



Australian Government

MSTTX4003 Perform routine textile testing and analyse results

Release: 1

MSTTX4003 Perform routine textile testing and analyse results

Modification History

Release 1. Supersedes and is equivalent to LMTTX4003A Perform routine textile testing and analyse results

Application

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

This unit of competency applies to testing textile materials to determine a range of outcomes such as 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.

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

Pre-requisite Unit

MSTTX4001 Interpret and apply textile calculations and specifications

MSTTX4002 Understand and apply textile science

Competency Field

Textile production

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 | 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
		1.4 Identify job requirements from specifications, drawings, job sheets or work instructions
2	Prepare to perform routine textile testing	2.1 Obtain specifications applying to textiles, fibres, yarns or fabrics from work sheets or documentation
		2.2 Identify routine tests for textiles, fibres, yarns or fabrics and reasons for tests
		2.3 Determine testing requirements for textiles, fibres, yarns or fabrics and select test methods
		2.4 Determine materials, processes, equipment and timelines appropriate to the test requirements
		2.5 Clarify testing requirements or specifications as required using appropriate information resources
3	Undertake textile tests	3.1 Prepare and calibrate materials, tools and equipment required to conduct test, and prepare materials for testing
		3.2 Check test environment meets specifications and undertake test in accordance with testing requirements and workplace procedures
		3.3 Record test procedures and outcomes using standard recording procedures
		3.4 Identify and record all deviations from standard test procedures or report deviations to appropriate personnel
4	Analyse test results and complete procedures	4.1 Interpret and assess test results against industry and design specifications
		4.2 Check and validate deviations in test results, record and report deviations using standard procedures
		4.3 Check inconsistent test results for compliance with test specifications, and conduct tests again, as required

4.4 Record test results and clean test equipment and work area according to 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
 - SOPs
 - work instructions
 - PPE
 - 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

- Routine tests of textiles include one or more of the following:**
- fibre thickness
 - fibre length
 - linear density
 - abrasion
 - dimensional change
 - chemical properties
 - strength
 - seam opening

- colour fastness (wash, perspiration, rubbing and light)
- mass per unit area

Industry and design specifications include one or more of the following:

- weight or mass
- density
- length
- contour
- constant rate of extension
- finish
- dimensional change

Test materials, tools and equipment include one or more of the following:

- spectrometer
- strength tester
- abrasion tester
- light exposure box
- washing machine

Analysis of test results includes the following:

- comparison to industry and Australian Standards
- standard and non-standard deviation
- compliance to specifications
- limits and tolerances

Information resources include one or more of the following:

- SOPs
- safety procedures
- job lists
- manufacturer manuals
- specifications
- textile production patterns and machine settings
- international and Australian Standards
- trade journals
- quality system documentation customer requirements
- workplace and site procedures and manuals
- industry manuals
- codes of practice
- awards
- legislation
- plans and diagrams
- log books
- hard copy or electronic data
- key personnel, supervisors, trainers and colleagues

Appropriate personnel include one or more of the following:

- supervisor
- quality manager
- trainer

Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTTX4003A Perform routine textile testing and analyse results

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 MSTTX4003 Perform routine textile testing and analyse results

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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
- applying relevant standards
- identifying specifications, determining testing requirements for at least five (5) textiles, fibres, yarns or fabrics and selecting test methods
- determining materials, processes, equipment and timelines appropriate to the test requirements
- determining materials, processes, equipment and timelines appropriate to the test requirements
- preparing and calibrating materials, tools and equipment for testing and checking test environment meets specifications
- conducting routine tests on at least three (3) textile materials
- interpreting test specifications and outcomes accurately
- converting test specifications accurately, as required
- interpreting and assessing test results against industry and design specifications
- checking and validating deviations in test results, recording and reporting deviations using standard procedures
- checking inconsistent test results for compliance with test specifications, and conducting tests again, as required
- recording test results and cleaning test equipment and work area according to 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
- textile industry terminology
- standard textile test procedures to determine properties, including weight, length ratio, fibre mass, shrinkage, chemical properties, fibre strength, seam opening, colour fastness properties, strength and abrasion

- textile test equipment
- international specification standards
- quality criteria
- quality practices
- production processes
- enterprise lines of authority
- 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 routine textile testing and analysis, 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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