

Foster Wilson Size

# Petersfield Festival Hall

Specification

Main Hall Rigging Works

P2 (Tender)

26-01-2024

## **C20 Demolition**

### **General requirements**

#### **110 Desk study/ Survey**

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1. **Scope:** Before starting deconstruction/ demolition work, examine available information, and carry out a survey of:
  - 1.1. the structure or structures to be deconstructed/ demolished,
  - 1.2. the site on which the structure or structures stand, and
  - 1.3. the surrounding area.
2. **Report and method statements:** Submit, describing:
  - 2.1. Form, condition and details of the structure or structures, the site, and the surrounding area.
  - 2.2. Type, location and condition of features of historical, archaeological, geological or ecological importance.
  - 2.3. Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures, or by noise, vibration and/ or dust generated during deconstruction/ demolition.
  - 2.4. Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.
  - 2.5. Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal.
  - 2.6. Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.
  - 2.7. Proposed programme of work, including sequence and methods of deconstruction/ demolition.
  - 2.8. Details of specific pre-weakening required.
  - 2.9. Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.
  - 2.10. Arrangements for control of site transport and traffic.

#### **120 Extent of deconstruction/ demolition**

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1. **General:** Subject to retention requirements specified elsewhere, deconstruct/ remove/demolish:  
Existing rigging system – refer to Theatreplan for details  
From new padstone/foundation and new steels refer to Conisbee for details

#### **150 Features to be retained**

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1. **General:** Keep in place and protect the following: None.
2. Project the stage surface
3. All existing services and fixtures and fittings

## Services affected by deconstruction/ demolition

### 210 Services regulations

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1. Work carried out to or affecting new and/ or existing services: Carry out in accordance with the byelaws and/ or regulations of the relevant Statutory Authority.

## Deconstruction/ demolition work

### 310 Workmanship

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1. Standard: Demolish structures in accordance with BS 6187.
2. Operatives
  - 2.1. Appropriately skilled and experienced for the type of work.
  - 2.2. Holding, or in training to obtain, relevant CITB Certificates of Competence.
3. Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.

### 320 Gas or vapour risks

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1. Precautions: Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.

### 330 Dust control

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1. General: Reduce airborne dust by periodically spraying deconstruction/ demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.
2. Lead dust: Submit method statement for control, containment and clean-up regimes.

### 331 Internal protection

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1. Provide sealed internal hoarding within entrance foyer to prevent dust into adjoining areas
2. Hoarding will also separate public foyer which will remain in use during the works
3. Internal arrangement to be agreed with client

### 340 Health hazards

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1. Precautions: Protect site operatives and general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.

### **360 Structures to be retained**

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1. **Extent:** Existing concrete encased beams at high level
2. **Parts which are to be kept in place:** Protect.
3. **Interface between retained structures and deconstruction/ demolition:** Cut away and strip out with care to minimize making good.

### **370 Partly demolished structures**

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1. **General:** Leave in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrolled collapse. Make secure outside working hours.
2. **Temporary works:** Prevent overloading due to debris.
3. **Access:** Prevent access by unauthorized persons.

### **380 Dangerous openings**

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1. **General:** Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.
2. **Access:** Prevent access by unauthorized persons.

### **390 Asbestos-containing materials – known occurrences**

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1. **General:** Materials containing asbestos are known to be present in: Refer to asbestos register.
2. **Removal:** By contractor licensed by the Health and Safety Executive, and prior to other works starting in these locations

### **391 Asbestos-containing materials – unknown occurrences**

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1. **Discovery:** Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.
2. **Removal:** Submit statutory risk assessments and details of proposed methods for safe removal.

### **410 Unforeseen hazards**

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1. **Discovery:** Give notice immediately when hazards such as unrecorded voids, tanks, chemicals, are discovered during deconstruction/ demolition.
2. **Removal:** Submit details of proposed methods for filling, removal, etc.

## **Materials arising**

### **510 Contractor's property**

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1. **Components and materials arising from the deconstruction/ demolition work:** Property of the Contractor except where otherwise provided.
2. **Action:** Remove from site as work proceeds where not to be reused or recycled for site use.

### **511 Employer's property**

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1. **Components and materials to remain the property of the Employer:** To be confirmed on site
2. **Protection:** Maintain until these items are removed by the Employer or reused in the Works, or until the end of the Contract.

3. Special requirements: none

### **520 Recycled materials**

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1. Materials arising from deconstruction/ demolition work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.
2. Evidence of compliance: Submit full details and supporting documentation.
  - 2.1. Verification: Allow adequate time in programme for verification of compliance.

