensure that textile fabric or web is ready for heat-setting process |
| | | 2.2 | Prepare work area according to WHS practices and workplace procedures |
| | | 2.3 | Prepare and adjust heat-setting machine according to specifications required for work |
| | | 2.4 | Report and record problems according to workplace procedures |
| 3 | Prepare technical textile for heat setting | 3.1 | Conduct appropriate pre-heat-setting tests on technical textile, as required |
| | | 3.2 | Fix technical textile into position on heat setting machine or conveyor |
| | | 3.3 | Check job or batch requirements |
| 4 | Operate and monitor heat-setting machine | 4.1 | Set temperature to achieve quick and even heat over width of technical textile |
| | | 4.2 | Set duration of heating process according to job requirements |
| | | 4.3 | Set other controls, such as conveyor speed, moisture and fans, according to job and process requirements |
| | | 4.4 | Monitor technical textile and machine during heat-setting process to ensure quality, and safe and efficient operation |
| | | 4.5 | Identify machine or process faults and take required action |
| | | 4.6 | Remove technical textile from heat-setting machine and carry out dimensional and other tests, as required |
| | | 4.7 | Direct technical textile to next operation |

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
Machines include one or more of the following:	• stenters • drying, curing and heating ovens • steamers • humidifiers • similar machines, including associated conveyors •
WHS practices	WHS practices must 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
- other WHS practices relevant to the job and enterprise

Unit Mapping Information

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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 MSTTN2008 Conduct heat setting on technical textiles

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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
- safely setting up and operating technical textile heat-setting machines and work area on at least three (3) occasions
- preparing and adjusting heat-setting machine according to specifications required for work on at least three (3) occasions
- monitoring technical textile and machine during heat-setting process to ensure safe and efficient operation on at least three (3) occasions
- removing technical textile from heat-setting machine and carrying out dimensional and other tests as required
- consistently achieving quality and production output requirements
- identifying and responding to machine or process faults
- following job specifications and orders
- applying workplace procedures
- maintaining records.

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
- heat-setting principles, including potential for variation in outcomes caused by temperature, moisture and fibre or yarn stress
- heat-setting machines:
 - stenters
 - drying
 - curing and heating ovens
 - steamers
 - humidifiers
 - similar machines, including associated conveyors

- machine operations relevant to workplace procedures
- process and machine faults
- work health and safety (WHS) practices
- 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 conducting heat setting on technical textiles, 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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