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SWI002: Squash Plaster Working Instructions 2 - Repairs

Armourcoat (ASF) QA Working Instructions For Repairs And Renovations In White Plaster

1 Armourcoat Squash Court Plaster

Armourcoat Squash Court Plasters may be used with confidence to repair all traditionally built squash courts. They are not suitable for repairing prefabricated plastic-faced panel courts.

2 Contractor Responsibilities

Contractors must provide their own guarantees of work. Armourcoat Plasters are guaranteed by Armourcoat Limited for the purposes for which they are designed.

Armourcoat Limited accepts no responsibility for application failure.

It is the responsibility of the Contractor to ensure proper application control and management.

3 Type of Repair

There are four categories of squash court plaster repair:

3.1 Major Renovations

(See Ref SWI1 New Build) involving re-plastering with Basecoat and Finishing Plaster to single walls or complete courts, having first stripped off existing plaster or render finishes.

Cracked and severely damaged plaster surfaces and delaminating plaster (sounds hollow when tapped with a coin) should be removed and replaced. (See Ref SWI1 New Build).

3.2 Minor Renovations

(This document) involving Basecoat and/or Finishing Plaster repairs, mainly to the front wall strike area and side boast areas.

Before making repairs to walls, floors must be protected.

Wall Preparation

- Identify and mark margin lines 50-100 mm beyond the damaged areas. See 7 (Crack Repairs) for guidance on special procedures for repair of latent structural cracks.

NOTE when using a hammer and chisel to cut out faulty areas, cut margin lines first. Failure to do this may cause further damage through vibration.

- Depending on the repair needed, cut with a skilsaw or similar, through Finishing Plaster and/or Basecoat Plaster to the required depth.
- With a club hammer and 25 mm/50 mm cold chisel, remove all plaster, Basecoat and Finish, or Finishing Plaster only, depending on the type of repair required.
- When removing Finishing Plaster only, check exposed Basecoat Plaster for firmness and remove any loose material.
- With abrasive paper or abrasive cleaning pads, clean surrounding areas of contaminants, hand grease, ball scuff, dirt and grime and graphite marks.

3.3 Budget Renovations

(See Ref SWI3 Overcoating System) involving the re-application of a Topcoat over the original plaster on a single wall or complete court.

3.4 Four Hour/Overnight Repairs

(See Ref SWI4) involving the repair of stress cracks, small holes, surface pinholing and worn-out Topcoat surfaces with Armourcoat's special Ultra Hard quick setting Repair Plaster.

4 Application

4.1 Application Basecoat

- Saturate surfaces for repair to a depth of 3-4 mm. This takes several wettings, particularly on exposed substrate, but it is essential to achieve permanent bonding and good repairs.
- When thoroughly wetted, prepare a bonding slurry of equal parts Armourcoat Basecoat Plaster and Armourcoat R13 Resin gauged 1:3 with clean water.
- Brush and trowel the slurry into and over the area for repair, removing any slurry from outside the repair area.
- Mix Basecoat Plaster with cold, clean water in a high-sided container. Mix with an Armourcoat paddle on a slow speed drill (500-600 rpm) to a smooth, lump-free consistency.
- Apply Basecoat Plaster as a continuous operation, starting with a tight coat, pressed well into the bonding coat.
- Working wet-on-wet, build thickness and rule off either flush with original plaster face or set back by 3 mm according to the type of repair. Do not trowel smooth.
- Leave the Basecoat until set (3-4 hours) before applying the Finishing Plaster.

4.2 Application Finishing Plaster

- Work only in ambient temperatures of between 5°C and 23°C, or adjust court temperature to suit.
- Add Finishing Plaster to clean cold water. Whisk in a high sided plastic container to a smooth, sloppy consistency, using an Armourcoat paddle fitted to a slow speed electric drill.
- Leave for 5-10 minutes and mix again, adding more water, if necessary, to achieve the correct consistency.
- Apply a tight first coat, squeezing it into the Basecoat Plaster surface, filling pores and voids.
- Working wet-on-wet, apply a second coat, building to 2.0-2.5 mm thickness.
- When the second coat starts to firm up but still showing a wet surface - sticky to the touch - trowel flat before applying the final 0.5-1.0 mm layer of plaster, completing the required 3 mm build thickness.
- Trowel down at intervals to a flat, smooth and uniform matt finish.
- With patch repairs, feather out the final plaster layer 100 mm beyond the repair line and then work the edge line with a soft, damp sponge or sponge float to blend the new plaster with the old.