Ω End of Section

## M20 Plastered/ rendered/ roughcast coatings

### Types of coating

#### Making good to existing walls/ceiling after installation of new steelwork

##### 210 Lightweight gypsum plaster

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1. Description:
2. Substrate: Concrete blockwork as section F10
  - 2.1. Preparation: Bonding agent recommended by plaster manufacturer
3. Manufacturer: British Gypsum
4. Undercoats: To BS EN 13279-1.
  - 4.1. Product reference: Thistle coat or similar approved
  - 4.2. Thickness (excluding dubbing out and keys): Two coat 13 mm overall
5. Final coat: Finish plaster to BS EN 13279-1.
  - 5.1. Thickness: 2-3 mm.
  - 5.2. Finish: Smooth.
6. Accessories: Beads and stops

##### 280 Gypsum plaster skim coat on plasterboard

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1. Plasterboard: 12.5 mm
  - 1.1. Preparation: Bonding agent recommended by plaster manufacturer
2. Plaster: Board finish/ finish plaster to BS EN 13279-1.
  - 2.1. Manufacturer: British gypsum
    - 2.1.1. Product reference: multi finish or similar approved
  - 2.2. Thickness: 2mm
  - 2.3. Finish: Smooth.
3. Accessories: Beads and stops

### General - Not Used

### Materials and marking of mortar

##### 495 Mixing

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1. Render mortars (site prepared)
  - 1.1. Batching: By volume. Use clean and accurate gauge boxes or buckets.
  - 1.2. Mix proportions: Based on damp sand. Adjust for dry sand.
  - 1.3. Lime:sand: Mix thoroughly. Allow to stand, without drying out, for at least 16 hours before using.
2. Mixes: Of uniform consistence and free from lumps. Do not retemper or reconstitute mixes.
3. Contamination: Prevent intermixing with other materials.

##### 497 Cold weather

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1. General: Do not use frozen materials or apply coatings on frozen or frost bound substrates.

2. **External work:** Avoid when air temperature is at or below 5°C and falling or below 3°C and rising. Maintain temperature of work above freezing until coatings have fully hardened.
3. **Internal work:** Take precautions to enable internal coating work to proceed without detriment when air temperature is below 3°C.

## Preparing substrates

### 510 Suitability of substrates

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1. Soundness: Free from loose areas and significant cracks and gaps.
2. Cutting, chasing, making good, fixing of conduits and services outlets and the like: Completed.
3. Tolerances: Permitting specified flatness/ regularity of finished coatings.
4. Cleanliness: Free from dirt, dust, efflorescence and mould, and other contaminants incompatible with coatings.

### 527 Raking out for key

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1. Joints in existing masonry: Rake out to a depth of 13 mm (minimum).
  - 1.1. Dust and debris: Remove from joints.

### 531 Roughening for key

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1. Substrates: Roughen thoroughly and evenly.
  - 1.1. Depth of surface removal: Minimum necessary to provide an effective key.

### 541 Bonding agent application

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1. General: Apply evenly to substrate to achieve effective bond of plaster/ render coat. Protect adjacent joinery and other surfaces.

### 551 Removal and renewal of existing plaster/ render

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1. Location and extent: Agree, at least on a provisional basis, before work commences. Minimize extent of removal and renewal.

### 556 Removing defective existing render

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1. Render for removal: Detached, hollow, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
2. Removing defective render: Cut out to regular rectangular areas with straight edges.
  - 2.1. Horizontal and vertical edges: Square cut or slightly undercut.
  - 2.2. Bottom edges to external render: Do not undercut.
  - 2.3. Render with imitation joints: Cut back to joint lines.
3. Cracks
  - 3.1. Fine hairline cracking/ crazing: Leave.
  - 3.2. Other cracks: Obtain instructions
4. Dust and loose material: Remove from exposed substrates and edges.

### 566 Removing defective existing plaster

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1. Plaster for removal: Detached, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
2. Stained plaster: Remove
3. Removing defective plaster. Cut back to a square, sound edge.
4. Faults in substrate (structural deficiencies, damp, etc.): Submit proposals.
5. Cracks
  - 5.1. Fine hairline cracking/ crazing: Leave.
6. Dust and loose material: Remove from exposed substrates and edges.



## **568 Existing damp affected plaster/ render**

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1. Plaster affected by rising damp: Remove to a height of 300 mm above highest point reached by damp or 1 m above dpc, whichever is higher.
2. Perished and salt contaminated masonry
  - 2.1. Mortar joints: Rake out.
  - 2.2. Masonry units: Submit proposals.
3. Faults in substrate (structural deficiencies, additional sources of damp, etc.): Submit proposals.
4. Drying out substrates: Establish drying conditions. Leave walls to dry for as long as possible before plastering.
5. Dust and loose material: Remove from exposed substrates and edges.

## **Backings/ beads/ joints**

### **600 Additional framing supports for backings**

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1. Framing: Accurately position and securely fix to give full support to fixtures, fittings and service outlets.
2. Support board edges and perimeters: As recommended by board manufacturer to suit type and performance of board.

### **612 Joints in plasterboard backings**

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1. Ceilings
  - 1.1. Bound edges: At right angles to supports and with ends staggered in adjacent rows.
  - 1.2. Two layer boarding: Stagger joints between layers.
2. Partitions/ walls
  - 2.1. Vertical joints: Centre on studs. Stagger joints on opposite sides of studs.
    - 2.1.1. Two layer boarding: Stagger joints between layers.
  - 2.2. Horizontal joints
    - 2.2.1. Two layer boarding: Stagger joints between layers by at least 600 mm. Support edges of outer layer.
3. Joint widths (maximum): 3 mm.

