



**Australian Government**

# **MSTTX4001 Interpret and apply textile calculations and specifications**

**Release: 1**

# MSTTX4001 Interpret and apply textile calculations and specifications

## Modification History

Release 1. Supersedes and is equivalent to LMTTX4001A Interpret and apply textile calculations and specifications

## Application

This unit of competency covers the skills and knowledge required to interpret and apply calculations and specifications within a textile manufacturing environment.

The unit of competency applies to calculations and specifications to ensure specified job requirements and standards of quality and design are met.

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

Nil

## 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.

<b>1 Determine job requirements</b>	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 apply textile calculations and specifications**
    - 2.1 Identify systems to document specifications
    - 2.2 Identify techniques for converting specifications across systems for textile production
    - 2.3 Interpret specifications applying to yarn analysis and fabric analysis
    - 2.4 Identify, interpret and apply terminology used in the textile production industry relating to raw materials, specifications and processing
    - 2.5 Interpret specifications to determine work requirements for textile operations
    - 2.6 Use appropriate information resources and search techniques to clarify specifications
  - 3 **Perform textile calculations**
    - 3.1 Determine what calculations are required for specific production processes
    - 3.2 Identify and apply formulas used to convert specifications to desired format
    - 3.3 Identify and apply formulas and graphs appropriate for specified textile to calculate requirements for production
    - 3.4 Check and verify calculations
    - 3.5 Examine and validate deviations from expected outcomes with advice from appropriate information resources
  - 4 **Complete records**
    - 4.1 Document calculation records to agreed standards
    - 4.2 Prepare documentation for testing or production processes

## 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

### **Specifications applying to yarn analysis include one or more of the following:**

- mean variation
- count or linear density
- ply
- dye weight
- moisture or regain
- winding speed

### **Specifications applying to fabric analysis include one or more of the following:**

- mass or unit area
- thread density
- dimensional change

### **Terminology includes one or**

- Australian Standards

**more of the following:**

- international standards
- industry standards

**Formulas include the following:**

- calculation of percentages
- calculation of fractions
- conversion between systems
- reading and constructing graphs

**Resources and search techniques include one or more of the following:**

- SOPs
- 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 and colleagues
- using index, table of contents, and numbering and classification systems
- computer database search or look-up, questioning and cross-referencing
- basic techniques to identify relevant information, including skimming and scanning, and identifying key words and ideas

**Specified textiles include one or more of the following:**

- cotton
- wool
- mad-made fibres

**Appropriate information**

resources include one or more of the following:

- supervisors
- managers
- trainers
- machine manuals

## Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTTX4001A Interpret and apply textile calculations and specifications

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a203ec5c-de7d-406b-b3e1-8f1a9b76e92e>