Part 8 Services and internal finishing

# Chapter 8.5

# Painting and decorating

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# SCOPE

This Chapter gives guidance on meeting the Technical Requirements and recommendations for painting and decorating.

# **DESIGN STANDARDS**

# 8.5 - D1 Design shall meet the Technical Requirements

Design that follows the guidance below will be acceptable for painting and decorating.

# SELECTION OF PAINT AND **DECORATIVE SYSTEMS**

# 8.5 - D2 Paint and decorative systems shall provide an acceptable finish

Paint or decorative systems should be selected and applied in accordance with BS 6150 'Code of Practice for painting of buildings'.

Items to be taken into account include: (a) timber

# **DECORATIVE SYSTEMS**

Decorative systems should be compatible with the surface to be decorated which may be:

- bare timber
- stained timber
- primed timber
- preservative treated timber
- naturally durable species.

### STAIN SYSTEMS

Stain systems for timber should be either:

- a 2 coat system, or
- in accordance with manufacturers' recommendations.

### PAINT SYSTEMS

Paint systems for timber should be either:

- at least one priming coat, one undercoat and one finishing coat, or
- proprietary systems in accordance with manufacturers' recommendations.

# PRESERVATIVE TREATMENT

Painting or staining of external timber is required to provide protection and stability even if the timber is preservative treated, unless the preservative treatment manufacturer confirms otherwise (see Clause D3).

# **MOISTURE CONTENT**

Wood with moisture content above 18% is not suitable for priming/painting.

### (b) masonry and rendering

Paint or decorative finishes should not be applied to external brickwork or render where the finish could trap moisture in the construction causing frost damage or sulfate attack or other detrimental effects.

(This applies particularly to bricks which have no upper limit on their soluble salt content. The brick manufacturer's written agreement to the application of any finish should be obtained in such cases.)

Paint systems for external brickwork or render, including proprietary surface preparations, should be appropriate for the substrate in accordance with the manufacturer's recommendations.

Where the decorative system is part of the weather resistance of the rendering, it should be assessed in accordance with Technical Requirement R3.

# (c) metal

# STRUCTURAL STEEL

Guidance on the protection of structural steel is given in BS EN ISO 12944 'Paints and varnishes. Corrosion protection of steel structures by protective paint systems' and BS EN ISO 14713 'Protection against corrosion of iron and steel in structures'.

Internal and external steel which has not been galvanized should be protected with at least two coats of zinc phosphate primer and a suitable decorative finish, where required.

Internal and external steel which has been galvanized to a rate of at least 460g/m<sup>2</sup> is acceptable without further protection. Steel galvanized to a rate of less than  $460 \text{g/m}^2$  should be protected with at least two coats of zinc phosphate primer and a suitable decorative finish, where required.

Where steelwork is to be protected by intumescent paint for fire resistance, the manufacturer's recommendations should be followed.

# **GUTTERS**

Insides of metal gutters (other than aluminium) should be painted with a suitable protective paint.

# NON-FERROUS PIPEWORK

Copper pipes, etc should be painted with the normal decorative finishes.

### (d) plaster and plasterboard

Plaster and plasterboard surfaces should be prepared in accordance with manufacturers' directions for: plastic compound finishes

- wallpapers
- emulsion paints, etc.

# (e) proprietary building boards

- Paint systems should be either: at least one priming coat, one undercoat
- and one finishing coat, or
- proprietary systems in accordance with manufacturers' recommendations.

Other finishes should be applied in accordance with manufacturers' recommendations.

# COMPATIBILITY

# 8.5 - D3 Paint and decorative systems shall be compatible with timber species and treatments

Items to be taken into account include: (a) preservatives

Paint and stain systems specified should be compatible with any timber preservatives

that have been used. Where appropriate, manufacturers' recommendations should be obtained and followed.

### (b) stains and varnishes

Stains and varnishes should be suitable for the species of timber to which they are applied. Where appropriate, manufacturers' recommendations should be obtained and followed.

BS 6952 gives recommendations on the use of exterior wood coating systems.

### (c) glazing compounds

Linseed-oil putty should not be specified for glazing rebates in windows and doors treated with stains.

Appropriate sealants should be used in accordance with manufacturers' recommendations.

# **PROVISION OF** INFORMATION

# 8.5 - D4 Designs and specifications shall be produced in a clearly understandable format and include all relevant information

Design information should include:

- specification of preparatory work
- schedule of finishes.

# 8.5 - D5 All relevant information shall be distributed to appropriate personnel

Ensure that design and specification information is issued to site supervisors and relevant specialist subcontractors and/ or suppliers.