### **630 Beads/ stops for internal use**

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1. Standard: In accordance with BS EN 13914-2, Table 2.
2. Material: Galvanized steel to BS EN 13658-1

### **640 Beads/ stops generally**

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1. Location: External angles and stop ends except where specified otherwise.
2. Corners: Neat mitres at return angles.
3. Fixing: Secure, using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
  - 3.1. Beads/ stops for external render: Fix mechanically.
4. Finishing: After coatings have been applied, remove surplus material while still wet, from surfaces of beads/ stops exposed to view.

### **646 Crack control at junctions between dissimilar solid substrates**

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1. Locations: Where defined movement joints are not required. Where dissimilar solid substrate materials are in same plane and rigidly bonded or tied together.
2. Crack control materials

- 2.1. Isolating layer: Building paper to BS 1521.
- 2.2. Metal lathing: Internally: Galvanized steel plain expanded metal with spacers
3. Installation: Fix metal lathing over isolating layer. Stagger fixings along both edges of lathing.
4. Width of installation over single junctions
  - 4.1. Isolating layer: 150 mm.
  - 4.2. Lathing: 300 mm.
5. Width of installation across face of dissimilar substrate material (column, beam, etc. with face width not greater than 450 mm)
  - 5.1. Isolating layer: 25 mm (minimum) beyond junctions with adjacent substrate.
  - 5.2. Lathing: 100 mm (minimum) beyond edges of isolating layer.

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### **648 Fibre glass reinforcement mesh**

1. Manufacturer: Contractor's choice

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### **659 Plasterboard joints**

1. Joints and angles (except where coincident with metal beads). Reinforce with continuous lengths of jointing tape.

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### **673 Plasterboard over conduits/ service chases**

1. General: Prevent cracking over conduits and other services.
2. Services chased into substrate: Isolate from coating by covering with galvanized metal lathing, fixed at staggered centres along both edges.

## **Mouldings/ decorative plasterwork - Not Used**

### **Internal plastering**

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#### **710 Application generally**

1. Application of coatings: Firmly and in one continuous operation between angles and joints. Achieve good adhesion.
2. Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
  - 2.1. Accuracy: Finish to a true plane, to correct line and level, with angles and corners to a right angle unless specified otherwise, and with walls and reveals plumb and square.
3. Drying out: Prevent excessively rapid or localized drying out.

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#### **715 Flatness/ surface regularity**

1. Sudden irregularities: Not permitted.
2. Deviation of plaster surface: Measure from underside of a straight edge placed anywhere on surface.
  - 2.1. Permissible deviation (maximum) for plaster not less than 13 mm thick: 3 mm in any consecutive length of 1800 mm.

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#### **718 Junction of new plasterwork with existing**

1. New plasterwork: Finish flush with original face of existing plasterwork to form a seamless junction.

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#### **720 Dubbing out**

1. General: Correct substrate inaccuracies.

2. **New smooth dense concrete and similar surfaces:** Dubbing out prohibited unless total plaster thickness is within range recommended by plaster manufacturer.
3. **Thickness of any one coat (maximum):** 10 mm.
4. **Mix:** As undercoat.
5. **Application:** Achieve firm bond. Allow each coat to set sufficiently before the next is applied. Cross scratch surface of each coat.

### **725 Undercoats generally**

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1. **General:** Rule to an even surface. Cross scratch to provide a key for the next coat.
2. **Undercoats on metal lathing:** Work well into interstices to obtain maximum key.
3. **Undercoats gauged with Portland cement:** Do not apply next coat until drying shrinkage is substantially complete.

### **742 Thin coat plaster**

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1. **Preparation for plasters less than 2 mm thick:** Fill holes, scratches and voids with finishing plaster.

### **747 Projection plaster**

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1. **Application:** Evenly and in one continuous operation between angles and joints.
2. **Finish:** A level open textured surface before finishing manually.

### **777 Smooth finish**

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1. **Appearance:** A tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks. Avoid water brush, excessive trowelling and over polishing.

### **External rendering - Not Used**

Ω End of Section

## M60 Painting/clear finishing

### Coating systems

#### 110 Emulsion to plaster walls / ceiling at high level (making good/locally only)

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1. Manufacturer: [Dulux Trade, brand of AkzoNobel](#)
  - 1.1. Contact details
    - 1.1.1. Address: AkzoNobel Decorative Paints  
Wexham Road  
Slough  
Berkshire  
SL2 5DS
    - 1.1.2. Telephone: [+44 \(0\)333 222 7070](tel:+44(0)3332227070)
    - 1.1.3. Web: [www.duluxtradepaintexpert.co.uk](http://www.duluxtradepaintexpert.co.uk)
    - 1.1.4. Email: [project.support@akzonobel.com](mailto:project.support@akzonobel.com)
  - 1.2. Product reference: [Dulux Trade Airsure Vinyl Matt \(paint system including all primers and undercoats\)](#)
2. Composition: Vinyl copolymer.
3. Sheen: Vinyl matt.
4. Colour: Colour mixed - final colours to be advised- black to ceiling and to match walls elsewhere tbc
5. Coverage: Up to 17 m<sup>2</sup>/L.
6. Drying time: Recoatable after two to four hours.
7. Volume solids: Medium (33%).
8. VOC content: Minimal.
9. Application method: Brush, roller or airless spray.
10. Form: Liquid.
11. Capacity: 10 L.
12. Surfaces: Plaster walls
  - 12.1. Preparation: Ensure surfaces are clean and dry and new work flush with existing walls
13. Initial coats: As recommended by manufacturer
14. Number of coats:  
  
