

Overview

This standard is about preparing mesh and stencils for printing.

It applies to you if you work in a digital printing environment and are responsible for preparing, identifying and selecting mesh and stencils in accordance with the job requirements.

This involves:

1. identifying the mesh type and frame size
2. selecting and preparing the frame
3. stretching the mesh (when necessary) and checking the tension
4. checking the condition of mesh material
5. degreasing mesh material
6. applying and drying emulsion
7. positioning the photo-positive
8. exposing, developing and drying the stencil

Prepare stencils for printing

Performance criteria

You must be able to:

Prepare mesh

1. check the job details you have are complete
2. identify and select appropriate mesh types and frame sizes for each job
3. check that the tension of mesh on the frame meets job requirements, stretching it yourself when required
4. check that new or used mesh is in a suitable condition for use
5. prepare mesh so that it is in the appropriate state to accept the stencil, roughening it and degreasing it as appropriate
6. report to the appropriate people straight away, when the frame or mesh is no longer suitable for use

Prepare stencils

7. check that the job details you have are complete
8. check that photo-positives are fit for use
9. apply emulsion to the screen and dry it in line with procedures
10. position photo-positives on screens and confirm that exposure is sufficient to suit stencil systems
11. develop stencils using water at the appropriate temperature and pressure
12. dry stencils at the appropriate temperature, checking that drying is even over the entire surface

Prepare stencils for printing

Knowledge and understanding

You need to know and understand:

Prepare mesh

1. how to identify the machine to be used
2. how to select the frame
3. how to identify the required mesh material
4. why it is important that reclaimed mesh is free from stains and ghost images and how to confirm this
5. why pre-treatment is necessary for new screen meshes and how to select treatments
6. how to treat mesh material
7. why it is necessary to degrease the screen mesh and how to do this
8. how to check that stencil residue has been completely removed from reclaimed screens
9. the health and safety requirements when using chemicals and what personal protective equipment to use
10. to whom to report unsuitable frames and meshes

Prepare stencils

11. the methods to use in the production of the different types of stencil
12. how to select the type of stencil to use
13. how the stencil type affects the quality of print
14. the materials available for the production of stencils
15. what safe light conditions are
16. how to determine the resolving power of materials
17. why it is important to position the photo-positive correctly and how the machine affects positioning
18. how to achieve the optimum exposure
19. the effects of under- and over-exposure
20. how the condition of the stencil affects the printed image
21. what the critical parameters of the stencil are

Scope/range

Prepare mesh

Operators can prepare the mesh consistently over a period of time for the following types of image:

- Line
- Line and half tone
- Single and multicolour

Operators can identify and select mesh according the following requirements:

- Thread count
- Mesh thickness
- Weave

Operators can pre-treat mesh material including:

- Nylon
- Polyester
- Steel

Operators can prepare screens coating systems including:

- Direct
- Direct/indirect
- Indirect

Prepare stencils

Operators prepare stencils consistently over a period of time using the following types of coating methods:

- Indirect
- Direct/indirect
- Direct

Operators can apply emulsion to the screen using the following methods:

- Capillary film; or
- Direct emulsion

Operators can use the following types of stencil imaging systems:

- Direct projection
- Direct to screen
- Conventional

Prepare stencils for printing

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Suite Pre Press

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