# MATERIALS STANDARDS

### 8.5 - M1 All materials shall: (a) meet the Technical Requirements (b) take account of the design

Materials that comply with the design and the guidance below will be acceptable for painting and decorating.

Materials for painting and decorating should comply with all relevant standards, including those listed below. Where no standard exists, Technical Requirement R3 applies (see Chapter 1.1 'Introduction to the Standards and Technical Requirements').

References to British Standards and Codes of Practice include those made under the Construction Products Directive (89/106/ EEC) and, in particular, appropriate **European Technical Specifications** approved by a European Committee for Standardisation (CEN).

# PRESERVATIVES, STAINS AND PAINTS

## 8.5 - M2 Materials for use on nondurable building elements shall be selected to provide adequate protection

Items to be taken into account include: (a) preservatives

Timber preservatives should be selected in accordance with Chapter 2.3 'Timber preservation (natural solid timber)' (Materials).

# (b) knotting

BS 1336 Specification for knotting.

However, knotting may not be effective against heavy exudation of resin which may disrupt finishes.

# (c) stains

BS 6952 Exterior wood coating systems.

# (d) primers

- BS 4756 Specification for ready-mixed aluminium priming paints for woodwork
- BS 5082 Specification for water-borne priming paints for woodwork
- BS 5358 Specification for solvent-borne priming paints for woodwork.

# (e) proprietary paint systems

Paint systems should be suitable in all respects for their intended use and situation. Selection should be in accordance with manufacturers' recommendations.

# PREFABRICATED JOINERY

### 8.5 - M3 Prefabricated joinery shall be provided with adequate protection Protection in accordance with Clause M2 may be required.

Prefabricated joinery to be painted or stained should have been primed or given a first coat of stain or sealer before fixing.

Where primer is damaged, surfaces should be re-primed.

# SITEWORK STANDARDS

# 8.5 - S1 All sitework shall: (a) meet the Technical Requirements (b) take account of the design (c) follow established good practice and workmanship

Sitework that complies with the design and the guidance below will be acceptable for painting and decorating.

# PREFABRICATED COMPONENTS

### 8.5 - S2 Prefabricated components to be painted or decorated shall be of suitable quality and adequately prepared

Components to be painted, stained or sealed should have been primed (if to be painted) or given a first coat of stain or sealer before fixing.

Prefabricated joinery to be decorated should be supplied primed. Complete decoration should be carried out within the time specified by the manufacturer.

Components supplied untreated should have been stored under cover and be primed as soon as possible after delivery.

Where primer is damaged, surfaces should be re-primed.

# STORAGE ON SITE

# 8.5 - S3 Materials and prefabricated components stored on site shall be adequately protected

Items to be taken into account include: (a) painting materials

Where it is necessary to store materials, the storage should ensure that the materials remain fit for use in the dwelling.

Water-borne paints, primers and stains should be protected against frost before use. Painting materials should not be used if they have been damaged by frost.

# (b) prefabricated components

Where it is necessary to store components, the storage should ensure that they remain fit for use in the dwelling.

# TIMING

### 8.5 - S4 Work shall only be carried out when conditions and surfaces are appropriate

Items to be taken into account include:

# (a) external work

External paintwork should not be carried out under weather conditions which may adversely affect the completed work.

Surfaces should be free from frost before painting commences and while paint dries.

Coatings should not be applied to moist surfaces, nor when rain is expected before the paint surface has set.

### (b) internal work

When decorating internal walls, cold surfaces may cause problems with water-borne paints, even though the air temperature may be above freezing.

Surfaces should be free from condensation before applying paint. Coatings, especially those which are oil-based, should not be applied until all moisture has evaporated from the surface. Internal paintwork should be left until the risk of dust and damage is minimal.

### (c) staining

Staining should be carried out when the substrate is dry to ensure adequate dispersal and absorption.

# QUALITY OF FINISH

8.5 - S5 Workmanship shall ensure a satisfactory finish

Items to be taken into account include: (a) painting on wood

# SURFACE PREPARATION

Door and window furniture, sockets and light switches should be removed before painting to avoid over-painting and splashing.

Unsound wood, loose or highly resinous knots, etc should be cut out, replaced and made good.

Tool and machine marks and raised grain should be removed. Where a smooth surface is required, re-finish with glasspaper and fillers, as appropriate.

Nail holes, splits and other imperfections should be stopped. Sharp arrises should be rubbed down to ensure an even coating.

Surfaces to be painted should be free from dirt, dust and moisture.

All joinery delivered pre-primed to the site should meet the requirements given under PRIMING below.

Any surfaces showing deterioration of primer or seal coat should be rubbed down and a second coat applied.

Prefabricated joinery should have the first coat of paint or stain applied before fixing.

