
Overview

This standard identifies the competences you need to apply yacht or boat liquid surface coatings to various substrates, using brushes or rollers, in accordance with approved procedures. You will be required to access the appropriate contractual and other specifications, to check that these are of the latest issue and to extract all necessary information in order to carry out the coating operations. You will be required to check that all surfaces to be coated have been prepared in accordance with the process specification and that any necessary exclusion, containment, masking, protection and ventilation requirements are implemented. You will be expected to select the appropriate brushes and/or rollers and to ensure that they are fit for purpose. You will be expected to apply a variety of coatings in a number of boatyard environments.

Your responsibilities will require you to comply with organisational policy and procedures for the yacht or boat coating activities undertaken and to report any problems with these activities that you cannot personally resolve, or are outside your permitted authority, to the relevant people. You will be expected to work with a minimum of supervision, taking personal responsibility for your own actions and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will provide a good understanding of your work and will provide an informed approach to applying liquid surface coatings to yachts or boats using manual methods. You will understand the surface coating procedures and techniques used and their application. You will know about the substrates, their preparation requirements, coating materials and their preparation requirements, in sufficient depth to provide a sound basis for carrying out the activities, correcting faults and for ensuring that the coated surfaces are to the required standards and to the customer's expectations.

You will understand the safety precautions required when carrying out the yacht or boat manual surface coating operations. You will be required to demonstrate safe working practices throughout and will understand the responsibility you owe to yourself and to others in the workplace.

**Performance
criteria**

You must be able to:

- P1 work safely at all times, complying with health and safety legislation, regulations, directives and other relevant guidelines
- P2 ensure the material surfaces to be treated are suitably prepared for the finishing operations to be carried out
- P3 check that the finishing equipment and coatings are set up and maintained at satisfactory operating conditions and levels
- P4 carry out the treatment process in accordance with operating procedures and the component specification requirements
- P5 ensure that the treated workpiece achieves the required characteristics and meets the finishing specification
- P6 deal promptly and effectively with problems within your control and report those that cannot be solved
- P7 dispose of waste and excess materials in line with agreed organisational procedures
- P8 shut down the finishing equipment to a safe condition on completion of the processing activities

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Knowledge and understanding

You need to know and understand:

- K1 the safe working practices and procedures to be observed when carrying out manual surface coating activities on yacht or boat components (such as general workshop and site safety; appropriate personal protective equipment (PPE); protecting other workers from the effects of the work, safety in enclosed/confined spaces, working at height, use of mobile elevated work platforms (MEWPs), atmospheric controls)
- K2 how to recognise and deal with emergencies and the procedures to be followed (such as methods of safely evacuating and closing down of compartments in the case of fire or other major incident, first aid, fire fighting and resuscitation of personnel)
- K3 statutory requirements, risk assessment procedures and relevant requirements of HASAWA, COSHH, (such as The Management of Health and Safety at Work Regulations, The Provision and use of Work Equipment Regulations; The Confined Space Regulations; The Special Waste Regulations; The Pollution Prevention and Control Regulations; The Water Resources Act)
- K4 the hazards associated with the storage of, the preparation of, and the disposal of surface coating products (including the information to be found in manufacturers' data sheets and in Chemical Hazard Information and Packaging for Supply (CHIPS) data sheets)
- K5 the requirements for working in confined spaces and the importance of emergency procedures and safe systems of work (including permits to work, Required Air Quantities (RAQs) and local exhaust ventilation (LEV)) to maintain safe conditions; the provision of adequate and safe lighting and avoidance of sources of ignition
- K6 the personal protective equipment (PPE) to be worn during the surface coating activity
- K7 the characteristics of and the applications for, yacht or boat coatings products (including the use of manufacturers' data sheets, requirements for the application of particular coating systems, and contractual specifications)
- K8 the need to ensure that the substrates have been prepared correctly for the coatings to be applied
- K9 the importance of maintaining appropriate environmental conditions for the application and curing of the surface coating products
- K10 the time intervals that are required between coats and why these must be adhered to
- K11 the procedures for the handling and safe use of coating materials and solvents
- K12 the use of paint thinners to adjust the viscosity of the product being applied
- K13

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- K14 selection of the application equipment, to suit the materials and the finish required (to include brushes, rollers, paint pads, suitable containers)
- K15 the techniques required to avoid defects arising from application errors or problems for the application of yacht or boat surface coating products to a variety of surfaces
- K16 the correct use of stripe coating
- K17 the requirements for working afloat, on outer bottoms and at heights
- K18 the procedure to contain and to clear away spillages and the safe and appropriate disposal of waste materials
- K19 the identification of faults in application and their causes and correction
- K20 simple non-destructive testing procedures to ensure that colour, gloss, adhesion and other required performance qualities are achieved
- K21 the extent of your own responsibility and whom you should report to if you have problems that you cannot resolve

