



Australian Government

Department of Education, Employment and Workplace Relations

ICPSP337C Prepare stencil using photographic capillary method

Revision Number: 1

ICPSP337C Prepare stencil using photographic capillary method

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to prepare photographic capillary stencils.
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Application of the Unit

Application of the unit	This unit requires the individual to prepare photographic capillary 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
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 and process capillary film	3.1. Capillary film is selected according to requirements for ink type, print resolution, substrate and machine type with minimisation of waste 3.2. Capillary film is cut to size according to OHS requirements and manufacturer's/supplier's specifications with minimisation of waste 3.3. Capillary film is mounted on screen according to manufacturer's/supplier's specifications 3.4. Screen is dried according to manufacturer's/supplier's specifications and enterprise procedures 3.5. Backing sheet is removed according to manufacturer's/supplier's specifications
4. Process material	4.1. Screen is placed in vacuum frame with positive positioned according to manufacturer's/supplier's specifications and job specifications 4.2. Exposure is calculated and stencil exposed according to manufacturer's/supplier's specifications 4.3. Light source is positioned according to manufacturer's/supplier's specifications 4.4. Exposed screen is removed from vacuum frame according to OHS requirements and manufacturer's/supplier's specifications 4.5. Exposed screen is washed out according to OHS requirements and manufacturer's/supplier's specifications
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. Stencil is inspected for flaws, scum and/orientation 6.2. Non-image areas of prepared screen are blocked out with filler suitable for ink type and according to job specifications 6.3. Pinholes are spotted out with suitable filler and faulty/damaged images are retouched and taped according to ink type and job specifications
7. Store screen	7.1. Prepared screen is labelled according to enterprise specifications 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 selecting the appropriate capillary fill-in according to job specifications
- planning and organising activities by positioning light source prior to exposing the screen
- teamwork when maintaining the production process in association with others
- mathematical ideas and techniques by cutting capillary fill-in to size according to job specifications
- problem-solving skills by retouching and taping damaged images
- use of technology by using the vacuum frame and other equipment to prepare the stencil

Required knowledge

- health hazards and what safe working procedures should be in place when degreasing screens
- significance of mesh count
- need to have the correct tension on the screen
- best screen mesh count for the application of a capillary stencil
- chemicals that are used for degreasing screens
- maintenance procedures that are there in place for equipment in the stencil preparation area
- peculiarities of photographic capillary stencils
- type of capillary film to be used
- pollution and environmental concerns that are addressed when working with capillary films
- wetting agents that are used to facilitate the application of the film to the screen
- problems that are caused by dust on the surface of the mesh
- position of film on the screen
- problems that can occur from poor or incorrect mounting techniques
- rectification of problems associated with mounting capillary film
- OHS concerns that are there when exposing stencils
- correct drying distance and drying time
- effects of incorrect drying temperature
- factors that indicate that drying is complete
- need to dry film under safelight conditions

REQUIRED SKILLS AND KNOWLEDGE

- removal of the backing sheet removed
- function and use of a light integrator
- effect that the position, angle and distance of the light source has on the exposure process
- effect that temperature, pressure and time taken has on the washing out process?
- importance of blotting up excess water from the stencil to prevent scum and streaking
- completion of drying
- bearing the ink used and the type of stencil on the type of blackout
- preventive measures that can be taken to prevent pinholes
- need to tape the edge of the frame
- means that the screen is able to be identified at a later date
- maintenance that should be carried out on exposing, washing and drying equipment
- 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:

- correctly prepare direct emulsion stencils using automatic coating equipment 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 direct screens using automatic coating equipment, and expose, wash and dry the screen 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 for example:

- any basic set up units.

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>Enterprise procedures</i> may include:	tasks must be performed according to enterprise procedures.
<i>Type of stencil materials</i> may include:	capillary stencil materials commonly used relative to the industry sector.
<i>Degree of autonomy</i> may include:	work is performed under supervision to defined procedures to ensure production requirements 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		

