



**Australian Government**

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

# **ICPPR222C Produce basic gravure printed product**

**Revision Number: 1**

## ICPPR222C Produce basic gravure printed product

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the performance outcomes, skills and knowledge required to produce routine gravure printed product.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires the individual to operate a gravure press ensuring an efficient production flow that maintains product quality standards. Any production problems are rectified with minimum downtime. The machine is correctly shut down and cleaned according to OHS guidelines.
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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. Maintain routine operation of reel system	1.1. Reel stand and rewind section are is monitored and adjusted to ensure efficient continuous operation and to maintain correct tension and to ensure no marks, blemishes or damage to finished product 1.2. Web control system is monitored and adjusted to ensure correct tension and accurate continuous positioning of the web for efficient operation 1.3. <b>Substrate</b> is added to and remove from process according to job instructions 1.4. Sheeting section is monitored and adjusted to ensure quality and efficient product delivery 1.5. Set-off/marketing prevention system is monitored and adjusted to ensure quality of printed product without set-off or marking meets the standard of approved proof
2. Maintain basic gravure printing process	2.1. Gravure cylinder condition is monitored and adjusted to ensure the quality of printed product meets the standard of the approved proof 2.2. Gravure impression roller condition is monitored and maintained to ensure the quality of printed product meets the standard of approved proof 2.3. Gravure inking system and doctor blade are monitored and adjusted to ensure quality of printed product meets the standard of approved proof 2.4. Drying systems are monitored and adjusted to ensure quality of printed product meets the standard of approved proof 2.5. Basic <b>in-line</b> printing/convertng/binding/finishing process(es) are monitored and adjusted to ensure quality of product meets the standard of the approved proof
3. Maintain routine production process	3.1. Production process is operated in association with fellow workers and according to company specifications and planned daily schedule 3.2. Production is maintained within OHS requirements and company and manufacturer's specifications 3.3. Manual and/or automatic control is used as per specification 3.4. Performance is monitored and verified using the process control system according to enterprise procedures

ELEMENT	PERFORMANCE CRITERIA
	<p>3.5. <b>Ink</b> performance, colour, register and position of print are monitored and adjusted throughout production run</p> <p>3.6. Production difficulties are anticipated and preventive action is taken to prevent occurrence by timely intervention</p> <p>3.7. Process adjustments to eliminate problems are reported according to enterprise procedures</p> <p>3.8. Waste is sorted according to enterprise procedures</p>
4. Identify and rectify faults	<p>4.1. Problem in gravure <b>machine</b> operation is identified and reported according to enterprise procedures</p> <p>4.2. Adjustments or corrections are carried out according to specified procedures and consistent with operator's skill level</p> <p>4.3. Gravure machine operation is checked to ensure correct operation</p> <p>4.4. Faulty performance of equipment is identified and reported according to enterprise procedures</p>
5. Conduct shutdown of production process	<p>5.1. Correct shutdown sequence is followed according to manufacturer's specifications and enterprise procedures</p> <p>5.2. Shutdown is conducted in association with fellow workers and in compliance with OHS requirements</p> <p>5.3. Unused ink is correctly labelled and stored according to manufacturer/supplier specifications and enterprise procedures</p> <p>5.4. Solid and liquid waste is removed from operating area and recycled or disposed of, where required, according to regulatory requirements and enterprise procedures</p> <p>5.5. All product is removed from operating area</p> <p>5.6. Machine faults requiring repair are identified and reported to designated person according to enterprise procedures</p> <p>5.7. Repair/adjustment is verified prior to resumption of operations</p>
6. Clean and wash up printing machine at end of print run	<p>6.1. Cylinders and roller surfaces are cleaned ready for next run</p> <p>6.2. Inking system is washed up ready for next run, and liquid waste is disposed of according to company and regulatory requirements</p> <p>6.3. In-line printing/converting/binding/finishing units are</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	cleaned ready for next run 6.4. Reel feed, transportation and delivery systems are disengaged and cleaned ready for next run 6.5. Production records or other documentation are accurately completed where required by enterprise procedures