As recommended by manufacturer

#### 150 Eggshell to woodwork (if present)

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1. Manufacturer: [Dulux Trade, brand of AkzoNobel](#)
  - 1.1. Contact details
    - 1.1.1. Address: AkzoNobel Decorative Paints  
Wexham Road  
Slough  
Berkshire  
SL2 5DS
    - 1.1.2. Telephone: [+44 \(0\)333 222 7070](tel:+44(0)3332227070)

1.1.3.Web: [www.duluxtradepaintexpert.co.uk](http://www.duluxtradepaintexpert.co.uk)

1.1.4.Email: [project.support@akzonobel.com](mailto:project.support@akzonobel.com)

- 1.2. Product reference: [Dulux Trade Diamond Eggshell](#).
2. Composition: Acrylic copolymer.
3. Sheen: Eggshell.
4. Colour: to be advised
5. Form: Liquid.
6. Initial coats: As recommended by manufacturer
  - 6.1. Number of coats: As recommended by manufacturer

## **172 Flame-retardant coating system/Steels**

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1. Description: refer to Z12 210

### **Generally**

## **215 Handling and storage**

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1. Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.
2. Materials from more than one batch: Store separately. Allocate to distinct parts or areas of the work.

## **220 Compatibility**

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1. Coating materials selected by contractor
  - 1.1. Recommended by their manufacturers for the particular surface and conditions of exposure.
  - 1.2. Compatible with each other.
  - 1.3. Compatible with and not inhibiting performance of preservative/fire-retardant pretreatments.

## **280 Protection**

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1. 'Wet paint' signs and barriers: Provide where necessary to protect other operatives and general public, and to prevent damage to freshly applied coatings.

## **310 Supervised control samples**

NA

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## **320 Inspection by coating manufacturers**

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1. General: Permit manufacturers to inspect work in progress and take samples of their materials from site if requested.

### **Preparation**

## **400 Preparation generally**

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1. Standard: In accordance with BS 6150.
2. Refer to any pre-existing CDM Health and Safety File.
3. Refer to CDM Construction Phase Plan where applicable.

4. Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
5. Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
6. Substrates: Sufficiently dry in depth to suit coating.
7. Efflorescence salts: Remove.
8. Dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
9. Surface irregularities: Remove.
10. Joints, cracks, holes and other depressions: Fill flush with surface, to provide smooth finish.
11. Dust, particles and residues from preparation: Remove and dispose of safely.
12. Water based stoppers and fillers
  - 12.1. Apply before priming unless recommended otherwise by manufacturer.
  - 12.2. If applied after priming: Patch prime.
13. Oil based stoppers and fillers: Apply after priming.
14. Doors, opening windows and other moving parts
  - 14.1. Ease, if necessary, before coating.
  - 14.2. Prime resulting bare areas.

#### **440 Previously coated surfaces generally**

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1. Preparation: In accordance with BS 6150, clause 11.5.
2. Contaminated or hazardous surfaces: Give notice of:
  - 2.1. Coatings suspected of containing lead.
  - 2.2. Substrates suspected of containing asbestos or other hazardous materials.
  - 2.3. Significant rot, corrosion or other degradation of substrates.
3. Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
4. Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
5. Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
6. Alkali affected coatings: Completely remove.
7. Retained coatings
  - 7.1. Thoroughly clean to remove dirt, grease and contaminants.
  - 7.2. Gloss-coated surfaces: Provide key.
8. Partly removed coatings
  - 8.1. Additional preparatory coats: Apply to restore original coating thicknesses.
  - 8.2. Junctions: Provide flush surface.

9. Completely stripped surfaces: Prepare as for uncoated surfaces.

### **461 Previously coated wood**

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1. Degraded or weathered surface wood: Take back to provide suitable substrate.
2. Degraded substrate wood: Repair with sound material of same species.
3. Exposed resinous areas and knots: Apply two coats of knotting.

### **481 Uncoated wood**

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1. General: Provide smooth, even finish with arrises and moulding edges lightly rounded or eased.
2. Heads of fasteners: Countersink sufficient to hold stoppers/fillers.
3. Resinous areas and knots: Apply two coats of knotting.

### **580 Uncoated plaster**

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1. Nibs, trowel marks and plaster splashes: Scrape off.
2. Overtrowelled 'polished' areas: Key lightly.

### **590 Uncoated plasterboard**

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1. Depressions around fixings: Fill with stoppers/ fillers

### **611 Wall coverings**

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1. Retained wall coverings: Check that they are in good condition and well adhered to substrate.
2. Previously covered walls: Wash down to remove paper residues, adhesive and size.

### **622 Organic growths**

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1. Dead and loose growths and infected coatings: Scrape off and remove from site.
2. Treatment biocide: Apply appropriate solution to growth areas and surrounding surfaces.
3. Residual effect biocide: Apply appropriate solution to inhibit re-establishment of growths.

