

# PROMP251 (SQA Unit Code – H9J4 04)

## Make and maintain lithographic printing plates



### Overview

This standard is for lithographic printers whose job includes making plates and storing plates for reuse.

Lithographic printing plates can be created by several methods, including computer to plate systems, imaged either on-press and off-press, through exposure in a light cabinet using film in contact with the plate, or through 'printing' plate material using a laser printer or other proprietary system.

This unit requires the printer to be able to produce lithographic plates by one method. Where a computer to plate system is employed, the requirement is for the printer to be able to run a previously imposed and ripped file to plate. There is no requirement for imposition or file handling to be included. Typically printers will do this where a plate re-make is required when the pre-press technicians are not available.

For analogue plate making, the printer would select the correct film together with any masks, would place the film, mask and plate on 'pins' in an exposure frame, expose the plate to light for the correct time, and once the exposures for each film/mask combination was complete, the plate would be developed, either by hand or by machine.

Storage of lithographic printing plates for re-use involves cleaning ink from the plate using appropriate plate cleaner, washing any chemical residues from the plate surface, and, for metal plates, 'gumming' the plate and drying the gum. Once ready for storage, the plate has to be correctly located and identified so it can be quickly located when required again.

### Performance criteria

#### Create lithographic printing plates

- You must be able to:
- P1 identify the correct plate material for platemaking
  - P2 identify the correct files or film/mask materials for exposing the plate
  - P3 check that the imaging/exposure equipment and your work area are safe and ready for operation, and any online processing equipment is also ready for operation
  - P4 load the plate into the imaging/exposure equipment, locating it onto register pins if required
  - P5 for analogue platemaking, place the film and any masks 'emulsion to emulsion' with the plate surface, close the frame and bring the vacuum up to the correct operating level
  - P6 begin the imaging/exposure of the plate, making sure that UV or laser light cannot create a health and safety risk
  - P7 on completion of imaging/exposure, develop the plate using the method employed in your company for plate development
  - P8 on completion of development of the plate, make sure it has been properly processed and the non-image areas 'desensitised'
  - P9 check the plate for correct exposure, completeness of the image and free from physical damage or blemishes
  - P10 complete any records required by your company

#### Store lithographic printing plates for re-use

- You must be able to:
- P11 identify the plates for storage and check that they have not suffered any physical or image damage that would prevent the plate from being re-used in the future
  - P12 report any plate wear or damage to the appropriate person before storing the plate
  - P13 clean printing ink from the plate, using a suitable press chemistry that will not cause damage to the surface or image of the plate
  - P14 after removal of ink, make sure that any plate cleaner residues are washed from the plate
  - P15 apply any protective coating required, such as finishing gum, and 'buff down' to an even and dry finish
  - P16 when the plate is dry and ready for storage, identify the storage location and any other plates being stored as part of a set

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P17 place the plate(s) in the folder (or other filing system) provided for that purpose

P18 complete the labelling/identification requirements of the plate(s) folder and, if required, complete any records that form part of an indexing system

P19 promptly report any problems concerning the storage of plate(s) to your manager

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## Make and maintain lithographic printing plates



### Knowledge and understanding

You need to know and understand:

### Health and safety

- K1 your duties and responsibilities for health and safety as defined by any specific legislation covering your job role
- K2 manufacturer's health and safety requirements relevant to your job
- K3 how to stop a machine in the event of an emergency

### Communication

You need to know and understand:

- K4 how to communicate with colleagues

### Workplace policy and practice

You need to know and understand:

- K5 workplace objectives, priorities, standards and procedures

### The identification and assessment of printing options

You need to know and understand:

- K6 the stages in the printing process from pre-press to printed product

### Time and resources

You need to know and understand:

- K7 how to maximise productivity

### The operation of equipment

You need to know and understand:

- K8 the operation of offset lithographic platemaking equipment

### Printing

You need to know and understand:

- K9 the principles of offset lithographic printing and platemaking

### The causes and treatment of common faults

You need to know and understand:

- K10 raw material faults
- K11 processing faults
- K12 machine faults

**Administrative procedures**

You need to know and understand:

K13 recording and reporting

**Environmental**

You need to know and understand:

K14 any specific environmental legislation that covers processes in your company

K15 control of pollution

**Quality assurance and control**

You need to know and understand:

K16 techniques for controlling quality

K17 equipment for controlling quality in offset lithographic platemaking

**Problem solving**

You need to know and understand:

K18 sources of information

**Materials**

You need to know and understand:

K19 the types and characteristics of lithographic printing plates

K20 how to maintain the quality of printing plates during storage and handling

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