



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **LMTTX3001B Identify quality and types of textile fibres, yarns and fabrics**

**Revision Number: 1**

## **LMTTX3001B Identify quality and types of textile fibres, yarns and fabrics**

### **Modification History**

Not applicable.

### **Unit Descriptor**

**Unit descriptor** This unit covers the skills and knowledge to identify the quality and types of fibres, yarns and fabrics used and produced in textile production.

## Application of the Unit

### Application of the Unit

The unit applies to fibres, yarns and fabrics used and produced in the textile industry. These will include a range of natural and synthetic materials which may be used for knitted, tufted, woven or non-woven products. It includes the conducting of simple tests to identify yarn and fabric types and properties. Testing under this unit is for production purposes only and does not cover skills required for specialised testing.

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

The application of this unit is in accordance with 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 textiles properties and determine performance characteristics. Planning and organising skills are required to conduct tests and determine suitable uses. Learning and self management skills are required to apply knowledge of textiles and communication skills are used to recognise and identify labelling requirements.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

**Prerequisites** LMTTX2001B

## 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 fabrics	1.1 <i>Identification methods</i> are used to identify fibres, yarns and <i>fabrics</i>
2 Determine fibre, yarn and fabric performance	2.1 <i>Properties</i> of fibres, yarns and fabric are identified. 2.2 <i>Performance characteristics</i> of fibres, yarns and fabric are identified and described. 2.3 Common fibre and yarn <b>faults</b> and the problems they cause in fabric production or the finished product are identified. 2.4 Fibre, yarn and fabrics quality is determined using <i>quality indicators</i> . 2.5 Quality faults are identified and appropriate action. 2.6 <i>Performance testing</i> of fibre, yarn and fabric is conducted in accordance with <i>OHS practices</i> .
3 Determine uses for fabric types	3.1 Performance characteristics are used to describe appropriate uses of fabrics. 3.2 Applicable fabric <i>finishes</i> and implications are identified. 3.3 Care requirements for <i>handling fabrics</i> are identified. 3.4 <i>Requirements</i> for fabric use are identified.
4 Identify care and labelling requirements	4.1 <i>Care and cleaning</i> requirements of fabrics are identified. 4.2 Labelling requirements are identified in accordance with workplace practices and Australian Standards.

## **Required Skills and Knowledge**

### **REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level

Demonstrates knowledge of:

- types of fibre, yarn and fabric
- uses of fabrics
- information resources on fibres, yarn and fabrics
- quality standards and practices
- OHS practices, including hazard identification and control measures
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- analyse performance characteristics
- 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.

<b>Critical aspects of evidence to be considered</b>	Demonstrates skills and knowledge to: <ul style="list-style-type: none"><li>• identify fibres, yarns and fabrics</li><li>• determine performance</li><li>• determine uses of fabric</li><li>• determine care of fabrics</li></ul>
<b>Consistency in performance</b>	Consistently applies skills and knowledge when: <ul style="list-style-type: none"><li>• organising work</li><li>• completing tasks according to instructions</li><li>• working systematically with attention to detail</li><li>• identifying improvements and avoiding damage</li><li>• using workplace practices</li><li>• using OHS practices</li><li>• recording and reporting accidents and incidents</li><li>• assessing operational readiness of equipment</li><li>• recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions</li></ul>
<b>Resource implications</b>	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
<b>Context for assessment</b>	Assessment may occur on the job or in an appropriately simulated environment.
<b>Interdependent assessment</b>	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.
Identification methods may include	<ul style="list-style-type: none"> <li>• visual inspection</li> <li>• tactile analysis</li> <li>• acetone</li> <li>• burn test</li> <li>• microscopy</li> </ul>
Fabrics may include	<ul style="list-style-type: none"> <li>• component fabrics used in making final textile products for example backing materials and linings or a final textile product</li> <li>• knitted fabrics, including weft knits and warp knits</li> <li>• woven fabrics, including plain, twill, satin, dobby and jacquard</li> <li>• non-woven fabrics, including felts, nets, braids and bonded</li> </ul>
Properties may include	<ul style="list-style-type: none"> <li>• physical</li> <li>• chemical</li> </ul>
Performance characteristics may include	<ul style="list-style-type: none"> <li>• stretch</li> <li>• abrasion resistance</li> <li>• wearability</li> <li>• absorbency</li> <li>• durability</li> <li>• elasticity</li> <li>• fineness</li> <li>• heat sensitivity</li> <li>• shrink resistance</li> <li>• wrinkle recovery</li> <li>• thermal properties (conductivity, ironing temperature, flammability)</li> <li>• ease of care</li> <li>• drape quality</li> <li>• colour fastness</li> <li>• strength</li> </ul>
Quality indicators include	<ul style="list-style-type: none"> <li>• straightness of grain</li> <li>• even/uneven yarn</li> <li>• slippage</li> </ul>

- length of fibres
- pilling
- fabric resilience
- workability
- wash testing
- shade
- tensile properties
- handle



- Faults may include
- ends out
  - weft faults
  - tucking
  - unlevel
  - bad edges
  - thick and thin yarn
  - colour or design faults
- Performance testing may include
- performance testing may include:
  - light
  - heat
  - chemical reaction
  - absorbency
- 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
- Finishes may include
- crease resistance
  - fire retardency
  - water proofing/resistance
  - printing
  - dyeing
  - surface finishes
  - lubricating
  - waxing
  - anti-static
  - anti-pilling
  - spot and stain resistant
  - anti-slip
  - mildew and rot proof finish
  - permanent creasing or press
  - shrink resistance

- mercerising
  - moireing
- Handling fabrics may include
- cutting
  - dyeing
  - printing
  - pressing
  - lining
  - assembling
  - sewing
  - packaging and storage
- Production requirements may include
- sewing requirements such as needle size and type, machine type, thread type
  - binding, joining, fusing requirements
  - lining, reinforcement
  - seam types
  - material form such as yarn, top, piece and loose stock
- Care and cleaning may include
- dry cleaning
  - washing
  - drying
  - ironing
  - steam cleaning
  - use of stain removers
  - special requirements

## Unit Sector(s)

**Sector** Textile Production