



Australian Government

Department of Education, Employment and Workplace Relations

ICPSP373C Semi-automatically produce complex screen prints

Revision Number: 1

ICPSP373C Semi-automatically produce complex screen prints

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to produce complex screen prints using semi-automatic machines.
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Application of the Unit

Application of the unit	This unit requires the individual to produce complex screen prints using semi-automatic machines.
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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. Load substrate	1.1.Substrate is checked for conformance to job specifications with any irregularities reported and/or rectified 1.2.Substrate position and stencil registration are adjusted according to job specifications
2. Apply ink to screen	2.1.Ink is applied to the screen in the quantity required for the screen size 2.2.Equipment is kept clean and spillage is minimised 2.3.Colour is mixed and ink is checked for conformance to job specifications
3. Produce proof print	3.1.Proof print is run off and checked for colour, strength, registration, adhesion, clarity, gloss level, drying/curing, artwork detail and other technical aspects according to job specifications 3.2.Adjustments are made as required 3.3. Appropriate approval to commence production is sought prior to commencement 3.4.Belt speed and energy required are set to achieve desired properties
4. Run job and monitor print quality	4.1.Printing speed production is adjusted to maximise quality and output 4.2.Print quality is continuously evaluated and adjusted as required 4.3.Effects of ink alterations during run are monitored and appropriate action taken according to manufacturer's/supplier's and job specifications 4.4.Workplace documentation on job is completed as required 4.5.Curing and drying are constantly monitored and adjusted according to manufacturer's/supplier's and job specifications
5. Carry out routine user maintenance	5.1.Equipment is lubricated, cleaned and adjusted according to manufacturer's/supplier's specifications 5.2.Fault conditions are identified and reported according to enterprise procedures
6. Stack production output	6.1.Output is checked for thorough drying/curing before stacking 6.2.Job status and progress are checked for conformance to job specifications and any necessary action is taken

ELEMENT	PERFORMANCE CRITERIA
7. Shut down machine	7.1.Excess ink, screens, squeegees and flood coaters are removed and cleaned according to OHS requirements and manufacturer's/supplier's specifications 7.2.Waste materials are disposed of according to manufacturer's/supplier's specifications, regulatory requirements and enterprise procedures 7.3.Equipment and surrounding areas are cleaned according to manufacturer's/supplier's specifications and 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 obtaining approval to commence a production run
- collecting, analysing and organising information by checking the substrate for conformance to the job specifications
- planning and organising activities by producing a proof print prior to running a job
- teamwork when maintaining the production process in association with others
- mathematical ideas and techniques by setting the belt speed and required energy
- problem-solving skills by continuously evaluating and adjusting print quality
- use of technology by using semi-automatic and computerised machines to produce screen prints

Required knowledge

- criteria for selecting the correct substrate for the job
- ink and substrate compatibility
- characteristics of solvents and ink additives and determining compatibility
- adjustments that are necessary to the machine prior to setting up
- maintenance that is required on this machine prior to the commencement of printing
- procedure that you use for checking the screen sequence of colours, ink, substrate and squeegee/flood coater prior to printing
- function of the printing base and maintenance that is required
- determining the lay edge and gripper/take-off edge of the substrate
- correct positioning, registering and locking the screen in position
- selection of the squeegee/shore hardness and flood coater to be used
- need to adjust the off contact/peel-off requirements of the screen
- OHS requirements when working with infra red/UV curing units
- speed/temperature of the unit
- routine maintenance that is required on this unit
- OHS concerns that are there when using a semi-automatic machine
- effect that humidity level has on print procedure
- correct viscosity of the ink prior to printing
- rectification of the change in the viscosity of the ink during a production run
- evaluation and maintenance of the print quality during the run
- ideal printing rate for this substrate on this machine

REQUIRED SKILLS AND KNOWLEDGE

- stacking of production output (ie flat or on-edge)
- effect that environmental conditions have on output capacity
- need to determine the exact count and to record production details on the job sheet
- health hazards associated with inks and solvents
- correct procedure for removing ink without damaging the screen
- correct method of cleaning squeegees/flood coater machine and surrounding area
- maintenance that is required on this machine after printing
- manuals, safety and other documentation that are relevant to this task and where are they 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 following is essential:

- produce a complex print of more than two colours containing line and tone using a semi-automatic machine according to job specifications
- 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 a complex print of more than two colours containing line and tone using a semi-automatic machine according to manufacturer's and job specifications, enterprise procedures and the listed Performance Criteria
- for valid and reliable assessment of this unit, evidence should be gathered over a period of time through a range of methods for assessment to indicate consistent performance
- 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 both of these. Off the job assessment must be undertaken in a closely replicated workplace environment.

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 assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended

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>Drying/curing units</i> may include:	drying systems commonly used and relative to the industry sector.
<i>Quality standards</i> may include:	should meet client requirements and enterprise and industry standards.
<i>Enterprise procedures</i> may include:	tasks must be performed according to enterprise procedures.
<i>Type of machine</i> may include:	semi-automatic and computerised screen printing machines relative to the industry sector.
<i>Complexity</i> may include:	multi-colour jobs.
<i>Degree of autonomy</i> may include:	working to defined procedures in consultation with other relevant persons to ensure production procedures are met.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Screen Printing
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Co-requisite units

Co-requisite units		