# LMTTD4005A Produce screen printed textiles

Revision Number: 1

# LMTTD4005A Produce screen printed textiles

# Modification History

Not applicable.

# Unit Descriptor

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|---|---|
| **Unit descriptor** | This unit covers the skills and knowledge required to apply screen printing techniques used to produce screen print designs on textiles. |

# Application of the Unit

| Application of the Unit | The unit 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-related 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 communications skills associated with interpreting patterns and specifications, and planning and organising skills for the safe and effective use of textile printing technology and operations.   This unit also requires an ability to check the quality of outcomes and identify and address problems relating to printing or production.   Initiative and enterprise and problem solving will be used to combine printing processes, technique and medium to achieve desired design outcomes. |

# Licensing/Regulatory Information

Not applicable.

# Pre-Requisites

**Prerequisites**

# 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 Interpret production requirements | 1.1 Design specifications are analysed and discussed with ***appropriate personnel*** to confirm production requirements |
| | 1.2 Desired effects of screen printing are identified and appropriate printing ***technique*** selected to achieve required ***design outcome*** |
| | 1.3 ***Textile substrates*** and quantities are selected according to design requirements |
| | 1.4 ***Stencil techniques***, stencil types, masters, ***screen types***, ***meshes*** and ***medium*** are selected according to requirements of printing technique, substrate and design |
| 2 Apply screen printing procedure | 2.1 Workstation, ***tools and equipment*** are set up according to specifications for work. |
| | 2.2 ***Substrates are prepared*** and checked against quality standards |
| | 2.3 Stencil masters, meshes and screens are prepared for printing according   to requirements for selected printing technique |
| | 2.4 Printing set up is prepared. |
| | 2.5 Screen printing techniques are applied to meet design specifications for sample and according to ***OHS practices*** |
| 3 Produce Textile printed sample | 3.1 Strike off is checked against design specifications to ensure quality standards are met |
| | 3.2 ***Printing faults and production problems*** are identified and causes determined |
| | 3.3 Printing process, technique and medium used are analysed to determine necessary modifications to printing techniques, processes or materials |
| | 3.4 Sample is printed |
| | 3.5 Screen print is finished and housekeeping completed |
| | 3.6 Outcomes are examined with appropriate personnel and possible |
| | 3.7 Required documentation is completed |

# Required Skills and Knowledge

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

Demonstrates knowledge of:

- characteristics of fabrics
- information resources on fibres and fabrics
- specific design and printing practices
- printing processes and practices
- different types of screens and meshes
- different types of medium
- woven and non woven substrate characteristics
- stencil and printing techniques
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- use tools and equipment associated with printing fabrics
- read, interpret and follow information on work specifications, standard operating procedures and work instructions, and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- 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.

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| **Critical aspects of evidence to be considered** | Demonstrates skills and knowledge to:<br>• analyse design specifications and interpret production requirements<br>• identify and address faults<br>• determine effects of printing on woven and non woven substrates<br>• make minor adjustments to equipment<br>• use printing techniques to achieve design effects<br>• recognise and apply stencil application for image use, design and printing techniques<br>• evaluate own work and conduct quality checks |
| **Consistency in performance** | Consistently applies skills and knowledge when:<br>• organising work<br>• completing tasks<br>• identifying improvements<br>• using workplace practices<br>• using OHS practices<br>• recording and reporting accidents and incidents<br>• assessing operational readiness of equipment used and work processes<br>• completing work systematically with attention to detail and without damage to goods and equipment |
| **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 if the candidate, accessibility of the item, and local industry and regional contexts.

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|---|---|
| Legislative/regulatory requirements | All work must comply with relevant Federal and State or Territory legislative or regulatory requirements. |
| Appropriate personnel may include | • trainers<br>• colleagues<br>• mentors<br>• designers<br>• members of the design team |
| Printing technique may include | • registered techniques:<br>• multi coloured<br>• print rail<br>• registration lays<br>• placement printing<br>• flatbed repeat printing<br>• wet-on-wet<br>• flood coat<br>• dry pull |
| Design outcome may include | • repeat patterns<br>• border designs<br>• placement prints<br>• engineered designs<br>• banners |
| Substrate preparation may include | • laundering<br>• pre shrinking<br>• dying<br>• pressing<br>• stretching<br>• stapling to print table |
| Textile substrates may include | • knitted fabric<br>• felt<br>• woven fabrics such as wool, cotton, linen, silk<br>• T- shirts |
| Stencil types include | • basic stencils<br>• hand cut and hand drawn stencils |

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|                              |                                                          |
|------------------------------|----------------------------------------------------------|
| Screen types include         | • photosensitive stencils                                |
|                              | • autographic                                            |
|                              | • digitally generated stencils                           |
|                              | • timber, steel, aluminium framed                        |
|                              | • butt, mitre, nailed, glued, screwed, welded,           |
|                              | • rectangle, rotary, hat, flat bed                       |
| Meshes include               | • mesh types:                                            |
|                              | • material                                               |
|                              | • nylon                                                  |
|                              | • polyester                                              |
|                              | • metal                                                  |
|                              | • colour:                                                |
|                              | • white                                                  |
|                              | • yellow                                                 |
|                              | • red                                                    |
|                              | • size                                                   |
|                              | • mono or multi-filament                                 |
| Mediums may include          | • inks                                                   |
|                              | • dyes                                                   |
|                              | • specialist inks                                        |
|                              | • binders                                                |
|                              | • extenders                                              |
|                              | • reducers                                               |
|                              | • additives                                              |
|                              | • thermoset                                              |
|                              | • sublimation                                            |
| Tools and equipment may include | • 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                                                   |

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|---|---|
| | • blow dryers |
| | • light box |
| | • slide projector |
| | • overhead projector |
| | • photocopier |
| | • computer equipment |
| | • CAD software |
| Screen preparation may include to | • reclaim |
| | • de-grease |
| | • wash and dry |
| | • apply emulsion |
| | • registration |
| | • attach master and expose to light source |
| OHS practices | OHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit and may include: |
| | • 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 |
| | • other OHS practices relevant to the job and enterprise |
| Finished includes | • touch up and tape as required |
| | • wash image clean and dry |
| | • curing and heat setting |
| | • hemming |
| | • labelling |
| Printing problems and production faults include | • 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 Sector(s)

**Sector**                    Textile Design and Development

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