# PRESERVATIVES

Before application, primer or paint finishes should be checked for compatibility with any timber preservatives that have been used.

Where appropriate, manufacturers' recommendations for selection and use of materials should be obtained and followed.

# KNOTTING

All knots should be sealed using knotting applied by brush or in the case of joinery part of the priming process.

# PRIMING

One full round coat of primer should be applied to all surfaces to be painted and to hidden surfaces of external woodwork.

Cut ends of external woodwork, rebates for glazing and backs of glazing beads should be primed.

# UNDERCOAT AND GLOSS

Paint should not be thinned beyond the limits recommended by the manufacturer.

Unless an alternative recommendation is made by the manufacturer, the following should be applied:

- at least one undercoat (2 coats preferred), and
- one finishing coat.

The undercoat should provide a suitable base to ensure a satisfactory finishing coat. Additional undercoats or finishing coats are at the discretion of the Builder.

Each application should be a full round coat.

Surfaces should be lightly rubbed down between coats with glasspaper and each coat should be applied within one month of the application of the previous coat.

# (b) staining and varnishing on wood SURFACE PREPARATION

Before application, stains should be checked for compatibility with any timber preservatives that have been used. Stains should not be applied to door or window rebates to be glazed with linseed-oil putty.

Surfaces to be stained or varnished should be prepared to provide adequate adhesion and acceptable appearance.

# APPLICATION

Low-build or high-build stain should be applied as recommended by the manufacturer to provide appropriate cover.

Varnish should be applied in at least three coats on interior surfaces. Exterior varnish (yacht or high gloss) should be applied in at least four coats. Surfaces should be sanded between coats.

# (c) painting on metal STRUCTURAL STEEL

Internal and external steel which has not been galvanized should be protected with at least two coats of zinc phosphate primer and a suitable decorative finish, where required.

Internal and external steel which has been galvanized to a rate of at least 460g/m<sup>2</sup> is acceptable without further protection. Steel galvanized to a rate of less than 460g/m<sup>2</sup> should be protected as steel which has not been galvanised.

Where steelwork is to be protected by intumescent paint for fire resistance, the manufacturer's recommendations should be followed.

# **GUTTERS**

Insides of metal gutters (other than aluminium) should be painted with a suitable protective paint.

# **NON-FERROUS PIPEWORK**

Copper pipes, etc should be painted with the normal decorative finishes.

# (d) painting on other surfaces EXTERNAL MASONRY AND

# RENDERING

Only materials specified should be used for external masonry or rendering.

Substrates should be clean and free from dust or loose deposits. Surfaces with varying suction may require stabilizing with a treatment recommended by the manufacturer.

# PLASTER AND SKIM COAT ON PLASTERBOARD

Surfaces should be visibly sound and without powdering or crumbling.

All joints should be completed and any cracks, nail holes and surface imperfections filled. The surface should be rubbed down with glasspaper, if necessary, and dusted.

Surfaces require stabilizing, either with a coat of thinned paint or with a sealer recommended by the manufacturer.

Paint should then be applied in not less than two coats.

# DRY LINING

A seal coat should be applied and surfaces prepared for decoration in accordance with manufacturers' recommendations.

# BUILDING BOARD

Where painting is specified, surfaces should be primed or sealed and finished with at least two coats.

The first coat should be as recommended by the board manufacturer.

# (e) surface finish

# QUALITY OF COMPLETED WORK

All paintwork should be complete. Surfaces should be evenly coated and neither background nor undercoat should be visible.

Where brush marks, runs or abnormal roughness occur, work should be rubbed down and re-painted. Spilt, splashed or badly applied paint should be removed.

On completion, there should be no paintmarks on any surfaces not intended to be painted. On painted surfaces there should be no conspicuous runs or prominent brush marks. Ironmongery removed before painting should be re-fixed afterwards.

# PROTECTION

Completed work should be protected against dirt and damage until the dwelling is handed over.

# WALLPAPERING

# 8.5 - S6 Wallpapering shall achieve a neat, consistent appearance

Items to take into account include:

### (a) surface preparation

Before any wallpapering is started, check that surfaces are dry and sufficiently even and smooth. Surfaces should be sized or sealed, if necessary.

To prevent stripping of the board lining paper, dry lining should be sized in accordance with manufacturers' recommendations.

Where proprietary coverings are used, any preparatory treatment recommended by the manufacturer should be applied.

### (b) choice of adhesive

Adhesive of a type recommended by the wallpaper manufacturer should be used.

### (c) workmanship

Wallpaper and coverings should be properly aligned and neatly fixed.

Electrical switch plates should be temporarily removed and the papering accurately trimmed so that it will tuck behind the switch plate on completion. Papers containing metal backings should not be tucked behind switch plates.

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