

### Overview

This standard is for machine printers with responsibility for setting up flexographic printing units on web presses.

This standard requires a machine printer to be able to set up and maintain flexographic printing units on a web-fed printing machine. The printer needs to have a full working knowledge of flexographic printing units, including issues that arise from the transfer of substrate between units, ink strength, trapping and drying, achieving and maintaining ink densities for different inks on different substrates, and colour control. Practical ability must be demonstrated through the production of printed work of a commercial standard from the flexographic units, usually in the context of multiple units printing process colour.

As well as making ready unit(s) for particular jobs, the printer must also be able to undertake routine maintenance of the unit to ensure it prints to an acceptable quality. Often this will be checked with reference to known quality standards. Other tests may be performed to check ink roll-out is satisfactory and that ghosting, repeat or gear marks are not developing.

A printer must be able to check and assess the quality of print under correct viewing conditions against an approved proof and make whatever adjustments are necessary to the press to achieve and maintain the quality required. On most modern machines, integral colour control hardware and software is installed, allowing the printer to check continually that ink densities, dot measurements or spectral colour meet recognised standards and/or are consistent with an approved 'pass sheet'. As a minimum, the printer must be familiar with colour standards and how such standards are maintained. If equipment for this purpose is in use in company, then the printer must be capable of operating it and understanding it.

### Performance criteria

#### Make flexographic printing units ready for production

- You must be able to:
- P1 check that you have all the details required for the job and authority to start the job
  - P2 check that the machine and your work area are safe and ready for production
  - P3 check that the general condition of the flexographic plate is suitable for production and meets the job imposition requirements
  - P4 fit the plate correctly onto the plate cylinder
  - P5 fit the plate cylinder into the printing unit (where this has been made ready 'off line')
  - P6 fit the correct anilox roller into the printing unit
  - P7 introduce the ink/ink cassette to the printing unit
  - P8 set, test and adjust impression pressure so that a clean, even print is produced
  - P9 position the image correctly
  - P10 make adjustments to the machine settings as necessary to achieve the required job specification and quality standards with regard to colour and registration
  - P11 report promptly to your manager if circumstances beyond your control prevent you from producing a pass sheet to the required standard from the printing unit.

#### Maintain the quality of output from flexographic printing units

- You must be able to:
- P12 regularly check that the output from the flexographic printing unit(s) and press matches the pass sheet and/or is within the tolerance of any standards established for flexographic printing within your company
  - P13 make the correct running adjustments to the unit to achieve the standard set for the job
  - P14 identify and correct the cause of problems in the flexographic printing unit which affect the quality of the image or reduce the rate of output
  - P15 report promptly to your manager if circumstances beyond your control prevent you from achieving the required quality from the flexographic unit(s)

### Knowledge and understanding

You need to know and understand:

### Health and Safety

- K1 your legal duties for health and safety in the workplace as defined by the relevant health and safety legislation
- K2 your duties and responsibilities for health and safety as defined by any specific legislation covering your job role
- K3 workplace policies and procedures
- K4 working practices
- K5 hazards and risks in the workplace, their assessment and the action to take to deal with them
- K6 hazards and risks in your own job, their assessment and the action to take to deal with them - including relevant regulations on the safe handling of equipment and materials.
- K7 manufacturer's health and safety requirements relevant to your job
- K8 what Personal Protective Equipment should be used in your job
- K9 how to stop a machine in the event of an emergency

### Communication

You need to know and understand:

- K10 how to communicate with colleagues, customers and suppliers

### Workplace policy and practice

You need to know and understand:

- K11 workplace objectives, priorities, standards and procedures
- K12 the range of work carried out in the workplace
- K13 the working practices existing in the workplace

### The identification and assessment of printing options

You need to know and understand:

- K14 the stages in the printing process from pre-press to printed product

### Time and Resources

You need to know and understand:

- K15 the different types of resource, including labour, materials, machinery
- K16 the relationship between resource usage and profitability
- K17 how to maximise productivity

K18 the relationship between productivity and competitiveness

**The operation of equipment**

You need to know and understand:

- K19 the range of adjustments and settings on flexographic printing units
- K20 the operating practices and procedures for flexographic printing units
- K21 the use of colour control equipment, including densitometers and spectrophotometers

**Printing**

You need to know and understand:

- K22 the principles of flexographic printing

**The causes and treatment of common faults**

You need to know and understand:

- K23 raw material faults
- K24 processing (printing) faults
- K25 machine faults

**Administrative procedures**

You need to know and understand:

- K26 recording and reporting
- K27 product labelling

**Environmental**

You need to know and understand:

- K28 the legal requirements for the classification, storage, carriage and disposal of waste
- K29 any specific environmental legislation that covers processes in your company
- K30 the existence of any national or international standards on environmental management

**Quality Assurance and Control**

You need to know and understand:

- K31 the main features of quality assurance and quality control systems

K32 techniques for controlling quality, including inspection, testing, sampling, use of input and output controls

K33 equipment for controlling quality in machine printing

K34 light standards for viewing and assessing colour print

### Problem Solving

You need to know and understand:

K35 types of problems that may need to be solved

K36 sources of information

K37 techniques for solving complex problems

K38 techniques for assessing machine faults

### Materials

You need to know and understand:

K39 the types and characteristics of paper, board and other commonly used substrates

K40 the types and characteristics of inks, coatings and coatings

K41 how to maintain the quality of materials during storage and handling

### Proofing

You need to know and understand:

K42 the principal types of proof and their role in the printing process

## PROMP273 (SQA Unit Code – H9JM 04)

### Control flexographic printing units



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