



Australian Government

MSTGN4028 Research and use information about textiles

Release: 1

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Modification History

Release 1. Unit Code, Title and Application changed. Prerequisite units removed. Elements and Performance Criteria restructured. Foundation Skills field populated. Range of Conditions removed. Assessment Requirements clarified with generic foundation skills statements moved to appropriate section and duplication with Performance Criteria removed. Supersedes and is not equivalent to MSTTX4002 Understand and apply textile science.

Application

This unit describes the skills and knowledge required to identify current and emerging issues about textile safety and sustainability and to source and use information about the physical and chemical properties of fibres, yarns and fabrics, including how materials are affected when subjected to various treatments.

This unit applies to any individual involved in the design, treatment and processing of textile materials whose work involves the analysis of information from diverse sources as the basis for decision-making.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Competency Field

Generic

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Source and interpret information about textile materials	1.1 Identify current and emerging issues about textile materials that impact the workplace 1.2 Identify and access reliable sources of information about textile materials 1.3 Interpret information sources and identify physical and chemical properties of textile materials 1.4 Determine potential implications of textile properties on material selection and production processes
2. Investigate effects of textile processes from	2.1 Identify the effects of treatment and textile processing on textile materials and resulting safety and sustainability considerations

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
information sources	2.2 Determine the behaviour or impact of treatment and textile processing on the physical and chemical properties of textile materials 2.3 Review and interpret textile testing data to establish or validate effects of treatment and textile processing
3. Maintain currency of knowledge	3.1 Identify and use opportunities to update and maintain textile knowledge 3.2 Share updated and accurate information in the workplace to support effective decision-making about products and processes

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret diverse and potentially complex technical information
- Numeracy skills to interpret technical data in information about test results.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

No equivalent unit.

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 MSTGN4028 Research and use information about textiles

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- interpret technical information about 10 different textile materials, and for each material:
 - interpret information from at least two different sources
 - establish physical and chemical properties
 - establish the safety and sustainability issues for use
 - determine the potential impacts of at least three different production processes on the material.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- current and emerging safety and sustainability issues for textile materials
- local and global frameworks and initiatives that support safe and sustainable supply and use
- the link between effective use of textile knowledge and profitable and sustainable business operations
- textile industry terminology, including categories of different textile materials
- generic and trade names for common fabrics and textile materials
- techniques for identifying fibre, yarn, fabric and textiles, including:
 - natural fibres: cotton, wool, silk and linen
 - synthetic fibres: polyamide, polyester, acrylic, lycra, rayon and acetate
- types of fabrics and textiles and their construction methods, including:
 - natural and synthetic single yarn fabrics and blends
 - knitted fabrics: weft knits and warp knits
 - woven fabrics: plain, twill, satin, dobby, jacquard and pile
 - non-woven fabrics: felts, nets, braids, bonded and composite
 - emerging smart fabrics
- physical properties of textiles and other materials, including:

- density
- length
- moisture content
- shape and contour
- strength
- weight or mass
- chemical properties of textiles and associated materials, including:
 - fat content
 - chemical concentrations
- construction processes for the following fibres, yarns and textiles:
 - spun
 - ply
 - combo
 - blended
 - crimped
 - monofilament
 - multifilament
 - staple spun
 - technical textiles
- textile treatments and processing techniques and the implications for their use on textiles with different physical and chemical properties, including:
 - cutting
 - drying and curing
 - dyeing and colouration
 - dying
 - finishing using chemical and mechanical means
 - heating
 - printing
 - proofing (water and fire)
 - spinning
 - stitching
 - stretching
 - washing
 - weaving
- standard textile test procedures and the role of testing in textile product development
- ways of ensuring currency of textile knowledge.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - technical information about textile materials, including product specifications
 - information technology for research.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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