## 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 providing feedback to internal and external clients about printing and in-line processes and job specifications
- collecting, analysing and organising information by collating details of job and machine specifications and printing processes to ensure efficient production
- planning and organising activities by coordinating sequences for printing and wash-up
- teamwork when communicating with work team members and workers involved in prior and subsequent processes to ensure efficient production
- mathematical ideas and techniques by calculating consumables requirements
- problem-solving skills by identifying print problems and correcting during print run
- use of technology by using monitoring systems, understanding their output and feeding into production management systems

#### Required knowledge

- reel transportation and delivery
- OHS concerns that are there when loading and handling heavy reels
- determining the printing side of the substrate
- effect on the print of excessive tension on the unwinding reel
- correct splicing of the web
- gravure printing operations
- frequency the quality of the product should be assessed
- action that can taken if the print was filling in when printing
- effect that dirt under the doctor blade would have on the print and the cylinder
- doctor blade oscillation
- addressing a nick in the doctor blade
- action that can be taken if the ink in the duct is foaming
- signs of wear in the image area of the plate
- level the ink level should be maintained
- in-line processes
- OHS concerns for the in-line component of the press
- frequency in-line components of the job should be examined
- quality control and problem solving
- precautions that should be taken to ensure that the rewound product is of consistent acceptable quality

**REQUIRED SKILLS AND KNOWLEDGE**

- identifying printed material that is not of an acceptable standard
- monitoring to ensure quality
- the marking of product that is deemed unacceptable by the operator
- consultation if there was a problem with the print that was not able to be fixed by the operator
- location of information concerning the correct operation of the machine
- shut down and wash up the press
- dangers that exist from solvents and solutions used to clean the inking system, plate and the press
- methods that are used to ensure proper storage of the plates following printing
- parts of the machine that should be thoroughly cleaned following the print run
- components that are to be inspected for wear following the print run
- records that are important for following or repeat prints
- machine manuals, safety and other documentation that are relevant to this task and where they are 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>operate a gravure press ensuring an efficient routine production flow that maintains product quality standards. Any production problems are rectified with minimum downtime. The machine is correctly shut down and cleaned according to OHS guidelines</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>produce TWO basic gravure printing jobs (if possible including at least ONE in-line process) according to 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>gravure printing machine with in-line processes.</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> <ul style="list-style-type: none"> <li>ICPSU201C Prepare, load and unload reels and cores</li> </ul>

**EVIDENCE GUIDE**

	on and off machine <ul style="list-style-type: none"><li>• ICPSU208C Operate and monitor machines (basic)</li><li>• ICPPR321C Set up for basic gravure printing.</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>Substrate handling</i></b> may include:	<ul style="list-style-type: none"> <li>• wide or narrow reel handling systems.</li> </ul>
<b><i>In-line processes</i></b> may include:	<ul style="list-style-type: none"> <li>• minor processes that are integral to this competency can include basic in-line operations such as perforating, numbering, date coding, slitting that do not in themselves constitute another defined unit of competency. Where a major in-line process is defined as a separate competency (eg flat-bed cutting, folding) it should be assessed as such.</li> </ul>
<b><i>Inks/coatings</i></b> may include:	<ul style="list-style-type: none"> <li>• range of standard inks commonly used in 1-2 colour printing.</li> </ul>
<b><i>Machines</i></b> may include:	<ul style="list-style-type: none"> <li>• a range of in-line gravure printing machines with manual, semi-automated, fully automated or computerised process control.</li> </ul>
<b><i>Colour matching systems</i></b> may include:	<ul style="list-style-type: none"> <li>• use of visual colour assessment and densitometry to match basic standard colours under controlled lighting conditions.</li> </ul>
<b><i>Design</i></b> may include:	<ul style="list-style-type: none"> <li>• 1-2 colours, simple graphics or 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, board, plastics and related films, or metal.</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>

**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>		