



# West Australian Solid Plastering Association

## Interim Specification for Solid Plastering

Revised June 2002

### 1 GENERAL

#### 1.1 Materials

All materials used in plastering shall conform to the relevant Australian Standards and manufacturers specification.

#### 1.2 Workmanship

All work done by WASPA members is to be of an acceptable standard of workmanship and in accordance with Australian Standards.

### 2 MATERIALS

#### 2.1 Sand

All sand shall be approved plastering sand in accordance with ASCA27: 1959 Internal Plastering on Solid Backgrounds and have the following properties:

- ?? A variety of grain sizes
- ?? Contain no more than 5 - 15%, (by volume) clay and fine silt by settling (tested to AS 1141 Section 33)
- ?? Be clean and free from impurities

And where specified:

- ?? Sieved clean and free of impurities
- ?? Washed to contain no more than 5% silt or clay (by volume)

Note: Sand supplied contrary to specifications becomes the responsibility of the supplier

#### 2.2 Cement

Cement used in plastering shall conform to **AS 3972 (1991)**, or **AS 1316 (1972)** and be used in accordance with the manufacturers specifications. Cement shall be used fresh and not re-mixed after two (2) hours from initial mixing.

### 2.3 Lime

Lime used in plastering shall be lime putty or finishing hydrated lime and shall conform to **AS 1672.1 – 1997 Limes and lime stones Part 1; Limes for Building**, and be used in accordance with the manufacturers specifications.

### 2.4 Gypsum Set Plaster

Set Plaster used in plastering shall conform to **AS2592 Gypsum Plaster for Building Purposes** and be used in accordance with the manufacturer specifications.

### 2.5 Water

Water shall be fresh and clean, free from impurities and salt, which may harm steel or concrete. Water fit for drinking is normally suitable.

### 2.6 Additives

Additives such as waterproofing or bonding agents, or other commercial admixtures, shall only be used in accordance with the manufacturers specification.

### 2.7 Patent Plaster Applications

Where these are specified for use, application and working techniques must be in accordance with the manufacturers specifications.

### 2.8 Metal Lath and Beading

Where used, these shall be galvanized to AS 1397 Steel Sheet and Strip-Hot-Dipped Zinc coated or aluminium zinc coated. Coating class Z200.

### 3 FLOAT/BASE COAT AND SET/FINISH COAT

3.1 This is an accepted two- (2) coat application for internal finishes only.

#### 3.2 Float Coat / Base Coat

3.2.1 The materials used for this application shall be as specified in **Clause 2**.

3.2.2 Prior to commencement, clean down background, remove all dust and where necessary dampen to give correct suction before applying any mortar.

3.2.3 Mixing should occur by an approved mechanical system (mixer) or by hand on a clean flat surface. The mortar shall be a composition mix. Slight variation for a workable mix may occur to suit weather and humidity conditions.

3.2.4 The application to the walls shall be finished to a thickness of not less than an average 8mm over the area and to a true flat straight plane.

3.2.5 The wall surface shall be left finished "off the rule" and the wood or plastic float should be used minimally.

3.2.6 All internal / external angles, returns / reveals shall be straight, true, and finished to an accurate radius.

3.2.7 Face brick walls or other finished work, where float / base coat walls finish, shall be cleaned immediately the work is completed.

3.2.8 Where the float / base coat abuts a timber frame, all mortar shall be cut away neatly. An approved metal strip (stop bead) may be used.

3.2.9 All power boxes shall be cut clean at the time of float / base coating walls.

3.2.10 Generally, clean all floors on completion of work.

#### 3.3 Setting Coat / Finish Coat

3.3.1 The materials used for this application shall be as specified in **Clause 2**.

3.3.2 Prior to commencement, clean down background, remove all dust, and where necessary dampen to give correct suction before applying set / finish coat materials.

3.3.3 Apply the mixed material to the float base coat in three (3) continuous applications to a maximum of four (4) mm thickness

(i) A thin scratch coat

(ii) An application coat

(iii) Laying down coat

- 3.3.4 The walls shall be trowelled to a flat smooth surface with no depressions scratches, watermarks, or blemishes.
- 3.3.5 All returns, angles, head jamb, and sill reveals shall be finished with either a true radius or an arris.
- 3.3.6 WASPA recommends a **Shore "D" Hardness of 60** for set/finished walls after seven (7) days. Walls should be trowelled at least three (3) times to finish to the required standard after application of the first coat.
- 3.3.7 All cornice and skirting lines, internal and external angles, shall be finished straight and true.
- 3.3.8 All frames, floors, face brickwork, and electrical boxes shall be cleaned immediately that the set / finish coat is complete.
- 3.3.9 All newly set / finish plasterwork shall be allowed to cure by naturally circulating air for a period of not less than seven (7) days after completion.

