



Australian Government

Department of Education, Employment and Workplace Relations

ICPPR472C Produce complex coated product

Revision Number: 1

ICPPR472C Produce complex coated product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to produce complex coated product.
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Application of the Unit

Application of the unit	This unit requires the individual to produce a complex coated product on either a reel- or sheet-fed machine ensuring an efficient production flow that maintains product quality standards. Any production problems are anticipated and 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

Prerequisite units		

Employability Skills Information

Employability skills	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 operation of reel system (OR Element 2)	1.1. Reel stand and rewind section are monitored and adjusted to maintain correct tension and to ensure no marks or blemishes to finished product and to ensure efficient continuous operation 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. Substrate is added to and removed from process according to job instructions 1.4. Sheeting section is monitored and adjusted to ensure quality and efficient product delivery
2. Maintain operation of sheet system (OR Element 1)	2.1. Feeder and delivery is monitored and adjusted to ensure continuous and efficient feeding to machine 2.2. Sheet pick-up and transport system is monitored and adjusted to ensure accurate and continuous sheet handling and efficient operation 2.3. Transfer and control systems are monitored and adjusted to ensure correct and continuous sheet handling and efficient operation 2.4. Substrate is added to and removed from process according to job instructions
3. Maintain coating process	3.1. Roller condition is monitored and adjusted to ensure the quality of printed product meets the standard of approved proof 3.2. Coating system and doctor blade condition (if appropriate) are monitored and adjusted to ensure quality of product meets the standard of approved proof 3.3. Drying systems are monitored and adjusted to ensure quality of product meets the standard of approved proof 3.4. Quality and viscosity of varnish coatings are monitored and adjusted as necessary to ensure quality of product
4. Maintain production process	4.1. Basic or complex in-line printing/converting/binding/finishing processes are monitored and adjusted to ensure quality of product meets the standard of the approved proof 4.2. Production process is operated in association with fellow workers and according to company specifications and planned daily schedule

ELEMENT	PERFORMANCE CRITERIA
	4.3. Production is maintained within OHS requirements and company and manufacturer's specifications 4.4. Manual and/or automatic control is used as per specification 4.5. Performance is monitored and verified using the process control system according to enterprise procedures 4.6. Coating performance, register and position of coating are monitored and adjusted throughout production run 4.7. Production difficulties are anticipated and preventive action is taken to prevent occurrence by timely intervention 4.8. Process adjustments to eliminate problems are reported according to enterprise procedures 4.9. Waste is sorted according to enterprise procedures
5. Identify and rectify problems	5.1. Faulty performance of equipment is identified and reported according to enterprise procedures 5.2. Problems in coating machine are identified and reported according to enterprise procedures 5.3. Adjustments or corrections are carried out according to specified procedures and consistent with operator's skill level 5.4. Coating machine operation is checked to ensure correct operation
6. Conduct shutdown of production process	6.1. Correct shutdown sequence is followed according to manufacturer's specifications and enterprise procedures 6.2. Shutdown is conducted in association with fellow workers and in compliance with OHS requirements 6.3. Solid and liquid waste is removed from operating area and recycled or disposed of, where required, according to regulatory requirements and enterprise procedures 6.4. All product is removed from operating area 6.5. Machine faults requiring repair are identified and reported to designated person according to enterprise procedures 6.6. Repair/adjustment is verified prior to resumption of operations
7. Clean and wash up coating machine at	7.1. Cylinders, plate and roller surfaces are cleaned ready for next run

ELEMENT	PERFORMANCE CRITERIA
end of print run	7.2. Coating delivery system is washed up ready for next run, and liquid waste is disposed of according to company and regulatory requirements 7.3. In-line slitting units are cleaned ready for next run 7.4. Reef feed, transportation and delivery systems are disengaged and cleaned ready for next run 7.5. 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, in-line processes and job specifications
- collecting, analysing and organising information by collating details of job and machine specifications and coating processes to ensure efficient production
- planning and organising activities by coordinating sequences for coating 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 and personnel requirements to meet production schedules
- problem-solving skills by identifying coating problems and correcting during print run
- use of technology by using monitoring systems, understanding their output and feeding into production management systems

Required knowledge

- action if vital information were missing from the job ticket
- checks that should be undertaken prior to set up (availability of materials etc)
- major OHS concerns when setting up the sheet or reel transportation system
- effect of fanning the sheets before loading into the press
- setting and checking the double sheet detector during the print run
- effect on the print of excessive tension on the rewinding reel
- effect if the web is not spliced correctly
- precautions that should be taken to ensure that the rewound product is of consistent acceptable quality
- if sheeted, components that can be adjusted to ensure correct delivery
- identifying printed material that is not of an acceptable standard
- major OHS concerns when coating
- action that could be taken if the aqueous coating was smudging on the delivery section of the machine
- effects anti set off spray could have on the finished job
- level the coating should be maintained in the pan
- effect the UV lamp has on the UV coating
- varying the temperature and volume of hot and cold air knives
- use of IR radiation (including choice of medium or short wave lamps) and its

REQUIRED SKILLS AND KNOWLEDGE

- effect when using coatings
- dangers that exist from solvents and solutions used to clean the coating system, plates, cylinders and the press
- parts of the machine that should be thoroughly cleaned following the coating of the job
- 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

EVIDENCE GUIDE

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.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- produce a complex coated product on either a reel- or sheet-fed machine ensuring an efficient production flow that maintains product quality standards. Any production problems are anticipated and rectified with minimum downtime. The machine is correctly shut down and cleaned according to OHS guidelines
- demonstrate use of computerised control, monitoring and data entry systems if available and appropriate
- demonstrate an ability to find and use information relevant to the task from a variety of information sources
- produce THREE complex coating jobs (one spot coating, one overall coating and one fine detail, using THREE different coatings one of which must be metallic and if possible including at least ONE in-line process) according to job specifications, enterprise procedures and the Performance Criteria
- evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.

Context of and specific resources for assessment

Assessment must ensure:

- 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
- a print machine or a dedicated coating machine.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.

Guidance information for

Holistic assessment with other units relevant to the

EVIDENCE GUIDE	
assessment	industry sector, workplace and job role is recommended, for example: • ICPPR471C Set up for complex coating.

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. 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.	
<i>Substrate handling</i> may include:	narrow or wide reel handling, and small and large sheet systems.
<i>Machines</i> may include:	a range of dedicated coating and printing machines with manual, semi-automated, fully automated or computerised process control.
<i>Coatings</i> may include:	a range of carbon, carbonless, latex, wax, resin and metallic coatings, aqueous and UV varnishes and machine varnishes.
<i>In-line processes</i> may include:	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.
<i>Colour matching systems</i> may include:	use of visual colour assessment and densitometry to match basic standard tints under controlled lighting conditions.
<i>Design</i> may include:	spot coating, overall coating and fine detail coating.
<i>Substrate types</i> may include:	full range of substrates within the major categories of paper, pressure sensitive material, board, plastics and related films, or metal.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Printing
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Co-requisite units

Co-requisite units		