## **Application**

### **711 Coating generally**

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1. Application standard: In accordance with BS 6150, clause 9.
2. Conditions: Maintain suitable temperature, humidity and air quality during application and drying.
3. Surfaces: Clean and dry at time of application.
4. Thinning and intermixing of coatings: Not permitted unless recommended by manufacturer.
5. Overpainting: Do not paint over intumescent strips or silicone mastics.
6. Priming coats
  - 6.1. Thickness: To suit surface porosity.
  - 6.2. Application: As soon as possible on same day as preparation is completed.
7. Finish
  - 7.1. Even, smooth and of uniform colour.
  - 7.2. Free from brush marks, sags, runs and other defects.
  - 7.3. Cut in neatly.
8. Doors, opening windows and other moving parts: Ease before coating and between coats.

### **720 Priming joinery**

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1. **Preservative treated timber:** Retreat cut surfaces with two flood coats of a suitable preservative before priming.
2. **End grain:** Coat liberally allow to soak in, and recoat.

### **730 Workshop coating of concealed joinery surfaces**

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1. **General:** Apply coatings to all surfaces of components.

### **731 Site-coating of concealed joinery surfaces**

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1. **General:** After priming, apply additional coatings to surfaces that will be concealed when fixed in place.
  - 1.1. **Components:** Only where necessary - coating in workshop where possible.

### **751 Staining wood**

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1. **Primer:** Apply if recommended by stain manufacturer.
2. **Application:** Apply in flowing coats and brush out excess stain to produce uniform appearance.

Ω End of Section

Ω End of Section



## M61

# Intumescent coatings for fire protection of steelwork

## Protective coating systems

### 110 Intumescent protective coatings

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1. Intumescent coating system
  - 1.1. Manufacturer: Jotun A/S
    - 1.1.1. Contact details
      - 1.1.1.1. Address: 3202 Sandefjord Norway Norway PO21
      - 1.1.1.2. Telephone: +47 33 45 70 00
      - 1.1.1.3. Web: [www.jotun.com](http://www.jotun.com)
      - 1.1.1.4. Email: [nbsenquiries@jotun.com](mailto:nbsenquiries@jotun.com)
    - 1.1.2. Product reference: [SteelMaster 600WF Protective Intumescent Coating](#)
  - 1.2. Composition: Waterborne, acrylic, thin film intumescent coating.
  - 1.3. Colour: White.
  - 1.4. Capacity: 18.5 L.
  - 1.5. Intumescent coat system (or similar approved)
    - 1.5.1. Type: 1. Interior exposure with fire protection for load-bearing structural steel
      - i. 15-150 minutes thin-film solvent free epoxy intumescent
        - Penguard WF, one coat @ DFT 75 µm
        - SteelMaster 1200HPE applied strictly to manufacturer's requirements
        - Pilot WF, one coat @ DFT 50 µm (semi-gloss)
    - 1.5.2. Finish: Visible areas: high decorative
  - 1.6. Top sealer coat
    - 1.6.1. Colour: Black to ceiling areas - colour matched to walls on walls

**Prior to purchase and installation check compatibility of new steel protection with any primers applied to steel work**

## Performance and general requirements

### 202 Fire performance

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1. Reaction to fire: To BS EN 13501-1, A1
2. Fire resistance to BS EN 13501-2: To BS EN 13501-2, REI 60

### 205 Validation of materials

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1. Project-specific evaluation of intumescent coating materials
  - 1.1. Standard: In accordance with BS EN 16623, clause 4.
  - 1.2. Test results: Submit on request.

### 210 Working procedures

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1. Standard: In accordance with BS EN 16623.
2. Give notice: Before commencing surface preparation and coating application.

3. **Quality control:** Record project specific procedures for surface preparation and coating application.

## 215 Working conditions

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1. **General:** Maintain manufacturer's recommended temperature, humidity and air quality conditions during application and drying.
2. **Surface condition:** Clean and dry at time of application.

## 220 Applicator's personnel

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1. **Operatives:** Trained/ experienced in anticorrosive and intumescent coatings.
2. **Evidence of training/ experience:** Submit on request.

## 250 Sprayed coating application on site

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1. **Standard:** In accordance with BS EN 16623.
2. **Spray drift:** Minimize.
3. **Uncoated areas of steel:**
4. **Masking:** Protect designated adjacent surfaces.
  - 4.1. **Designated surfaces:**

## 270 Inspection

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1. **Permit intumescent manufacturer to**
  - 1.1. Inspect work in progress.
  - 1.2. Inspect quality control records.
  - 1.3. Take dry film thickness and other measurements.
  - 1.4. Take samples of products.
2. **Intumescent manufacturer's inspection reports:** Submit without delay.

## Preparation of surfaces

### 330 Existing steel – manual cleaning

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1. **Preparation:** Remove oil, grease and contaminants.
2. **Loose or unsound coatings:** Remove to a firm edge.
3. **Finish:** To BS EN ISO 8501-1, preparation grade St2. Leave a clean but unpolished dry surface.
4. **Primer:** Apply as soon as possible after cleaning and before gingering or blackening appears. Remove coating edges that lift as a result of priming, and reprime.

