



Australian Government

MSTTN2003 Use basic recognition techniques to identify technical and non-woven textiles

Release: 1

MSTTN2003 Use basic recognition techniques to identify technical and non-woven textiles

Modification History

Release 1. Supersedes and is equivalent to LMTTN2003B Use basic recognition techniques to identify technical and non-woven textiles

Application

This unit of competency covers the skills and knowledge required to recognise the different types of technical textiles and non-woven materials, including component fibres and yarns. The unit includes underpinning knowledge on the difference between a woven or knitted technical textile and a non-woven textile.

The unit of competency applies to production of technical textiles and non-woven textiles, generally known in industry as non-wovens. The unit covers the recognition of textiles manufactured using natural or synthetic fibres or yarns. The recognition techniques do not require laboratory skills. The fibres forming the technical or non-woven textile may be a staple or continuous filament.

Technical textiles covered by this unit are textiles used for engineering, safety, agricultural, medical, and other specialised non-apparel furnishing and floor covering applications. Non-woven textiles covered by this unit may be made by mechanically, chemically or thermally interlocking layers or networks of fibres or filaments.

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 Identify fibres, | 1.1 Use recognition techniques to identify natural and |
|---------------------------|---|

	yarns and other raw materials		synthetic fibres and yarns
		1.2	Identify non-fibre-based materials used in manufacture of technical or non-woven product
2	Identify and classify technical and non-woven textiles	2.1	Examine material samples to distinguish and identify woven, knitted and non-woven textiles
		2.2	Identify the different methods of production for technical textiles and non-wovens
		2.3	Identify the range of applications for technical textiles and non-wovens
		2.4	Use appropriate tests to classify intermediate and final technical and non-woven textile product
		2.5	Conduct test according to work health and safety (WHS) and workplace procedures

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
- standard operating procedures (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
Fibres and yarns may be of natural or synthetic origin and include one or more of the following:	- spun - ply - combo - blended - crimped - monofilament - multifilament - staple spun - staple or continuous filaments - fusible fibres - bi-components - co-polyesters
Non-fibre-based materials include one or more of the following:	- paper or other materials used in wrapping - raw materials chemicals either in liquid, pellet or solid form - catalyst chemicals
Applications include one or more of the following:	- medical - hygiene - sporting - engineering - safety - transportation - construction - agricultural - other - as a stand-alone product - incorporated into another product
Woven textile includes one or more of the following:	- textile fabric produced by interlacing two yarns of similar materials - the yarns cross each other at right angles to produce the fabric

Knitted textile includes:

- fabric produced by interlocking a series of loops of one or more yarns

Non woven includes one or more of the following:

- manufactured sheet, web, batt or other product made up of directionally or randomly oriented fibres, or filaments bonded by friction, cohesion and/or adhesion, excluding paper
- mechanically, chemically or thermally interlocking layers or networks of fibres or filaments
- textiles based on a scrim (mesh into which fibres are inserted) or scrimless

Technical includes one or more of the following:

- textiles that have been manufactured for special performance properties and applications
- generally non-apparel, carpet or furnishing products unless a specific technical feature beyond what is normally found in clothing, carpet or furnishing products has been added, such as special fire-retardant clothing

Tests include one or more of the following:

- visual checking
- colour matching
- weighing
- dimensional measuring
- tests for moisture, stretch, gloss, texture, handle, tensile strength, stability, shrinkage, stretch and permeability
- results of calendaring
- application of surface finishes
- tests on raw materials, including fibres and yarns, intermediate and final fabrics

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
- personal protective equipment (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 MSTTN2003 Use basic recognition techniques to identify technical and non-woven 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
- identifying different methods of production to create technical textiles or non-wovens
- identifying at least five (5) examples each of natural and synthetic fibres and yarns
- identifying at least five (5) industry applications of technical textiles and non-wovens
- using a range of appropriate tests to differentiate between woven, knitted and non-woven textiles on at least five (5) samples
- identifying appropriate tests on at least five (5) samples to classify intermediate and final technical and non-woven textile product
- applying work health and safety (WHS) and 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
- difference between woven, knitted and non-woven textiles
- different methods of production for technical textiles and non-wovens
- range of applications for technical textiles and non-wovens
- difference between natural and synthetic fibres
- range of tests to distinguish types of textiles and between intermediate and final technical textiles or non-wovens
- WHS practices, including hazard identification and control measures
- quality procedures
- workplace procedures.

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 using basic recognition techniques to identify technical and non-woven 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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