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| Title | Undertake pre-make ready for screen printing | | |
| Level | 4 | Credits | 20 |

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| Purpose | People credited with this unit standard are able to: select inks or dyes for screen printing; mix and match inks or dyes, and select and use additives; demonstrate knowledge of the production of film positives, and stripping and cutting film positives, for screen printing. |
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| Classification | Printing > Printing - Screen |
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| Available grade | Achieved |
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| Prerequisites | Unit 340, <i>Demonstrate knowledge of safe working practices in the print industry</i> , or demonstrate equivalent knowledge and skills. |
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Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

- Hazardous Substances and New Organisms Act 1996;
- Health and Safety at Work Act 2015;
- Privacy Act 2020;
- Resource Management Act 1991.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

- 2 Definitions

Job requirements refer to specific requirements for the print job at hand. These requirements may or may not be covered in the job documentation and may include special instructions, quality requirements expected by the customer, and/or production standards of the print workplace and/or organisation.

Specifications refer to a detail that defines an object being made; commonly communicated by annotated and dimensioned drawings; by written description, or by other communication media. External references may also be used to specify objects such as tables or industry standards.

Workplace procedures refer to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, manufacturer's requirements, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the print sector.

- 3 It is recommended that people hold credits for Unit 5139, *Make ready and print multi colour for flat sheet screen printing*; or Unit 5141, *Make ready and print multi colour for fabric panel screen printing*, before being assessed against this unit standard.
- 4 Assessment information
Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, workplace procedures and legislative requirements.

Outcomes and performance criteria

Outcome 1

Select inks or dyes for screen printing.

Performance criteria

- 1.1 Select inks or dyes to meet the requirements of the substrate, press, and job specifications.

Range inks or dyes are selected with regard to any of the following – transparency, opacity, colour, gloss, drying properties, lightfast, substrate, solvent compatibility, odour free, toxicity, bleed properties.
- 1.2 Calculate ink quantities to meet the job requirements.

Range historical, formula.
- 1.3 Determine ink or dye sequence to meet the job requirements.

Outcome 2

Mix and match inks or dyes, and select and use additives.

Performance criteria

- 2.1 Mix inks or dyes using colour mixing and matching systems available in the workplace.

- 2.2 Select and use ink or dye additives to ensure quality of print meets job requirements.
- Range may include – retarder, reducer, matting agent, gelling agent, hardener catalyst, flow agent, plasticisers, adhesion promoter, extender, photo initiator.
- 2.3 Calculate the correct quantity of ink or dye, and any required additives in accordance with product specifications and to meet the job requirements.

Outcome 3

Demonstrate knowledge of the production of film positives for screen printing.

Performance criteria

- 3.1 Outline electronically generated images in terms of production.
- Range may include but is not limited to – image on USB, scanner, computer, email, internet, digital camera.
- 3.2 Describe production of film positives for screen printing by camera and/or imagesetter.
- 3.3 Describe use of spreads and chokes (trapping) for multi colour printing.
- 3.4 Describe requirements for screen rulings, angles, and dots for screen mesh and inks.
- Range dot formation (conventional, stochastic [Diamond screening, CristalRaster]), dot gain, moiré, tonal range, registration marks.
- 3.5 Describe the method of electronic screen colour separation (scanning).

Outcome 4

Demonstrate knowledge of stripping and cutting film positives for screen printing.

Range hand cutting or computer cutting.

Performance criteria

- 4.1 Describe procedures for stripping film positives and identify masking films used in the workplace.
- Range registration, squareness, taping, cleanliness.
- 4.2 Describe procedures for cutting film positives from masking film and identify any faults.
- Range faults include – overcut, undercut, tears, burrs.

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| Replacement information | This unit standard replaced unit standard 344. |
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| Planned review date | 31 December 2027 |
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Status information and last date for assessment for superseded versions

| Process | Version | Date | Last Date for Assessment |
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| Registration | 1 | 23 August 1995 | 31 December 2025 |
| Revision | 2 | 28 May 1996 | 31 December 2025 |
| Revision | 3 | 20 July 1998 | 31 December 2025 |
| Review | 4 | 30 August 1999 | 31 December 2025 |
| Review | 5 | 21 February 2005 | 31 December 2025 |
| Rollover and Revision | 6 | 12 December 2008 | 31 December 2027 |
| Review | 7 | 30 March 2023 | N/A |
| Revision | 8 | 27 February 2025 | N/A |

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| Consent and Moderation Requirements (CMR) reference | 0013 |
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.