



Australian Government

MSTTD4005 Produce screen printed textiles

Release: 1

MSTTD4005 Produce screen printed textiles

Modification History

Release 1. Supersedes and is equivalent to LMTTD4005A Produce screen printed textiles

Application

This unit of competency covers the skills and knowledge required to apply screen printing techniques to produce screen print designs on textiles.

The unit of competency applies to the use of stencil, or silk-screen printing techniques to produce designs and artworks for textiles to be used for garments, textile products, furnishing fabrics or accessories or public art commissions. Screen printing involves the use of manual techniques, tools and equipment.

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 design and development

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

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|---|---|-----|--|
| 2 | Prepare to screen print textiles | 2.1 | Analyse design specifications and discuss with appropriate personnel to confirm production requirements |
| | | 2.2 | Identify desired effects of screen printing and select appropriate printing technique to achieve required design outcome |
| | | 2.3 | Select textile substrates and quantities according to design requirements |
| | | 2.4 | Select stencil techniques, stencil types, masters, screen types, meshes and medium according to requirements of printing technique, substrate and design |
| | | | |
| 3 | Apply screen printing procedure | 3.1 | Set up workstation, tools and equipment according to specifications for work |
| | | 3.2 | Prepare substrates and check against quality standards |
| | | 3.3 | Prepare stencil masters, meshes and screens for printing according to requirements for selected printing technique |
| | | 3.4 | Prepare printing set up |
| | | 3.5 | Apply screen printing techniques to meet design specifications for sample and according to workplace procedures |
| | | | |
| 4 | Produce textile printed sample | 4.1 | Check strike off against design specifications to ensure quality standards are met |
| | | 4.2 | Identify printing faults and production problems and determine causes |
| | | 4.3 | Analyse printing process, technique and medium used to determine necessary modifications to printing techniques, processes or materials |
| | | 4.4 | Print sample |

- 4.5 Finish screen print and complete housekeeping
- 4.6 Examine outcomes with appropriate personnel and discuss and document possible modifications to design
- 4.7 Complete required documentation

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

Appropriate personnel include one or more of the following:

- trainers
- colleagues
- mentors
- designers
- members of the design team

Stencil types include one or

- basic stencils

more of the following:

- hand cut and hand drawn stencils
- photosensitive stencils
- autographic
- digitally generated stencils

Meshes include one or more of the following:

- mesh types:
 - material
 - nylon
 - polyester
 - metal
- colour:
 - white
 - yellow
 - red
- size
- mono or multi-filament

Screen printing tools and equipment include three or more of the following:

- squeegees
- blocks
- lino
- brushes
- knives
- bucket, sink or container
- mixers
- rulers and tape measures
- screen-cleaning equipment and chemicals
- vacuum boards
- carousel
- printing tables with registration systems
- exposure unit
- scales high pressure hose
- screen coaters
- fans
- blow dryers
- light box
- slide projector
- overhead projector
- photocopier
- computer equipment
- computer-aided design (CAD) software

Printing problems and production faults include two or more of the following:

- uneven screen coating
- incorrectly stretched screen mesh
- poorly registered print
- inaccurate repeat measurements
- poor squeegee action
- insufficient print paste used
- off printing
- poor preparation of substrates
- inappropriate fixing of dyes and pigments
- poorly exposed screen
- poor quality colour separations

Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTTD4005A Produce screen printed textiles

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 MSTTD4005 Produce screen printed textiles

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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
- analysing design specifications and interpreting production requirements
- identifying and addressing faults
- determining effects of printing on woven and non-woven substrates
- making minor adjustments to equipment
- using printing techniques to achieve design effects on samples
- producing screen printed designs on at least three (3) different textiles
- analysing printing process, technique and medium used to determine necessary modifications to printing techniques, processes or materials
- examining outcomes with appropriate personnel and documenting possible modifications to design
- completing required documentation.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- characteristics of fabrics
- information resources on fibres and fabrics
- printing techniques:
 - registered techniques:
 - multi-coloured
 - print rail
 - registration lays
 - placement printing
 - flatbed repeat printing
 - wet-on-wet
 - flood coat
 - dry pull
- specific design and printing practices

- screen preparation:
 - reclaim
 - de-grease
 - wash and dry
 - apply emulsion
 - registration
 - attach master and expose to light source
- printing processes and practices
- different types of screens and meshes:
 - timber, steel and aluminium framed
 - butt, mitre, nailed, glued, screwed and welded
 - rectangle, rotary, hat and flat bed
- different types of medium:
 - inks
 - dyes
 - specialist inks
 - binders
 - extenders
 - reducers
 - additives
 - thermoset
 - sublimation
- woven and non-woven substrate characteristics
- stencil and printing techniques and equipment
- textile substrates:
 - knitted fabric
 - felt
 - woven fabrics, such as wool, cotton, linen and silk
 - t- shirts
- substrate preparation:
 - laundering
 - pre-shrinking
 - dying
 - pressing
 - stretching
 - stapling to print table
- design outcomes:
 - repeat patterns
 - border designs
 - placement prints

- engineered designs
- banners
- finishing:
 - touch up and tape, as required
 - wash image clean and dry
 - curing and heat setting
 - hemming
 - labelling
- quality practices
- 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 producing screen printed textiles, 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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