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Additional Information

Scope/range related to performance criteria

You must be able to:

1. Ensure that the appropriate measures are implemented before commencing application of the surface coatings, to include carrying out **all** of the following:
 - 1.1. adhere to procedures or systems in place for risk assessment, COSHH, CHIPS data, personal protective equipment and other relevant safety regulations
 - 1.2. ensure that appropriate exclusion zones and containment facilities are set up
 - 1.3. confirm that appropriate emergency arrangements are in place for any confined space or hazardous work (where applicable)
 - 1.4. ensure that brushes, rollers and other tools are correctly prepared for the paint application operations
 - 1.5. carry out masking up and provide weather protection for the areas to be coated
 - 1.6. provide a suitable means for curing the coating (such as heating, air supply to assist curing)
 - 1.7. leave the work area in a safe and clean condition on completion of the activities

2. Apply coatings, by brush or roller, to yacht or boat structures incorporating **six** of the following features:
 - 2.1. corners (such as outside corners, edges, 'obscured' corners)
 - 2.2. level surfaces
 - 2.3. vertical flat surfaces
 - 2.4. horizontal flat surfaces
 - 2.5. inclined surfaces
 - 2.6. overhead surfaces
 - 2.7. curved surfaces
 - 2.8. round parts
 - 2.9. slender components
 - 2.10. machinery

3. Apply coatings, by brush or roller, in **six** of the following situations:
 - 3.1. confined spaces (such as tanks, voids, double bottoms)
 - 3.2. internal spaces
 - 3.3. at height
 - 3.4. covered exterior environment
 - 3.5. exposed exterior environment

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- 3.6. outer bottoms
- 3.7. hull bottoms
- 3.8. weather decks

4. Apply stripe coatings to **all** of the following:
 - 4.1. corners/outside corners
 - 4.2. 'obscured' corners and edges
 - 4.3. edges
 - 4.4. structural joints

5. Apply liquid surface coatings in **both** of the following environments:
 - 5.1. ashore
 - 5.2. afloat

6. Apply liquid surface coatings to **six** of the following yacht or boat substrates
 - 6.1. uncoated composite material
 - 6.2. previously coated composite material
 - 6.3. uncoated wood
 - 6.4. previously coated wood
 - 6.5. uncoated compliant polymers
 - 6.6. previously coated compliant polymers
 - 6.7. uncoated ferrous material
 - 6.8. uncoated non-ferrous material
 - 6.9. previously coated ferrous material
 - 6.10. previously coated non-ferrous material
 - 6.11. other coated or uncoated materials

7. Apply **five** of the following liquid surface coatings:
 - 7.1. holding primer (touch up)
 - 7.2. solvent based epoxies
 - 7.3. water based acrylics
 - 7.4. anti-fouling coatings (touch up)
 - 7.5. alkyds/silicone alkyds
 - 7.6. bituminous paints
 - 7.7. vinyl tar paints
 - 7.8. tar epoxy paints
 - 7.9. shop primer (touch up)
 - 7.10. non-skid deck paints
 - 7.11. chlorinated rubber paints
 - 7.12. two component polyurethane paints
 - 7.13. zinc ethyl silicate paint
 - 7.14. mastics

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8. Apply coatings manually, using the appropriate techniques to achieve **all** of the following:
 - 8.1. correct film thickness
 - 8.2. smooth surface free from runs or drips
 - 8.3. uniform and complete coverage of the surface to be coated
 - 8.4. correct gloss level (where appropriate)

9. Check coating thickness using **one** of the following methods:
 - 9.1. wet film thickness gauge (combs)
 - 9.2. dry film thickness gauge (cured coating)

10. Apply liquid surface coatings to yacht or boat components, in accordance with **one** of the following:
 - 10.1. BS or ISO standards and procedures
 - 10.2. customer (contractual) standards and requirements
 - 10.3. company standards and procedures
 - 10.4. paint/covering manufacturer's recommendations
 - 10.5. recognised compliance agency/body's standards (such as Lloyds, Boat Safety Scheme, BMEA Code)
 - 10.6. other accepted international standards

11. Reinstate the work area on completion of the manual surface coating activities, to include carrying out **all** of the following:
 - 11.1. cleaning all brushes, rollers and containers and returning all tools and excess materials
 - 11.2. removing protection and exclusion arrangements (if no longer required)
 - 11.3. completing all relevant documentation (such as condition/pre-treatment of substrates, coating material preparation, equipment settings, confirmation of standard of finish)

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