
Overview

This standard is for print finishers using overprinting varnishing machinery. This standard applies to the application of spot or overall varnish that will be dried by infrared drying or ultraviolet curing. They will be expected to set up the equipment and control it whilst running production jobs.

This standard consists of two elements:

- Set up varnishing machinery
- Run varnishing machinery and monitor quality

This is what the standard covers:

- identifying the job requirements
- checking that the varnishing machinery is working properly
- checking that safety devices are working properly
- running the varnishing machinery safely
- adjusting settings, where necessary to maintain the required standard
- checking that work meets the required standard
- identifying faults and taking action to deal with them
- unloading and stacking the finished product

Performance criteria

You must be able to:

Set up varnishing machinery

1. check that you have all the job details you need
2. check that you have enough varnish of the right type for the job
3. report to appropriate people straight away when varnish provided is not correct or sufficient
4. check that screens and stencils are fitted in line with job requirements
5. check that images are positioned in line with job requirements
6. check that materials are loaded as per manufacturer's instructions
7. check that all safety devices are in place and working as they should be
8. produce a sample from the machine and check that:
 - 8.1 varnish is applied in the right position
 - 8.2 varnish is the right thickness
 - 8.3 varnish is even across the printed area
 - 8.4 the printed image remains clean and sharp through the varnish
9. make any necessary adjustments to enable the work to meet the required standard
10. report to appropriate people straight away, when standards cannot be met
11. check that your work area is safe and ready for production

Run varnishing machinery and monitor quality

12. monitor and run varnishing machinery so that it is safe and efficient and at the required speed with minimum downtime
13. keep up sufficient supplies of materials so that runs continue as long as necessary
14. load and unload materials in line with organisational and manufacturer's requirements
15. check at regular intervals that materials meet the specification, and varnished output is forwarded to the next stage in accordance with production requirements
16. check at regular intervals that the varnish quality meets the required quality standards for strength, evenness, register, position and size
17. follow the correct procedures for the removal of waste
18. record required production and quality assurance details, checking information is accurate

Knowledge and understanding

You need to know and understand:

Health and safety

1. your duties and responsibilities for health and safety as defined by any specific legislation covering your job role
2. regulations such as those covering manual handling, noise at work, personal protective equipment, safe handling of equipment and materials, and the safe use of computer equipment
3. workplace policies and written operating procedures relating to written health and safety policy statement, provision, use and processes of workplace equipment, training, prohibited equipment, young persons, safe systems of work

Working practices

4. the way you actually do your job, more particularly the activities and techniques and the way that materials and equipment are used
5. typical hazards and risks in the printing industry and those that relate to your own job
6. risk assessment techniques and the action to take to deal with them
7. codes of practice relevant to your role and where to obtain information on them
8. manufacturers' and suppliers' health and safety instructions and advice for operating machinery, guarding machinery and data sheets for substances harmful to health
9. the requirements for personal presentation including personal hygiene, suitable clothing and accessories, fitness for work, such as not under the influence of drugs, alcohol or medication, smoking policies in the workplace
10. how to stop a machine in the event of an emergency

Varnishing machinery

11. the purpose of overall and spot varnishing
12. the information and materials required to meet the job specification
13. safety devices found on varnishing machinery, their purpose and how to check they are functional
14. how to set up and adjust varnishing machinery to meet job requirements
15. the causes of common faults with screens, stencils and varnishes and how to rectify them including those relating to strength, unevenness, register, position and size

The causes and treatment of common faults

16. the causes of faults with raw materials, processes and machinery used in your business and how to identify and treat them

Quality assurance and control

17. techniques for controlling quality including inspection, testing, sampling and use of input and output controls
18. the impact that faults, in the process you are involved with, have on later processes and the quality of the end product

Problem solving

19. types of problems that may need to be solved including machinery - electrical, mechanical, electronic, settings, component wear and tear, consumables needing replacement, materials - defects, shortages, incompatibility, systems, organisation and lack of skills or knowledge
20. sources of information for solving problems including manufacturer's documentation / troubleshooting guides, colleagues, tutors / trainers / mentors and reference material - in house or external, such as the internet
21. techniques for solving complex problems including changing one thing only at a time and assessing effect of the change, using the problem solving cycle, root cause analysis, brainstorming and visual representations, such as fishbone / mindmap diagrams
22. techniques for assessing machine faults including observation, listening, inspection of product, reports from colleagues / log reports, touch or smell (if safe to do so) and testing, such as electrical, mechanical, electronic

Materials

23. the types of paper, board and other commonly used substrates including commonly used uncoated, coated, embossed papers and boards
24. the grammage, thickness, opacity, brightness/whiteness, strength, dimensional stability, gloss of paper, board and other commonly used substrates
25. the types of varnish and their drying times
26. the uses of stencils, screens and solvents for varnishing
27. how to maintain the quality of materials and protect them from damage, humidity and temperature during storage and handling
28. how to label and identify materials

Scope/range

In addition to being able to produce commercially acceptable work, operators should be competent to operate the equipment to apply varnish to areas of various sizes, including different page and image sizes, using a range of varnishing materials.

Operators should be able to deal with all running problems within his/her responsibility. Operators are also responsible for ensuring that the machine is in a safe and clean condition for normal production operations.

PROPF411 (SQA Unit Code - H9L8 04)

Set up and control varnishing machinery



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Suite Post Press

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