### 340 Existing steel – preparation for overcoating

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1. **Preparation:** Remove oil, grease and contaminants.
2. **Loose or unsound coatings:** Remove to a firm edge.
3. **Exposed steel finish:** Manually clean to BS EN ISO 8501-1, grade St2. Leave a clean but unpolished dry surface.
4. **Existing coatings finish:** Abrade to give a good key. Leave a clean, dry surface.
5. **Primer:** Apply one brush coat to bare steel areas. Remove coating edges that lift as a result of priming, and reprime.

## Application of castings

### 402 Intumescent casting thickness

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1. **Required thickness:** Determine for every steel member to give specified period of fire resistance. Use intumescent casting manufacturer's current published loading tables.

- 1.1. **Special sections and partial fire exposure conditions:** Obtain required thickness in writing from manufacturer.
2. **Schedule and drawings:** Submit at least two weeks before starting work.
  - 2.1. **Schedule content:** Member sizes, weights/ thicknesses, loading conditions, etc. showing, for each variant, the exposed perimeter/ sectional area (Hp/A) ratio and required casting thickness.
  - 2.2. **Drawing content:** Steelwork drawings marked in colour to show required thickness for each member.

#### 404 Intumescent casting installation

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1. **Assembly:** Adhesive fix casting sections tight to steel substrate.
2. **Filling:** Apply intumescent filler to all joints and deformations to produce a smooth and uniform finish.

#### Application of coatings

#### 410 Intumescent coating dry film thickness (dft)

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1. **Applicable coatings:**
2. **Required dft:** Determine for every steel member to give specified period of fire resistance. Use intumescent coating manufacturer's current published loading tables.
  - 2.1. **Special sections and partial fire exposure conditions:** Obtain required dft in writing from manufacturer.
3. **Schedule and drawings:** Submit at least two weeks before starting work.
  - 3.1. **Schedule content:** Member sizes, weights/ thicknesses, loading conditions, etc. showing, for each variant, the exposed perimeter/ sectional area (Hp/A) ratio and required dft.
  - 3.2. **Drawing content:** Steelwork drawings marked in colour to show required dft for each member.

#### 460 High decorative finish

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1. **Definition:** High standard of evenness, smoothness and gloss when viewed from a minimum distance of 2 m.

#### 490 Top sealer coat

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1. **Application:** To achieve dft recommended by manufacturer and to give an even, solid, opaque appearance, free from runs, sags and other visual defects.

#### Completion

#### 530 Records of intumescent application

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1. **On completion of intumescent work, submit**
  - 1.1. Accurate surface preparation, coating and intumescent application records.
  - 1.2. Fire resistance certificates.
  - 1.3. Intumescent manufacturer's recommendations for maintenance and overcoating.

Ω End of Section

# P12 Fire-stopping systems

## General - System

### performance

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#### 210 Design

1. NA

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#### 240 Fire performance

1. Description: Compartment line to areas outside of Main hall if breached
2. Resistance to fire: To BS EN 13501-2, EI 60 or better

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#### 260 Design life

1. Effective design life: 25 years

### Products

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#### 305 Product certification

1. Certification: For products specified generically, submit evidence of compliance with the specification.
2. Acceptable evidence: Listing in CERTIFIRE Register

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#### 330 Flexible intumescent gap sealer

1. Manufacturer: ROCKWOOL Ltd

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#### 338 Intumescent mastic

1. Manufacturer: Submit proposals
  - 1.1. Product reference:

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#### 360 Mineral wool slab insulation - passing fire compartment line above

- 
1. Manufacturer: [ROCKWOOL Ltd](#)

- 1.1. Contact details

- 1.1.1. Address: ROCKWOOL Ltd  
14th Floor, Chiswick Tower  
389 Chiswick High Road  
London  
W4 4AJ

- 1.1.2. Telephone: +44 (0)1656 862621

- 1.1.3. Web: <https://www.rockwool.com/uk/>

- 1.1.4. Email: [info@rockwool.com](mailto:info@rockwool.com)

- 1.2. Product reference: [ROCKWOOL® FIREPRO® Ablative Coated Batt](#)

2. General requirements: Insulation products generally.
3. Thickness: 50 mm.
4. Facing: Ablative coated.

Paint to match surround wall

5. Density: 160 kg/m<sup>3</sup>.
6. Fire performance: Euroclass fire rating A1.
7. Width: 600 mm.
8. Accessories:
9. Air leakage: 0.8 m<sup>3</sup>/h/m<sup>2</sup>.

## Execution

### 610 Third-party-certified installer

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1. Certification: For the technical competency of the installer of the evidence of compliance with a third-party installation certification scheme.
2. Acceptable evidence: UKAS Accreditation Certificate FIRAS Installer Certification

### 620 Workmanship generally

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1. Gaps: Seal between building elements and services, to provide effective resistance to fire and the passage of smoke. Allow for capping sealants where required. Finish flush with surrounds.
2. Adjacent surfaces: Prevent overrun of filler, sealant or mortar on to finished surfaces.

