



Australian Government

ICPSCP2330 Manually prepare direct emulsion stencil

Release: 1

ICPSCP2330 Manually prepare direct emulsion stencil

Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 4.0.

Application

This unit describes the skills and knowledge required to safely select, prepare and store direct emulsion stencils using manual techniques.

It applies to individuals working in the printing and graphic arts industry under direct supervision and performing mainly routine tasks such as monitoring equipment and ensuring set processes are followed.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Screen printing

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare work area and equipment	1.1 Clean work area according to enterprise procedures 1.2 Inspect equipment and undertake remedial action prior to commencement of work as required 1.3 Select coating trough and confirm it is free of nicks and burrs
2. Prepare screen	2.1 Select screen according to job specifications 2.2 Apply and remove according to work health and safety (WHS) requirements and manufacturer specifications 2.3 Check tension of screen mesh
3. Produce emulsion	3.1 Select emulsion according to requirements for ink type, print

ELEMENT	PERFORMANCE CRITERIA
	resolution, substrate, mesh type and machine type 3.2 Check emulsion expiry date and take action as required 3.3 Prepare emulsion 3.4 Apply and dry emulsion according to manufacturer specifications
4. Process coated screen	4.1 Position image films onto prepared screen and position in cleaned and prepared exposure device 4.2 Position light source according to manufacturer specifications 4.3 Calculate exposure and expose stencil 4.4 Remove exposed screen from vacuum frame exposure device 4.5 Wash exposed screen according to WHS requirements and manufacturer specifications 4.6 Inspect processed stencil or screen for flaws, scum and orientation 4.7 Spot out pinholes and tape according to ink type and job specifications
5. Clean stencil	5.1 Dry processed stencil according to manufacturer specifications 5.2 Remove backing sheet and check stencil for full adhesion
6. Store screen	6.1 Label prepared screen according to enterprise procedures 6.2 Store prepared screen according to manufacturer specifications

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Writing	Completes required details legibly and accurately for reference details
Numeracy	Identifies basic numerical data and calculates whole numbers and decimals for exposure time and measurements
Self-management	Takes personal responsibility for adherence to enterprise procedures relevant to own role
Planning and organising	- Follows clearly defined instructions and sequencing and monitors own progress for the task - Takes responsibility for routine low-impact decisions within

	familiar situations
Problem solving	• Responds to predictable problems and implements standard or logical solutions
Technology	• Identifies the purpose and some specific functions of some common digital tools used in work contexts

Unit Mapping Information

Supersedes and is equivalent to ICPSCP233 Manually prepare direct emulsion stencil.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a74b7a0f-a253-47e3-8be0-5d426e24131d>

Assessment Requirements for ICPSCP2330 Manually prepare direct emulsion stencil

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- prepare two different direct screens and two direct emulsion stencils using manual coating and exposure techniques according to manufacturer and job specifications, enterprise procedures and work health and safety (WHS) requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- WHS risks and requirements for:
 - working with UV exposure light
 - handling chemical materials
 - preparing emulsions
 - washing out exposed screens
- importance of the mesh count
- effect of screen tension on emulsion coating
- method of determining the emulsion required for the job and emulsion selection requirements
- importance of preparing the work area and equipment
- effect of the coating trough edge on emulsion coating
- reasons for checking the expiry date of emulsions
- maximum temperature at which the emulsion can be dried
- need to have vacuum pressure in the vacuum frame
- selection process for the light source position
- formula and process used to calculate optimum exposure time
- effects of overexposure and underexposure
- effect on exposure of a white or coloured mesh

- procedure for washing the screen out as required
- characteristics determining a good and bad stencil
- • reasons for drying the screen before blocking out
- factors determining the type of filler used for blocking out
- reasons for spotting pinholes and taping the screen
- qualities by which stored screens can be identified at a later date
- manufacturer manuals, enterprise procedures and work health and safety documentation, including their location and purpose.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the screen printing field of work and include access to:

- chemicals
- stencil equipment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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