



**Australian Government**

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

# **ICPSP375C Automatically produce complex screen prints**

**Revision Number: 1**

## ICPSP375C Automatically produce complex screen prints

### Modification History

Not applicable.

### Unit Descriptor

|                        |                                                                                                                             |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Unit descriptor</b> | This unit describes the performance outcomes, skills and knowledge required to automatically produce complex screen prints. |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------|

### Application of the Unit

|                                |                                                                                              |
|--------------------------------|----------------------------------------------------------------------------------------------|
| <b>Application of the unit</b> | This unit requires the individual to produce complex screen prints using automatic machines. |
|--------------------------------|----------------------------------------------------------------------------------------------|

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

|                           |  |  |
|---------------------------|--|--|
| <b>Prerequisite units</b> |  |  |
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|                           |  |  |

### Employability Skills Information

|                             |                                          |
|-----------------------------|------------------------------------------|
| <b>Employability skills</b> | This unit contains employability skills. |
|-----------------------------|------------------------------------------|

## 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. |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Elements and Performance Criteria

| ELEMENT                               | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Load substrate                     | <p>1.1.Substrate is checked for conformance to job specifications with any irregularities reported and/or rectified</p> <p>1.2.Substrate position and stencil registration are adjusted according to job specifications</p>                                                                                                                                                                                                                                                                                                      |
| 2. Apply ink to screen                | <p>2.1.Ink is applied to the screen in the quantity required for the screen size</p> <p>2.2.Equipment is kept clean and spillage is minimised</p> <p>2.3.Colour is mixed and ink is checked for conformance to job specifications</p> <p>2.4.Feeder is set and adjusted to suit substrate</p>                                                                                                                                                                                                                                    |
| 3. Produce proof print                | <p>3.1.Proof print is run off and checked for colour, strength, registration, adhesion, clarity, gloss level, <b>drying/curing</b>, artwork detail and other technical aspects according to job specifications</p> <p>3.2.Adjustments are made according to product and <b>machine</b> specifications</p> <p>3.3.Appropriate approval to commence production is sought prior to commencement</p> <p>3.4. Belt speed and energy required are set to achieve desired properties and then printing speeds are adjusted to suit</p>  |
| 4. Run job and monitor print quality  | <p>4.1.Printing speed production is adjusted to maximise <b>quality</b> and output</p> <p>4.2.Print quality is continuously evaluated and adjusted as required</p> <p>4.3.Effects of ink alterations during run are monitored and appropriate action taken according to manufacturer's/supplier's and job specifications</p> <p>4.4.Workplace documentation on job is completed as required</p> <p>4.5.Curing and drying are constantly monitored and adjusted according to manufacturer's/supplier's and job specifications</p> |
| 5. Carry out routine user maintenance | <p>5.1.Equipment is lubricated, cleaned and adjusted according to manufacturer's/supplier's specifications</p> <p>5.2.Fault conditions are identified and reported according to <b>enterprise procedures</b></p>                                                                                                                                                                                                                                                                                                                 |
| 6. Handle production                  | <p>6.1.Output is checked for thorough drying/curing before</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| <b>ELEMENT</b>       | <b>PERFORMANCE CRITERIA</b>                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output               | stacking<br>6.2.Job status and progress are checked for conformance to job specifications and any necessary action is taken                                                                                                                                                                                                                                                                                                                |
| 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<br>7.2.Waste materials are disposed of according to manufacturer's/supplier's specifications, regulatory requirements and enterprise procedures<br>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 gaining approval to commence a production run
- collecting, analysing and organising information by checking job status and progress according to job specifications
- planning and organising activities by following machine shutdown procedures
- teamwork when completing workplace documentation as required
- mathematical ideas and techniques by adjusting print speed to maximise quality
- problem-solving skills by monitoring and responding to the effect of ink alterations
- use of technology by operating automatic and computerised screen printing machines

#### Required knowledge

- adjustments that are necessary to the machine prior to setting up
- maintenance that is required on the machine and feeder prior to the commencement of printing
- adjustments that need to be made to the machine/feeder to allow for characteristics of the substrate
- procedure that is in place to confirm the screen sequence of colour, ink, substrate and squeegee/flood coater prior to printing
- system for setting the feed board and loading substrate
- need to prepare substrate or item when loading the feeder
- adjustment of the stock feed system for this machine
- system that is in place to check the substrate is fed into the machine at the required production speed without damage, distortion or variation in position
- criteria for selecting the right substrate for the job
- ink and substrate compatibility
- characteristics of solvents and ink additives and compatibility to this ink system
- correctly positioning, registering and the screen locking into position
- positioning the squeegee/flood coater
- adjustment of the on/off contact/peel-off requirements of the frame
- shore hardness of the squeegee blade and why have you chosen it
- relationship between ink deposit, squeegee speed and belt speed/temperature of the drying/curing unit
- OHS requirements when working with infra-red/UV curing units
- routine maintenance you undertake on this drying/curing unit

**REQUIRED SKILLS AND KNOWLEDGE**

- ink drying/ink curing characteristics
- OHS concerns that are there when using an automatic machine
- assessment of to colour to ensure it conforms to job specifications
- check made on the initial proof run before continuing
- evaluation of print quality and substrate feeding during the run
- ideal printing speed for this substrate on this machine
- effect of humidity on the substrate
- maintenance of the correct viscosity of ink during the run
- ways to determine if print is dried/cured before handling
- production output handling to prevent offsetting of ink, blocking, sweating or rewetting of ink
- effect that weather conditions could have on output capacity
- need to determine the exact count and to record production details on the job sheet
- health hazards associated with ink/solvents
- correct procedure for removing the ink without damaging the screen
- correct method of cleaning squeegees/flood coaters, machine and surrounding area
- maintenance that is required on this machine after printing is completed
- machine 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 an automatic machine according to job specifications
- 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 an automatic machine according to manufacturer's and job specifications, enterprise procedures and the listed Performance Criteria
- demonstrate use of computerised control, monitoring and data entry systems if available and appropriate
- 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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>Drying/curing units</i></b> may include:                                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>drying systems commonly used and relative to the industry sector.</li> </ul>                                                 |
| <b><i>Type of machine</i></b> may include:                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>automatic and computerised screen printing machines with three or more colours relative to the industry sector.</li> </ul>   |
| <b><i>Quality standards</i></b> may include:                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>should meet client requirements and enterprise and industry standards.</li> </ul>                                            |
| <b><i>Degree of autonomy</i></b> may include:                                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>initiative and judgement in working in consultation with other persons to ensure production requirements are met.</li> </ul> |
| <b><i>Enterprise procedures</i></b> may include:                                                                                                                                                                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>tasks must be performed according to enterprise procedures.</li> </ul>                                                       |

## Unit Sector(s)

|             |  |
|-------------|--|
| Unit sector |  |
|-------------|--|

## Competency field

|                  |                 |
|------------------|-----------------|
| Competency field | Screen Printing |
|------------------|-----------------|

## Co-requisite units

| Co-requisite units |  |  |
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|                    |  |  |