

Overview

This standard is about producing image carriers for printing from digital artwork. The image carrier may be for any kind of printing process, including lithography, screen, gravure and flexography.

This is what the standard covers:

Most artwork for printing is created electronically and at some point an image carrier has to be produced. Usually the artwork also has to be imposed in order to make best use of the printing machines and substrate.

Different printing processes require different image carriers and this standard is intended to apply to most image carriers. However, the standard is not intended for extremely simple image carriers, for example small, single colour film output for cutter guides or die making where there is no element of imposition, nor is it intended for digital printing machines such as copier / printers. However printing presses fitted with digital imaging heads are suitable.

Digital artwork, once approved for print, has to be output in imposed format to an image carrier. Any colour separations and bitmap images in the artwork need to be processed correctly to achieve the required reproduction quality when printed. This involves selecting the correct output parameters, including screen ruling and dot type, resolution and screen angle. The image also needs to be correctly positioned on the image carrier.

Performance criteria

You must be able to:

Impose images electronically

1. check you have complete job details
2. select appropriate imposition schemes by taking into account the working size of jobs and the quantity required
3. select appropriate imposition schemes by taking into account printing machine sizes, the number available and the type of printing machine to be used
4. select appropriate imposition schemes by taking into account colour fall and method of finishing
5. retrieve or create imposition templates that meet the requirements of imposition schemes
6. operate equipment in a safe and productive way
7. identify accurate information about data, system and software problems which will affect imposition production and correct them
8. report data, software and system problems which are not your job to deal with without delay
9. create accurate job references and store digital job files in a secure way

Prepare images for processing

10. confirm job files are compatible with the imaging software to be used
11. set appropriate output parameters to meet job specifications with regards to resolution, screen ruling and dot type, screen angle, orientation, position on the image carrier, register or other marks, right / wrong reading, emulsion up / down, separations settings
12. check the right image carrier material is loaded into the output device
13. check the output device are appropriately calibrated for operation
14. complete your work within agreed deadlines

Process data through computer-to-image carrier systems

15. send data to output devices in line with manufacturer's instructions
16. process image carrier after imaging in line with manufacturer's instructions
17. identify accurate information about errors and faults and correct them
18. report errors and faults, without delay, which are not your job to deal with
19. check that outputs meets job requirements for quality and specification
20. store finished outputs in a secure way
21. keep accurate records for quality assurance and administrative purposes

Produce computer-generated image carriers

- as required by your company
- 22. archive digital files as required by your company

Produce computer-generated image carriers

Knowledge and understanding

You need to know and understand:

The law as it affects printing

1. copyright and ownership of images
2. obscenity
3. forgery

Ethical issues relevant to printing

4. confidentiality

Health and safety

5. hazards and risks in your own job, their assessment and the action to take to deal with them
6. manufacturers' and suppliers' health & safety requirements relevant to your job

Security & storage

7. how to safely handle customer material
8. computer system security and virus protection
9. the secure methods of archiving digital and conventional artwork

Communication requirements and processes

10. how to communicate with colleagues
11. how to communicate with customers

Workplace policy and practice

12. workplace objectives, priorities, standards and procedures
13. the identification & assessment of printing options
14. the reasons for selecting one process over another

The operation of equipment

15. the set-up of digital imaging equipment and software
16. the operation of digital imaging equipment and software

Printing

17. the characteristics of sensitive material

Digital imaging

18. colour theory, including additive and subtractive systems such as rgb and

cmyk colour gamuts

19. the relationship between image size, file size and resolution
20. the difference in file formats for digital images and the reasons for using them

Colour management

21. how to set up, maintain and use image profiles

Digital files

22. file conversion techniques
23. file compression and decompression systems
24. file management procedures
25. the causes and treatment of common faults in digital imaging

Environmental considerations

26. the legal requirements for the classification, storage, carriage and disposal of waste
27. any specific environmental legislation that covers processes in your company control of pollution

Quality assurance and control

28. the main features of quality assurance and quality control systems
29. techniques for controlling quality
30. equipment for controlling quality in printing

Problem solving

31. types of problems that may need to be solved
32. sources of information
33. techniques for assessing machine faults

Materials

34. the types & characteristics of paper, board and other commonly used substrates
35. the types & characteristics of inks, toners & coatings
36. the purpose of image carriers
37. the principles of imposition
38. appropriate output parameters including screen ruling and dot type, resolution and screen angle
39. how to determine the correct positioning of images on image carriers

PRODPP129 (SQA Unit Code - H9KJ 04)

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Developed by	Proskills
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Version Number	2
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Date Approved	October 2014
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Indicative Review Date	April 2019
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Validity	Current
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Status	Original
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Originating Organisation	Proskills
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Original URN	PRODPP129
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Relevant Occupations	Originators compositors and print preps; Printers; Printing machine minders and assistants; Printing Trades; Bookbinders and print finishers; Graphic designers; Screen printers
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Suite	Pre Press
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Keywords	digital, print, pre-press, pre press, image, carriers
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