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| Title | Demonstrate introductory knowledge of pad printing | | |
| Level | 3 | Credits | 4 |

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| Purpose | People credited with this unit standard are able to: demonstrate knowledge of terms applicable to pad printing; describe halftones for pad printing; demonstrate knowledge of the machinery and equipment used in pad printing; and use reference material to ensure procedures are followed and required production standards are met. |
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| Classification | Printing > Pad Printing |
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| Available grade | Achieved |
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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:

- Copyright Act 1994;
- 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

Halftones refer to a printing technique that simulates continuous tone imagery through the use of dots.

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 as set down by the print workplace and/or organisation.

Required production standards refer to the production standards set down by the workplace, and the quality standards expected by the customer for the finished product.

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 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

Demonstrate knowledge of terms applicable to pad printing.

Performance criteria

1.1 Define terms applicable to pad printing.

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| Range | may include but is not limited to – additives, all purpose printers, closed principle, colour sequence, curing, densitometer, doctor blade, dot gain, durometer, evaporation, extenders, halftone, hardness, infra-red drying unit, jet dryer, light fastness, oxidation, pad printing inks, open principle, pigments, pads (tampons, teats), plates (clichés), polymerisation, register, relative humidity, retarder, rotary pad printers, solvent, static electricity, substrate pre-treatment, surface finish, transfer printing, ultraviolet (UV) curing units, upright printers, viscosity. |
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1.2 Use terms applicable to pad printing processes used in the workplace.

Outcome 2

Describe halftones for pad printing.

Performance criteria

2.1 Describe use of halftone and line film in terms of reproducing an original copy for pad printing.

2.2 Describe halftone screen ruling applications for different kinds of substrates and methods of printing.

Outcome 3

Demonstrate knowledge of the machinery and equipment used in pad printing.

Performance criteria

- 3.1 Outline the pad printing process, and list its features, advantages, and limitations.
- 3.2 Describe pad printing machinery in terms of functions.
- Range open principle, closed principle.
- 3.3 Identify plates used in pad printing and describe their characteristics.
- Range plates include – solid steel, thin steel, polymer, rotary, multiple image;
characteristics may include – cost, durability, etch depth, exposure and development, flexibility, handling and storage, image resolution, thickness.
- 3.4 Identify pads used in pad printing and describe their characteristics.
- Range pads may include but are not limited to – cone, rotary, roof top, bar, rectangular, circular;
characteristics – shape, size, hardness, surface finish, material, pad swell, pad life.
- 3.5 Describe the functions of other pad printing equipment available in the workplace.

Outcome 4

Use reference material to ensure pad printing procedures are followed and required production standards are met.

Range may include but is not limited to – instruction manuals, maintenance manuals, spare parts manuals, videos, product specification information.

Performance criteria

- 4.1 Locate reference material applicable to pad printing processes used in the workplace.
- 4.2 Use reference material to ensure machine operation meets workplace requirements.
- 4.3 Use reference material to ensure the finished product meets job requirements.

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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 |
|--------------|---------|------------------|--------------------------|
| Registration | 1 | 18 July 2008 | 31 December 2025 |
| Revision | 2 | 12 December 2008 | 31 December 2027 |
| Review | 3 | 30 March 2023 | N/A |
| Revision | 4 | 27 February 2025 | N/A |

Consent and Moderation Requirements (CMR) reference

0013

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.