



Australian Government

Department of Education, Employment and Workplace Relations

LMTTX4003A Perform routine textile testing and analyse results

Revision Number: 1

LMTTX4003A Perform routine textile testing and analyse results

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers the skills and knowledge required to undertake routine tests on textile materials and interpret test results accurately.

Application of the Unit

Application of the Unit

This unit applies to the testing of textile materials to determine a range of outcomes including fibre mass, shrinkage, length, density, abrasion, strength, colour performance, finish and other quality standards. Tests are undertaken and analysed in accordance with predetermined industry or enterprise test practices and procedures.

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 planning and organising testing of textile materials used in production. This unit also requires problem solving ability to conduct tests and analyse test outcomes. Communication skills will be used to interpret specifications and test procedures, analyse test results and record information. Team work will be used to ensure test conditions are established and results are shared with relevant personnel. Learning skills are applied to clarify test requirements or specifications and testing technology will be used to conduct tests.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites	LMTTX4001A
	LMTTX4002A

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 Determine test requirements	1.1 Specifications applying to textiles, fibres, yarns or fabrics are obtained from work sheets or documentation 1.2 Routine tests applying to textiles, fibres, yarns or fabrics and reasons for tests are identified 1.3 Testing requirements for textiles, fibres, yarns or fabrics are determined and test methods selected 1.4 Materials, processes, equipment and timelines appropriate to the test requirements are determined 1.5 Clarification of testing requirements or specifications is undertaken as required using appropriate information resources
2 Undertake textile tests	2.1 Materials, tools and equipment required to undertake test are determined, obtained, prepared and calibrated. 2.2 Materials to be tested are obtained and correctly prepared for testing 2.3 Test environment is checked to comply with test specifications 2.4 Test is undertaken in accordance with testing procedures and according to OHS practices 2.5 Test procedures and outcomes are recorded using standard recording procedures. 2.6 All deviations from standard test procedures are identified and recorded or reported to appropriate personnel
3 Analyse test results	3.1 Test results are accurately interpreted from data 3.2 Deviations in test results are checked and validated 3.3 Test results are assessed against industry and design specifications 3.4 Deviation in test results are recorded and reported using standard procedures 3.5 Inconsistent test results are checked for compliance with test specifications and test re-conducted if required
4 Complete test procedures	4.1 Test results are recorded using standard recording procedures 4.2 Work area and testing equipment is cleaned and housekeeping conducted to workplace standards

Required Skills and Knowledge

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

Demonstrates knowledge of:

- textile industry terminology
- standard textile test procedures to determine: weight length ratio, fibre mass, shrinkage, chemical properties, fibre strength, seam opening, colour fastness properties, strength, abrasion etc
- textile test equipment
- International and Australian specification standards
- quality practices
- workplace practices
- practices for recording and reporting
- production processes
- enterprise lines of authority

Demonstrates skills to:

- assemble and set up textile test equipment
- undertake textile tests
- identify specification information
- recognise, rectify and report deviations from specifications
- read, interpret and follow specification information, standard operating procedures and work instructions, and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- 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 test specifications relevant to textile processes • conduct a range of routine tests on textile materials • interpret test specifications and outcomes accurately • convert test specifications accurately as required • recognise deviations in test results • record information accurately • apply OHS practices in work operations
Consistency in performance	Consistently applies skills and knowledge when: • organising work • completing all aspects of test process • working systematically with attention to detail • identifying unacceptable deviations in test results • identifying improvements and avoiding damage • using workplace practices • using OHS practices • recording and reporting accidents and incidents • 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.
Routine tests may include testing of:	• fibre thickness • fibre length • linear density • abrasion • dimensional change • chemical properties • strength • seam opening • colour fastness: wash, perspiration, rubbing, light • mass per unit area
Industry and design specifications may include	• weight or mass • density • length • contour • constant rate of extension • finish • dimensional change
Test materials, tools and equipment may include	• spectrometer • strength tester • abrasion tester • light exposure box • washing machine
Analysis of test results may include	• comparison to industry and Australian standards • standard and non standard deviation • compliance to specifications • limits and tolerances
Information resources may include	• standard operating procedures, safety procedures, job lists, manufacturer manuals, specifications, textile production patterns and machine settings, Australian and International Standards, trade journals, quality system documentation customer requirements, workplace and site procedures and manuals, industry manuals, codes of practice, awards, legislation, plans,

	diagrams, log books
	• hard copy or electronic data • key personnel, supervisors, trainers, colleagues
Appropriate personnel may include	• supervisor • quality manager • trainer
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 Textile Production