### 710 Installing mineral wool batts

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1. Installing batts: Fit tight into void between the penetrating services and the surrounding construction to form a solid barrier.
2. Face of batts: Flush with the surface of wall, floor or soffit.
3. Joints between batts: To Rockwool details
4. Gaps between services and barrier: Seal with fire-resisting sealant.

### 745 Applying sealants generally

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1. Application: As section Z22.

## Completion

### 910 Cleaning

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1. Masking tapes: Remove.
2. Cleaning: Clean off splashes and droppings. Wipe down finishes.

### 920 Inspection

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1. Notice for inspection (minimum): Five working days

Ω End of Section

## P31

# Holes, chases, covers and supports for services

## Products - Not Used

## Execution

### 620 Holes, recesses and chases in in situ concrete

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1. Cast in: Holes larger than 10 mm diameter, recesses and chases.
2. Cutting and drilling
  - 2.1. Permitted for holes not larger than 10 mm diameter.
  - 2.2. Not permitted for holes larger than 10 mm diameter except as indicated on drawings.

### 670 Notches and holes in structural timber

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1. General: Avoid if possible.
2. Sizes: Minimum needed to accommodate services.
3. Position: Do not locate near knots or other defects.
4. Notches and holes in same joist: Minimum 100 mm apart horizontally.
5. Notches in joists
  - 5.1. Position: Locate at top. Form by sawing down to a drilled hole.
  - 5.2. Depth (maximum): 0.15 x joist depth.
  - 5.3. Distance from supports: Between 0.1 and 0.2 x span.
6. Holes in joists
  - 6.1. Position: Locate on neutral axis.
  - 6.2. Diameter (maximum): 0.25 x joist depth.
  - 6.3. Centres (minimum): 3 x diameter of largest hole.
  - 6.4. Distance from supports: Between 0.25 and 0.4 of span.
7. Notches in roof rafters, struts and truss members: Not permitted.
8. Holes in struts and columns: Locate on neutral axis.
  - 8.1. Diameter (maximum): 0.25 x minimum width of member.
  - 8.2. Centres (minimum): 3 x diameter of largest hole.
  - 8.3. Distance from ends: Between 0.25 and 0.4 of span.

Ω End of Section

## Z12

### Preservative/ flame-retardant treatment (Timber)

To be read with preliminaries/ general conditions.

#### 110 Treatment application

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1. **Timing:** After cutting and machining timber, and before assembling components.
2. **Processor:** WPA Benchmark-accredited for the specified treated components.

#### 120 Commodity specifications

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1. **Standard:** In accordance with the Wood Protection Association (WPA) publication 'Code of practice: Industrial Wood Preservation'.

#### 130 Preservative treatment solution strengths/ treatment cycles

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1. **General:** Select to achieve specified service life and to suit treatability of specified wood species.

#### 210 Flame-retardant treatment to all timber linings/Framing unless proprietary timber lining system meets requirements

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1. **Standard:** In accordance with the Wood Protection Association (WPA) publication 'Industrial flame retardant treatment of wood and wood-based panel products'.
2. **ENVIROGRAF ES/VFR FIRE RETARDANT CLEAR LACQUER FOR INTERIOR:** or similar approved
3. **Minimum requirements :** All fitted joinery and timber lining and timber battens to be minimum fire classification B-s3, d2(1)
4. **Moisture content of wood**
  - 4.1. **At time of treatment:** As specified in product classification report.
  - 4.2. **After treatment (INT1 only):** Timber to be re-dried slowly at temperatures not exceeding 60°C to minimize distortion and degradation.

#### 610 Making good to preservative treatment on site

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1. **Preservative solution:** Compatible with off-site treatment.
2. **Application:** In accordance with preservative manufacturer's recommendations.

#### 620 Making good to flame-retardant treatment on site

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1. **Flame-retardant:** Compatible with off-site treatment.
2. **Application:** In accordance with flame-retardant manufacturer's recommendations.

## Z20 Fixings and adhesives

### Products

#### 320 Packings

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1. Materials: Noncompressible, corrosion proof.
2. Area of packings: Sufficient to transfer loads.

#### 330 Nailed timber fasteners

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1. Nails
  - 1.1. Steel: To BS 1202-1 or BS EN 10230-1.
  - 1.2. Copper: To BS EN 1202-2.
  - 1.3. Aluminium: To BS 1202-3.

#### 340 Masonry fixings

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1. Light duty: Plugs and screws.
2. Heavy duty: Expansion anchors or chemical anchors.

#### 350 Plugs

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1. Type: Proprietary types to suit substrate, loads to be supported and conditions expected in use.

#### 360 Anchors

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1. Types
  - 1.1. Expansion: For use in substrate strong enough to resist forces generated by expansion of anchor.
  - 1.2. Adhesive or chemical
    - 1.2.1. For use in substrate where expansion of anchor would fracture substrate.
    - 1.2.2. For use in irregular substrate where expansion anchors cannot transfer load on anchor.
  - 1.3. Cavity: For use where the anchor is retained by toggles of the plug locking onto the inside face of the cavity.

