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### **3 PRIMERS, PAINTS AND COATINGS**

#### **3.1 GENERAL REQUIREMENTS**

##### **3.1.1 Scope**

- 1 This Part specifies requirements for products of primers, paints and coatings for building surfaces and elements.
- 2 Related Sections are as follows:

This Section

Part 1 ..... General

Part 2 ..... Surface Preparation for Painting

Section 24 Finishes to Buildings

##### **3.1.2 References**

- 1 The following Standards are referred to in this Section:
  - BS 4652.....Specification for zinc-rich priming paint (organic media)
  - BS 4756.....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

### **3.2 APPLICATION**

#### **3.2.1 General**

- 1 Coatings are to be applied in accordance with the manufacturer's instruction to clean, dry surfaces, in dust free and dry atmospheric conditions and after any previous coats have hardened.
- 2 All brands of primers, paints and coatings are to be approved and shall comply with the relevant British Standards.
- 3 Paints of different brands are not to be mixed or used in the same coating system.
- 4 No dilution of painting materials is to be allowed except strictly as detailed by the manufacturers and as approved by the Engineer
- 5 No primed or undercoated woodwork and metalwork is to be left in an exposed or unsuitable location for any undue period before completion of the painting process. No exterior or exposed painting is to be carried out under adverse weather conditions, such as rain, extreme humidity, dust storms, etc.

### **3.3 PRIMERS AND UNDERCOATINGS**

#### **3.3.1 Materials**

- 1 Primers for plaster and rendering are to be alkali resistant. Primers for other surfaces shall comply with Table 3.1.

Table 3.1  
Suitable Primers for Background

SURFACE	PRIMER
Non resinous wood	Low lead oil based primer to BS 5358 or Aluminium wood primer to BS 4756 or Solvent borne acrylic primer
Resinous woods	Aluminium wood primer to BS 4756 or long oil alkyd based oxidative drying primer
Iron and steel	Red lead primer to BS 2523, Type "B" or zinc phosphate pigmented urethane alkyd modified primer
Galvanised steel	Calcium plumbate primer to BS 3698, Type "A" or Zinc chromate primer Two component polyamide cured epoxy or modified vinyl based physically drying primer.
Blast cleaned iron and steel or touching-up damaged zinc coatings	Zinc-rich primer to BS 4652, Types 1, 2, and 3
Aluminium and aluminium alloys	Etch primer plus zinc chromate primer
Copper	Two component polyamide adduct cured epoxy or Modified vinyl based physically drying primer
Lead	Long oil alkyd based oxidative drying primer
Plastics	Two component polyamide adduct cured epoxy primer or Solvent borne acrylic based physically drying primer.

- 2 Undercoats on wood and metal surfaces are to be of the drying-oil/resin binder type pigmented with titanium dioxide and/or coloured pigments providing a matt or low-sheen finish suitable for subsequent application of a drying-oil type finish.
- 3 Water thinned priming paints and undercoats shall only be used with the approval of the Engineer. In order to obtain such approval, the Contractor shall demonstrate that proposed water thinned priming paints and undercoats comply with BS 5082.

### 3.3.2 Workmanship

- 1 Priming coats are to be applied by brush unless other methods are approved taking care to work the primer into the surface, joints, angles and end grain.
- 2 Any primed surfaces which have deteriorated on site or in transit are to be touched up to the approval of the Engineer.
- 3 All surfaces of joinery which have not been primed in the workshop are to be primed immediately on arrival at site and before fixing.
- 4 Undercoats are to be applied as an even film over all exposed surfaces avoiding an uneven thickness at edges and angles.

- 5 All priming and undercoats are to be rubbed down to a smooth surface with fine abrasive paper and cleaned of all dust before the application of the next coat.

### **3.4 PAINTS AND FINISH COATINGS**

#### **3.4.1 Materials**

- 1 The number of coats shall be as specified by the paint manufacturer, or at minimum, as specified on Table 3.2.

Table 3.2  
Minimum Number of Coats for Drying-Oil/Resin Based Paint Systems on New Work

<b>SURFACE</b>	<b>LOCATION</b>	<b>PAINT SYSTEM</b>
Wood-oil paint	Internal	1 coat primer 1 coat undercoat 1 coat alkyd gloss finish or 1 coat primer 2 coats alkyd mid-sheen finish
	External	1 coat primer 2 coats undercoat 1 coat alkyd gloss finish (lead free)
Wood-natural finish	Internal	3 coats varnish or polyurethane
	External	4 coats exterior grade varnish
Iron and steel including	Internal	1 coat primer 1 coat undercoat 1 coat alkyd gloss finish (lead free)
Galvanised steel	External	2 coats primer 2 coats undercoat 1 coat alkyd gloss finish (lead free)
Aluminium	Internal and External	1 coat etch primer 1 coat primer 1 coat undercoat 1 coat alkyd gloss finish (lead free)
Cement rendering	Internal	1 coat alkali resistant primer 1 coat undercoat 1 coat alkyd gloss finish (lead free)

#### **3.4.2 Workmanship**

- 1 Care shall be taken to ensure that finish coats applied over calcium plumbate primer are compatible with the primer.

- 2      Finish coats will be applied as an even film over all exposed surfaces, avoiding brush marks, sags, runs and other defects. Where two gloss finish coats are specified the second coat shall be applied within 48 hours of the first.
- 3      The application of paint systems for iron and steel should result in a minimum total film thickness of 125 microns internally or externally notwithstanding the number of coats specified.

END OF PART

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