3.4 Table 1: Recommended Base / Float Coat Ratios Matched to Backgrounds

Substrate (Background)	Float / Base Coat		
	Cement	Lime	Sand
Dense Concrete	1	1	5
Clay Bricks	1	1	7
Lime Silica	1	1.5	6
*AAC Blocks	1	1	6
Optional	1	2	9
Concrete Blocks	1	1	6
Limestone	1	2	9
Plaster Blocks	1	1	7

\*AAC: Autoclaved Aerated Concrete

3.5 Table 2: Recommended Set / Finish Coat Ratios

Lime Putty	Hardwall Plaster
25kg	15kg
50kg	30kg
75kg	45kg

## 4 SAND FINISH

This relates to both internal and external rendering.

All external sand finish shall be done using the two- (2) coat process.

- 4.1 Single coat sand finish to a maximum thickness of 18mm shall only be used where a painted finish is specified.
- 4.2 All external coloured sand finish shall be done using the two- (2) coat process.
- 4.3 Where light coloured (white/cream) cement finish is required; the two- (2) coat process shall be used.
  - 4.3.1 The first coat of rendering shall be applied as per **Clause 3.2** Float / Base coat to a nominal thickness of 10mm.
  - 4.3.2 The surface of the first coat shall be keyed by scratching lightly on completion.
  - 4.3.3 The second coat shall be applied after at least five (5) days to a thickness no greater than 5mm, and not be stronger than the first coat (not richer in cement).
- 4.4 Where window and door reveals join aluminium / timber frames, a narrow recessed groove or furrow shall be formed. Where sand finish abuts eaves, gables face brick, etc. a small "V" joint or groove shall be formed.

### 4.5 Working Process

- 4.5.1 Render - first coat - as per **Clause 3.2** Float / Base coat.
- 4.5.2 Second coat - apply a thin coat and rule off using a straight edge. Fill all depressions.
- 4.5.3 When the second coat has firmed up, float all walls, angles, etc., with a float, filling all small depressions.
- 4.5.4 Applying water as required, float the surface to a final finish as required.

**4.6 Table 3: Sand Finish Mix Ratios (1 or 2 Coats)**

	2 Coat Process			1 Coat Process		
EXTERNAL	Cement	Lime	Sand	Cement	Lime	Sand
First Coat	1	1	4.5	1	1	5
Second Coat	1	1	5			
INTERNAL						
First Coat	1	1	5	1	1	6
Second Coat	1	1	6			

## **5 TROWELLED ON TEXTURE COATINGS.**

5.1 This is a three-coat application where specified and for application on new brickwork only. For alternative texture applications (i.e. painted brickwork, concrete panels etc. contact texture manufacturers for specifications.)

### **5.2 Float/Base Coat**

5.2.1 The materials used for this application must be as specified in Clause 2.

5.2.2 The working procedure shall be, as per **Clause 3.2** Float/Base **excluding 3.25** whereas walls shall be finished to a true smooth flat finish.

5.2.3 **5.2.3** Mortar rates shall be as per **Table 3** external / 1coat process (i.e. 1 cement: 1 lime: 5 sand).

### **5.3 Prime Coat**

5.3.1 The float / base coat shall be inspected for moisture prior to application of Prime Coat and shall have cured for period of 28 days.

5.3.2 Masking tape shall be applied to door / window frames electrical fittings and all areas that are not being textured but will adjoin-textured surfaces.

5.3.3 The prime coat shall be applied to the float / base coat.

5.3.4 Once primer has been applied all masking tape shall be removed.

5.3.5 It is recommended that primer be tinted to 25% of finishing texture colour to achieve colour depth.

### **5.4 Texture Coat**

#### **Material selection and Pre Order Requisitions.**

5.4.1 Prior to ordering texture materials the plasterer shall provide two dry finished samples, one for the client, and keep one for future reference with technical details tabulated on the rear of the sample.

5.4.2 It is recommended that plasterers record on paper: colour, specified texture type and specified finished pattern once the sample has been accepted and have the customer sign authorization to proceed.

## **5.5 Texture Coat Application Procedure**

- 5.5.1 Texture shall be applied within 7 days of priming for maximum adhesion.
- 5.5.2 Primed walls shall be hosed and cleaned of dust and impurities, by water as per **Clause 2.5.** and allowed to dry.
- 5.5.3 Masking tape shall be applied to door / window frames, electrical fittings and all areas that are not being textured, but will texture surfaces.
- 5.5.4 Masking tape shall be applied keeping in mind the coarseness of the texture being applied so as not to damage edges of coating when tape is removed i.e. 1mm coating 1mm from edge of substrate.
- 5.5.5 All texture material shall be boxed to achieve colour uniformity.
- 5.5.6 Textures shall be applied to the substrate using a hawk and stainless steel trowel. Application shall be from head to foot in approximately 1-metre passes and leveled off to aggregate thickness. (i.e. shudder lines will appear if correctly laid off). The unfinished edge shall be kept moist using a spray bottle mist.
- 5.5.7 Finishing shall occur using either a firm plastic trowel or foam float and spray bottle mist if required.
- 5.5.8 Work shall be passed with a plastic or foam trowel to ensure coating is left flat.
- 5.5.9 Repeat until wall is complete.
- 5.5.10 Remove all masking tape and generally clean all work areas.

