



Australian Government

Department of Education, Employment and Workplace Relations

ICPSP341C Prepare stencil using direct electronic imaging method

Revision Number: 1

ICPSP341C Prepare stencil using direct electronic imaging method

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to prepare direct electronically imaged stencils.
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Application of the Unit

Application of the unit	This unit requires the individual to prepare direct electronically imaged stencils.
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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. Prepare the work area	1.1. Work area is made clean and functional prior to the commencement of work 1.2. All equipment is inspected to ensure it is functional and where necessary, appropriate remedial action is taken prior to the commencement of work 1.3. Chemicals are prepared, if necessary, according to OHS requirements and manufacturer's/supplier's specifications 1.4. Appropriate coating trough (or troughs for automatic coaters) is selected ensuring they are free of nicks and burrs
2. Prepare the screen	2.1. Screen is selected according to job specifications 2.2. Chemicals are applied and removed according to OHS requirements and manufacturer's/supplier's specifications
3. Select direct emulsion	3.1. Emulsion is selected according to requirements for ink type, print resolution, substrate, mesh type and machine type with minimisation of waste 3.2. Emulsion is checked for expiry date and appropriate action taken 3.3. Emulsion is prepared according to OHS requirements, and manufacturer's/supplier's specifications 3.4. Emulsion is used and dried according to manufacturer's/supplier's specifications
4. Process material	4.1. Coated screen is placed in direct imaging equipment according to manufacturer's/supplier's specifications 4.2. Direct imaging equipment is set up according to manufacturer's/supplier's and job specifications 4.3. Direct imaging equipment is operated according to OHS requirements, and manufacturer's/supplier's specifications 4.4. Exposed screen is removed and washed out according to OHS requirements and manufacturer's/supplier's specifications 4.5. Processed stencil/screen is inspected for processing flaws
5. Dry stencil	5.1. Processed stencil is dried according to manufacturer's/supplier's specifications 5.2. Backing sheet is carefully removed and stencil

ELEMENT	PERFORMANCE CRITERIA
	checked for full adhesion
6. Block out screen	6.1. Non-image areas of prepared screen are blocked out with filler suitable for ink type and according to job specifications 6.2. Stencil is inspected for flaws, scum and/or orientation 6.3. Pinholes are spotted out with suitable filler and taped according to ink type and job specifications
7. Store screen	7.1. Prepared screen is labelled according to <i>enterprise specifications</i> 7.2. Prepared screen is stored in a clean, dry environment according to manufacturer's/supplier's 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 labelling prepared screens
- collecting, analysing and organising information by drying and using emulsion according to supplier's instructions
- planning and organising activities by drying the stencil prior to blocking out the screen
- teamwork when maintaining the production process in association with others
- mathematical ideas and techniques by correctly preparing chemicals
- problem-solving skills by inspecting the stencil for flaws, scum and/or orientation
- use of technology by using relevant equipment to prepare direct electronically imaged stencils

Required knowledge

- influence that mesh count has on final printed product
- need to have a correctly tensioned screen
- screen tension that is required on screens of various mesh count or grades
- degreasing/cleaning techniques that are employed prior to coating the screen
- information that is contained in MSDSs for the emulsion
- pollution and environmental issues that need to be considered when working with emulsions
- maintenance that is required on the direct projection camera
- need to work in a safelight area when using the direct projection method
- kinds of high sensitivity emulsion that are available and state their characteristics, lifespans and areas of use
- preparation method for the emulsion you are using
- influence that the length of run and ink being used have on the coating technique
- number of coats of emulsion and the best method of coating the screen
- best position (horizontal or vertical) for drying the screen
- effect of heat on the emulsion during the drying process
- OHS concerns that are there when exposing the screen
- operating features of the direct projection camera
- best position on the frame and the registration requirements
- scanning speed and the exposure time
- inputting information into the computer, manipulation of the image and output information

REQUIRED SKILLS AND KNOWLEDGE

- effect of temperature, pressure and period of washing on the emulsion
- determining when washing out is complete
- ideal position of the screen for drying to prevent scum and streaking
- post-curing effect on the stencil
- information that is obtained from the MSDSs for this particular blackout
- ink to be used and the type of stencil that have a bearing on the type of blackout
- what preventive measures can be taken to minimise pinholes?
- need to tape the edge of the frame
- means by which is this screen able to be identified at a later date
- 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 following is essential: • correctly prepare direct electronically imaged stencils according to job specifications • demonstrate an ability to find and use information relevant to the task from a variety of information sources • prepare TWO different screens using direct electronic imaging techniques according to manufacturer's and job specifications, enterprise procedures and the listed Performance Criteria.
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>Coating techniques</i> may include:	appropriate coating techniques for various emulsions, mesh types and edge definition requirements.
<i>Type of stencil materials</i> may include:	direct emulsion commonly used in direct projection relative to the industry sector.
<i>Enterprise procedures</i> may include:	tasks must be performed according to enterprise procedures.
<i>Degree of autonomy</i> may include:	working to defined procedures in consultation with other relevant persons to ensure production procedures are met.
<i>Quality standards</i> may include:	should meet client requirements and enterprise and industry standards.

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		

Co-requisite units		