#### 370 Wood screws

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1. Type
  - 1.1. Wood screws (traditional pattern).
    - 1.1.1. Standard: To BS 1210.
  - 1.2. Wood screws.
    - 1.2.1. Pattern: Parallel, fully threaded shank or twin thread types.
2. Washers and screw cups: Where required are to be of same material as screw.

#### 380 Miscellaneous screws

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1. Type: To suit the fixing requirement of the components and substrate.
  - 1.1. Pattern: Self-tapping, metallic drive screws, or power driven screws.
2. Washers and screw cups: Where required to be of same material as screw.



## 390 Adhesives

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1. Standards
  - 1.1. Hot-setting phenolic and aminoplastic: To BS 1203.
  - 1.2. Thermosetting wood adhesives: To BS EN 12765.
  - 1.3. Thermoplastic adhesives: To BS EN 204.

## Execution

### 610 Fixing generally

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1. Integrity of supported components: Select types, sizes, quantities and spacings of fixings, fasteners and packings to retain supported components without distortion or loss of support.
2. Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers/ sleeves to avoid bimetallic corrosion.
3. Appearance: Fixings to be in straight lines at regular centres.

### 620 Fixing through finishes

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1. Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

### 630 Fixing packings

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1. Function: To take up tolerances and prevent distortion of materials and components.
2. Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer.
3. Locations: Not within zones to be filled with sealant.

### 660 Screw fixing

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1. Finished level of countersunk screw heads
  - 1.1. Exposed: Flush with timber surface.
  - 1.2. Concealed (holes filled or stopped): Sink minimum 2 mm below surface.

### 670 Pelleted countersunk screw fixing

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1. Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
2. Pellets: Cut from matching timber, match grain and glue in to full depth of hole.
3. Finished level of pellets: Flush with surface.

### 680 Plugged countersunk screw fixing

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1. Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
2. Plugs: Glue in to full depth of hole.
3. Finished level of plugs: Projecting above surface.

### 700 Applying adhesives

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1. Surfaces: Clean. Adjust regularity and texture to suit bonding and gap filling characteristics of adhesive.
2. Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.
3. Finished adhesive joints: Fully bonded. Free of surplus adhesive.

Ω End of Section

## Z25 Mortars

### Cement gauged mortars

#### 110 Cement gauged mortar mixes

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1. Specification: Proportions and additional requirements for mortar materials are specified elsewhere.

#### 160 Cements for mortars

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1. Cement: To BS EN 197-1 and CE marked.
  - 1.1. Types: Portland cement, CEM I.
    - 1.1.1. Portland limestone cement, CEM II/A-L or CEM II/A-LL.
2. Portland slag cement, CEM II/B-S.
3. Portland fly ash cement, CEM II/B-V.
  - 3.1. Strength class: 32.5, 42.5 or 52.5.
4. White cement: To BS EN 197-1 and CE marked.
  - 4.1. Type: Portland cement, CEM I.
  - 4.2. Strength class: 52.5.
5. Sulfate resisting Portland cement
  - 5.1. Type: To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
6. To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.
  - 6.1. Strength class: 32.5, 42.5 or 52.5.
7. Masonry cement: To BS EN 413-1 and CE marked.
  - 7.1. Class: MC 12.5.

#### 200 Storage of cement gauged mortar materials

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1. Sands and aggregates: Keep different types/ grades in separate stockpiles on hard, clean, free-draining bases.
2. Factory made ready-mixed lime:sand/ ready to use retarded mortars: Keep in covered containers to prevent drying out or wetting.
3. Bagged cement/ hydrated lime: Store off the ground in dry conditions.

#### 210 Making cement gauged mortars

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1. Batching: By volume. Use clean and accurate gauge boxes or buckets.
  - 1.1. Mix proportions: Based on dry sand. Allow for bulking of damp sand.
2. Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
  - 2.1. Mortars containing air entraining admixtures: Mix mechanically. Do not overmix.
3. Working time (maximum): Two hours at normal temperatures.
4. Contamination: Prevent intermixing with other materials.

### Lime:sand mortars - Not Used

Ω End of Section

# Sealants

## Products - Not Used

### Execution

#### 610 Suitability of joints

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1. Presealing checks
  - 1.1. Joint dimensions: Within limits specified for the sealant.
  - 1.2. Substrate quality: Surfaces regular, undamaged and stable.

#### 620 Preparing joints

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1. Surfaces to which sealant must adhere
  - 1.1. Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.
  - 1.2. Clean using materials and methods recommended by sealant manufacturer.
2. Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.
3. Backing strip and/ or bond breaker installation: Insert into joint to correct depth, without stretching or twisting, leaving no gaps.
4. Protection: Keep joints clean and protect from damage until sealant is applied.

#### 630 Applying sealants

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1. Substrate: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
2. Environmental conditions: Do not dry or raise temperature of joints by heating.
3. Sealant application: Fill joints completely and neatly, ensuring firm adhesion to substrates.
4. Sealant profiles
  - 4.1. Butt and lap joints: Slightly concave.
  - 4.2. Fillet joints: Flat or slightly convex.
5. Protection: Protect finished joints from contamination or damage until sealant has cured.

Ω End of Section