



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **ICPPR341C Set up for basic pad printing**

**Revision Number: 1**

## ICPPR341C Set up for basic pad printing

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the performance outcomes, skills and knowledge required to set up for basic pad printing.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires the individual to set up pad printing machines for routine print jobs. The individual will set up manual pre- and post-treatment processes, conduct a proof run and adjust settings to ensure production speeds are attained.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm job specifications	1.1. Job requirements are read and interpreted from job documentation or production control system 1.2. Set up is carried out correctly in minimum time with minimum wastage 1.3. Availability of all job related components is checked
2. Install tampons (printing pads) into machine	2.1. Appropriate tampons are selected according to job specifications 2.2. Tampons are secured into <i>machine</i>
3. Set up fixtures onto machine bed	3.1. Appropriate fixtures are selected and secured to xy table 3.2. Height of machine bed is adjusted to suit size of object to be printed 3.3. Xy table of machine bed is adjusted to suit position of image on object
4. Select and prepare inks and additives	4.1. <i>Inks</i> and additives are selected according to job specifications and end-user requirements 4.2. Quality and suitability of inks and additives are checked and appropriate action is taken 4.3. Inks and additives are prepared according to OHS requirements and manufacturer's/supplier's instructions with suitable precautions to minimise waste 4.4. Correct colour and weight/volume of ink are mixed and prepared to match the requirements of the printing process and <i>routine</i> job specifications 4.5. Formulation of the ink, <i>colour match</i> and the approved colour are appropriately recorded 4.6. Inks and additives are appropriately labelled, handled and stored according to manufacturer's/supplier's instructions to prevent damage and hazards to personnel and prolong shelf life
5. Set up machine for basic pad printing	5.1. Plate holder is set up and adjusted according to job specifications 5.2. Appropriate plate and plate holder are selected and plate is secured into plate holder 5.3. Tampons are set up and adjusted according to job specifications 5.4. Spatula and doctor blade are set up and adjusted according to the requirements of the pad printing

ELEMENT	PERFORMANCE CRITERIA
	process and routine job specifications OR 5.5. Ink cup is set up and adjusted according to job specifications
6. Set up manual pre- and post-treatment processes	6.1. Manual loading is set up according to routine object requirements and job specifications 6.2. Manual <i>pre-treatment</i> is set up to suit routine object and according to job specifications 6.3. Drying racks are set up to suit object and according to job specifications
7. Conduct proof run	7.1. Material to be used for proof is organised correctly 7.2. Machine is operated according to manufacturer's requirements and enterprise procedures to produce a specified proof 7.3. Proof is visually inspected and/or tested or laboratory testing is organised according to enterprise procedures 7.4. Production does not commence without client approval or authority where appropriate 7.5. Results are interpreted and adjustments are carried out according to product and machine specifications

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- OHS in relation to operating machinery such as safely switching off machinery before cleaning is started
- communication of ideas and information by interpreting job tickets and requirements
- collecting, analysing and organising information by collecting and assessing data about printing process and machine specifications and characteristics and how these interact
- planning and organising activities by providing information about time and materials requirements for production scheduling
- teamwork when working with others to coordinate set up to ensure efficient operation
- mathematical ideas and techniques by calculating cliché and tampon position and substrate requirements for the job
- problem-solving skills by recognising proofing faults and determining adjustments to correct them
- use of technology by using monitoring equipment and interpreting readouts

#### Required knowledge

- substrate identification
- class of substrate
- ink selection
- ink suitability
- correct viscosity
- pot life of a two-component ink
- pad selection
- correct pad shape for applications
- effect pad shape and hardness have on print quality
- ideal storage conditions for pads
- plate selection
- determining correct plate type for applications
- doctor blades
- OHS concerns when setting presses and doctor blades
- adjusting the machine so that doctor blade is operating correctly
- the effect of a damaged doctor blade
- pre- and post-treatment requirements
- OHS concerns when pre- and post-treating substrates
- pre-treating an oily surface to ensure it is ready for printing

**REQUIRED SKILLS AND KNOWLEDGE**

- print problem identification and correction
- causes and solutions for common print problems (eg hairlines around image, loss of density in the centre of a solid image, fine lines of ink running through image, distortion of image)
- machine manuals, safety and other documentation are relevant to this task and where are they kept and information that is included in these documents

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• set up pad printing machines for routine print jobs. The individual will set up manual pre- and post-treatment processes and conduct a proof run and adjust settings to ensure production speeds are attained</li> <li>• demonstrate use of computerised control, monitoring and data entry systems if available and appropriate</li> <li>• demonstrate an ability to find and use information relevant to the task from a variety of information sources</li> <li>• demonstrate all safety devices on the machine</li> <li>• set up a machine for basic pad printing on TWO occasions (if possible on different substrates) to meet manufacturer's and job specifications, enterprise procedures and the Performance Criteria</li> <li>• evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• assessment may take place on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment</li> <li>• pad printing machine.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p>



**EVIDENCE GUIDE**

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|  | <ul style="list-style-type: none"><li>• ICPSU202C Prepare, load and unload product on and off machine</li><li>• ICPSU207C Prepare machine for operation (basic)</li><li>• ICPSU211C Prepare ink and additives</li><li>• ICPPR242C Produce basic pad printed product.</li></ul> |
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## Range Statement

<b>RANGE STATEMENT</b>	
<p>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. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Machines</i></b> may include:	<ul style="list-style-type: none"> <li>a range of pad printing machines with manual, semi-automated or computerised operation.</li> </ul>
<b><i>Inks/coatings</i></b> may include:	<ul style="list-style-type: none"> <li>range of standard inks commonly used in single colour printing.</li> </ul>
<b><i>Routine</i></b> may include:	<ul style="list-style-type: none"> <li>routine within this context relates to the set up and production of print runs. The set up of equipment and production is straightforward and does not involve a significant amount of deviation from using standard equipment settings. In this sense, routine does not refer to a job that an individual might repeat on a regular basis.</li> </ul>
<b><i>Colour matching systems</i></b> may include:	<ul style="list-style-type: none"> <li>use of visual colour assessment to match basic standard colours under controlled lighting conditions.</li> </ul>
<b><i>Pre- and post-treatment processes</i></b> may include:	<ul style="list-style-type: none"> <li>range of pre- and post-treatment process commonly used in pad printing.</li> </ul>
<b><i>Design</i></b> may include:	<ul style="list-style-type: none"> <li>single colour simple graphics and text. Minor variations in registration and position.</li> </ul>
<b><i>Substrate types</i></b> may include:	<ul style="list-style-type: none"> <li>range of substrates within the major categories of paper, wood, glass (ceramics), plastics, metal.</li> </ul>
<b><i>Substrate handling</i></b> may include:	<ul style="list-style-type: none"> <li>manual handling.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

<b>Competency field</b>	Printing
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## Co-requisite units

<b>Co-requisite units</b>		