



Australian Government

Department of Education, Employment and Workplace Relations

LMTTN2003B Use basic recognition techniques to identify technical and non-woven textiles

Release: 1

LMTTN2003B Use basic recognition techniques to identify technical and non-woven textiles

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge 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.
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Application of the Unit

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The unit 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.

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

The application of this unit is according to OHS practices of the enterprise and workplace practices, which may include:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- standard operating procedures
- 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

This unit requires the application of skills associated with problem solving to identify and classify technical and non-woven textiles. Learning and self management skills are required to apply knowledge of technical and non-woven textiles and communication skills are used to testing procedures.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Identify fibres, yarns and other raw materials	1.1 Natural and synthetic fibres and yarns are correctly identified using recognition techniques. 1.2 Non-fibre-based materials used in manufacture of technical or non-woven product are correctly identified.
2 Identify and classify technical and non-woven textiles	2.1 Sample of material is correctly taken. 2.2 Sample is correctly identified as a woven, knitted or non-woven textile. 2.3 Appropriate tests are used to classify intermediate and final technical and non-woven textile product. 2.4 Tests are conducted according to OHS practices .

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Demonstrates knowledge of:

- difference between woven, knitted and non-woven textiles
- difference between natural and synthetic fibres
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- read, interpret and follow information on work specifications, standard operating procedures and work instructions, and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence	Demonstrates skills and knowledge to: • identify natural and synthetic fibres and yarns • differentiate between woven, knitted and nonwoven textiles • undertake appropriate tests
Consistency in performance	Consistently applies skills and knowledge when: • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • recording and reporting accidents and incidents • assessing operational readiness of equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions
Resource implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Context for assessment	Assessment may occur on the job or in an appropriately simulated environment.
Interdependent assessment	This unit may be assessed independently or in combination with other relevant units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Fibres and yarns	Fibres and yarns may be of natural or synthetic origin and include: • spun • ply • combo • blended • crimped • monofilament • multifilament • staple spun • staple or continuous filaments • fusible fibres • bi-components • co-polyesters
Non-fibre-based materials	Other materials used in the manufacture of technical textile or non-woven products. Examples include paper or other materials used in wrapping, raw materials chemicals either in liquid, pellet or solid form, catalyst chemicals etc.
Woven textile	A textile fabric produced by interlacing two yarns of similar materials so that the yarns cross each other at right angles to produce the fabric
Knitted textile	Fabric produced by interlocking a series of loops of one or more yarns
Nonwoven	A 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. Non-wovens are made by mechanically, chemically or thermally interlocking layers or networks of fibres or filaments and may be based on a scrim (mesh into which fibres are inserted) or scrimless.
Technical	Technical textiles are textiles that have been manufactured for special performance properties and applications and are 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. An example would be special fire retardant clothing.

Tests

Tests may include visual checking, colour matching, weighing, dimensional measuring and tests for moisture, stretch, gloss, texture, handle, tensile strength, stability, shrinkage, stretch, permeability, results of calendering, application of surface finishes.

Tests on raw materials, including fibres and yarns, intermediate and final fabrics.

OHS practices

OHS practices include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and may relate to:

- manual handling techniques
- standard operating procedures
- personal protective equipment
- 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 Sector(s)

Sector

Technical Textiles and Non-wovens