NOTES: Keep mixing and application tools clean and uncontaminated at all times. Residual materials from previous batches will accelerate setting, affecting work quality. Wash mixing buckets and tools at least once per hour.

5 Setting Times

Normal working time on the hawk for Basecoat Plaster is 1.5-2.0 hours, depending on prevailing conditions. Basecoat Plaster will set for application of Finishing Plaster in 3-4 hours. Finishing Plaster sets hard in 2.0-2.5 hours.

6 Curing

The complete Armourcoat Basecoat/Finishing Plaster system cures in 40 hours at temperatures between 5°C and 23°C. After 48 hours, chemical processes are complete and dehumidifiers can be used. Refurbished courts can be returned to play when all obvious damp areas have dried – within 4 days of completion, depending on building humidity and dehumidifier efficiency.

7 Crack Repairs

- Latent structural cracks can be repaired successfully.
- With a skilsaw, cut margin lines 200 mm each side of the crack.
- With a club hammer and 25 mm/50 mm cold chisel, remove the entire plaster system inside margin lines to expose the crack.
- Brush exposed substrate and wet until wetted to a depth of 3-4 mm. Leave for 5 minutes to restore suction.
- Mix bonding slurry of equal parts Armourcoat Basecoat Plaster and Armourcoat R13 Resin gauged 1:2 with clean water.
- Brush bonding slurry into and over area to be repaired, including vertical edges.
- Apply 2-3 mm layer of Basecoat Plaster over slurry coat, pressed tightly into pores and voids to make the bond.
- Embed Armourcoat Reinforcement Scrim, (300 mm wide) positioned centrally over the crack by trowelling the scrim into a thin layer of Basecoat Plaster until flat, wetted and incorporated.
- Overcoat with Armourcoat Basecoat Plaster to required depth, 3 mm below existing wall plane or flush, depending in the type of repair, following the procedure described above.

8 Potential Problems and Solutions

8.1 Temperature

Do not plaster when the court temperature is too low or too high. 5°C – 23°C is the optimum range.

8.2 Delamination

The most common cause of squash court plaster failure is usually traced to incorrect substrate preparation, or a failure in application of the first, tight coat applied to the substrate, with subsequent layers applied wet on wet to achieve proper layer bonding.

8.3 Wet Plaster on Dry

Armourcoat Finishing Plaster is a three layer system, applied wet-on-wet to the required 3 mm thickness. If the first or second layers lose stickiness or become touch dry, subsequent layers will not bond sufficiently to withstand playing stresses, leading to delamination. Armourcoat QA contractors must ensure that plaster layers are applied wet-on-wet.

8.4 Surface Blisters

If surface blisters appear during trowelling **DO NOT** press them back on the wall and hide them. They must be removed and replastered with fresh, wet plaster tight to the Basecoat Plaster. If this is not done, patches will break away under impact, with financial consequences to the applicator.

8.5 Discolouration

Armourcoat Squash Court plaster should be trowelled to a finish without additional water. Scouring or using excessive water during the final trowelling may result in a patchy surface finish when dry. Titanium Dioxide (the whitener) is drawn out of the plaster and trowelling re-distributes it unevenly. Use a sponge float to give the plaster life only as a last resort, as this can have the same effect. While patchiness may not be acceptable, the strength and integrity of the plaster are unaffected.

9 Material Storage

Armourcoat Basecoat and Finishing Plasters will store satisfactorily for up to six months in unopened bags, kept dry at 15 °C - 25 °C.

10 Material Requirements

10.1 Basecoat

For 9 mm thickness over high spots, allow 16-19 kg/m². This figure is for guidance only. Armourcoat QA Contractors are expected to assess material requirements on site. Build quality, uneven structure, cavities and mortar joints will require more material.

10.2 Finishing Plaster

For 3 mm uniform thickness, allow 4.5 kg/m².

11 Ordering Materials

11.1 Basecoat

For 9 mm thickness allow 16-19 kg/m²

The above is a guide only, assuming true construction and Basecoat Plaster application to 9 mm over high spots. Armourcoat QA Contractors must assess contracts individually for material requirements. Poor build quality, cavities and recessed mortar joints will require more material.

11.2 Finishing Plaster

Armourcoat Finishing Plaster is applied to a uniform 3mm thickness. Allow 4.5 kg/m².

11.3 R13 Resin

Only required in specific circumstances, as laid down in these notes. Only available in 5 and 25 litres containers.

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