### **5.5.11 Shield Coat**

- 5.5.11.1 Where a shield coat has been specified a registered painter must be employed.

## **5.6 Critical Factors**

### **5.6.1 Drying Times**

At 25 degrees c and 50 % humidity the primer will dry in approximately one hour.

### **5.6.2 Climatic Temperatures**

Primer and textures shall only be applied in air temperature between 10 - 30 degrees and shall be protected from rain and frost for 24 hours. Application in extreme heat and wind shall be avoided.

## 6 SLAB SOFFITS / CONCRETE CEILINGS

### 6.1 Table 3: Mix Ratios for Internal Surfaces

BONDING COAT/ KEY COAT		RENDER/BASE COAT			SET /FINISH COAT	
Cement	Sand	Cement	Lime	Sand	Lime Putty (weight)	Hardwall Plaster (weight)
1-2 Coats of an approved Bonding Agent		1	1	5	25kg	15kg
OPTIONAL METHOD						
1-2 Coats of an Approved Bonding Agent		-	-	-	25kg	15kg

### 6.2 Table 4: Mix Ratios for External (Exposed) Surfaces

BONDING COAT		RENDER COAT		
Cement	Sand	Cement	Lime	Sand
1 Key Coat	2	1	1	5
1-2 Coat Approved Bonding Agent		1	1	5

### 6.3 Run throating (drip groove) on soffits of external projections (such as underside edge of balconies.)

## 7 CEMENT SETTING /GLASS FACE CEMENT (INTERNAL)

This finish is a two-coat process and must be applied allowing 24 hours between coats.

### 7.1 Base Coat

The first coat is applied as per normal for two-coat sand finish **Clause 4.3.1** work but left off the rule and lightly scratched horizontally to give a key.

## 7.2 Mortar Ratio

Mortar Ratio may vary according to the background i.e. clay brick concrete masonry dense concrete

From (3) Three parts sand by volume to (1) part cement by volume and up to (5) Five parts sand by volume to (1) One part cement by volume. The addition of up to (10%) of lime by volume may be added for workability.

## 7.3 Finish Coat

This is applied as a Setting Coat, laid on with a trowel and skimmed with a long float to flatten the surface then trowelled to a smooth even finish.

Note: The use of water when trowelling is likely to cause the surface to streak and discolour

## 7.4 Mortar Ratio for Finish Coat.

The mix ratio may range from one (1) volume of sand to one (1) volume of cement to one volume of lime putty or two (2) volumes of sand to one (1) volume of cement and two (2) volumes of lime putty.

This material can be mixed by hand or mechanical means then passed through a fine sieve to ensure no lumps of lime or cement appear on the surface of the finished wall.

Excessive or rapid drying must not occur to the finished wall.

# 8 Tolerance Guide (Providing Brickwork is Plumb & True)

Items / Surface Measurements in mm	Maximum Tolerance in mm
All heads, jamb, sill reveals, beading are plumb and straight up to 2 400	± 3
Sides of Pier / Panel parallel up to 2 400 high	± 3
Skirting / Cornice line up to 3 000 long	± 5
Wall / Pier plumb up to 2 400 high	± 5
Wall Flat up to 2 400	± 3

## **9 WORKMANSHIP AND COMPLETION**

- 9.1 All work sites shall be left clean. All residue materials, empty bags, etc. shall be disposed of in the receptacle provided or in an orderly manner to one heap at the front of the site, or in an accessible position for a skid steer loader (bobcat) to collect.
- 9.2 Where plaster covers junctions between different background materials and abuts frames or other finishes a small "V" joint shall be formed.
  - 9.2.1 Mortar applied to wet areas as base coat for tiling shall be to a cement: lime: sand ratio of 1: 1: 4 or 1: 1: 5.
- 9.3 All chases or recesses over 50mm wide or 25mm deep shall be covered with a well secured metal lath (mesh) extending at least 75mm each side of the gap before the float/render is applied.
- 9.4 Where cement rendering is to meet face brickwork, an approved finishing system is to be provided e.g. stop beads (purpose made accessories).
- 9.5 If any background is too wet to begin work advise builder / agent of concerns. If decision is to proceed, advise WASPA.
- 9.6 Make yourself aware of the Occupational Safety and Health Act, Regulations and Codes relating to the work site; equipment; yourself, partners, employees and other persons visiting the site (you have a duty of care to others as per the O.H.S. Act).
- 9.7 Cover yourself, employees, partners, and the public with the relevant Insurance's including Public Liability, Accident and Sickness, Tools and Equipment, and Workers Compensation (where applicable).
- 9.8 Remember good documentation is your only safeguard.