

M20 PLASTERED/ RENDERED/ ROUGHCAST COATING

To be read with Preliminaries/ General conditions.

TYPES OF COATING

- 140 CEMENT: SAND RENDER TO RECEIVE TILING M40/110
- Location: Internal walls of all WCs as indicated on architect's finishes drawing
 - Background: plasterboarded stud wall, as clause K10/206.
 - Preparation: Submit proposals.
 - Render coat(s):
Cement: Masonry cement to BS 5224, class MC 12.5 (with air entraining agent) or, subject to approval, Portland cement plus an air entraining admixture to BS 4887:Part 1.
Sand: To BS 1199, type A.
Additional admixture(s):
 - Mix proportions (masonry cement: sand): -Cement; lime; sand, using portland cement and ready mixed lime; sand to BS4721
 - Mix designation 3
Thickness (excluding dubbing out): 10mm.
Finish: wood float as clause 778.
 - Accessories: Stainless steel accessories to be used in wet areas.
- 160 PROPRIETARY CEMENT GAUGED RENDER TO SIPS PANELS
- Substrate: Sips construction panels with breather membrane (as clause P10/320) to external face, S/W timber counter battens suitable for fixing vertical S/W treated timber battens (minimum size 80 100 x 35mm @ maximum 600mm c/c), sized to allow finish face of render to align with top of cant brick/apron flashing/cill, and StoVentec Render Carrier Board.
 - Preparation: Substrate requires no special preparation. Make good as necessary.
 - Manufacturer: Sto Ltd, Antura, Kingsland Business Park,
Wade Road, Basingstoke, RG24 8EN.
Tel: 01256 332770 Fax: 01256 810887.
(or equal approved)
 - Product Reference: StoRend Flex (or equal approved)
 - Render Carrier:
 - Product reference: As clause H20/160
 - Levelling Coat: Not applicable
 - Reinforcing coat:
 - Product reference: Sto Armat Classic cement-free, fibre-reinforced acrylic reinforcing coat.
 - Thickness: Minimum 3mm, to be such to ensure the reinforcing mesh is fully embedded and a flat level surface is provided.
 - Application temperature (minimum): 5 degrees centigrade.
 - Reinforcement:
 - Product Reference: Sto Glass Fibre Reinforcing Mesh
 - A symmetrical interlaced glass fibre made from twisted multi-end strands, styrene butadiene coated to provide a high resistance to alkali attack and is manufactured so as to prevent laminar movement and deformation.
 - Roll width: 110cm 33cm and 15cm.
 - Roll length: 50metres
 - Priming Coat: Not applicable
 - Render / Finish:

- Product Reference: StoSilco cement free silicone resin render.
 - Thickness: 1.5mm
 - Finish: Sto K – Stippled
 - Colour: C3 colour range. Colour to be confirmed. Advisable to have preceding coat tinted to the same colour reference as finish coat.
 - Preparation: Ensure the preceding coat is clean, dry and load-bearing.
 - Elevations to be protected from inclement weather.
- Refer to the StoSilco K Technical Data Sheets and Material Safety Data Sheets for further information.
- Accessories: As Clause 637.
- General: All installations of Sto Ltd materials in the UK to be carried out by and/or supervised by applicators registered by Sto Ltd.

280 GYPSUM PLASTER SKIM COAT ON PLASTERBOARD

- Plasterboard: refer to K10/206
- Preparation: refer to K10.
- Plaster: Board finish/ finish plaster to BS 13279-1, class B.
 - Manufacturer: refer to K10/680
 - Product reference: refer to K10/680.
 - Thickness: refer to K10/680
 - Finish: Smooth.
- Accessories: refer to K10/680

GENERAL

413 SAMPLES

- General: Provide representative samples of the following:
 - Render type: As clause 160
 - Location: In a suitable position to enable viewing in good natural light and in conjunction with the finished work
 - Size: 1500mm x 1500mm
 - Keep sample(s) available on site throughout the contract for inspection/comparison purposes.

421 SCAFFOLDING

- General: Prevent putlog holes and other breaks in coatings.

424 UNIFORMITY OF COLOUR AND TEXTURE (to clause 160)

- General: Once samples of coatings have been approved do not change type or proportion of constituent materials. Ensure that suppliers and batch numbers of materials are sufficient to give consistent uniformity of colour. Ensure uniformity of texture during application.

MATERIALS AND MAKING OF MORTAR

430 READY-TO-USE CEMENT GAUGED MORTARS

- Time and temperature limitations: Use within limits prescribed by mortar manufacturer.
 - Retempering: Restore workability with water only within prescribed time limits.

438 CEMENTS FOR RENDER MORTARS

- Cement:
 - Standard: To BS EN 197-1.
 - Types: Portland cement, CEM I.
Portland slag cement, CEM III/ B-S.
Portland fly ash cement, CEM III/ B-V.
 - Strength class: 42.5 or 52.5.
- Sulphate resisting cement:
 - Standard: To BS 4027.
 - Strength class: 42.5 or 52.5.
- Masonry cement:
 - Standard: To BS 5224.
 - Class: MC 12.5 (with air entraining agent).
- Certification for all cements: BSI Kitemark scheme.

444 READY TO USE CEMENT GAUGED RENDER MORTARS (General)

- Standard: Generally to BS 4721, using materials specified in this section.
- Time and temperature limitations: Use within limits prescribed by mortar manufacturer.
- Retempering: Restore workability with water only within prescribed time limits.
- Obtain from an approved manufacturer

449 ADMIXTURES (General)

- Do not use unless specified or approved.
- Do not use admixtures of any type with proprietary mixes.
- Do not use calcium chloride or any admixtures containing calcium chloride.

495 MIXING

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

497 COLD WEATHER

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

- Soundness: Free from loose areas and significant cracks and gaps.
 - Cutting, chasing, making good, fixing of conduits and services outlets and the like: Completed.
 - Tolerances: Permitting specified flatness/ regularity of finished coatings.
 - Cleanliness: Free from dirt, dust, efflorescence and mould, and other contaminants incompatible with coatings.
- 531 ROUGHENING FOR KEY
- Substrates: Roughen thoroughly and evenly.
 - Depth of surface removal: Minimum necessary to provide an effective key.
- 538 STIPPLE KEY
- Materials:
 - Cement: To BS EN 197-1 and CE marked.
 - Sand: Clean, coarse.
 - Admixture: Use only with Architect's approval.
 - Mix proportions (cement:sand): 1:1.5-2.
 - Consistency: Thick slurry, well stirred.
 - Application: Brushed and stippled to form deep, close textured key.
 - Curing: Controlled to achieve a firm bond to substrate.
- 541 BONDING AGENT APPLICATION
- General: Apply evenly to substrate to achieve effective bond of plaster/ render coat. Protect adjacent surfaces.

BACKINGS/ BEADS/ JOINTS

- 600 ADDITIONAL FRAMING SUPPORTS FOR BACKINGS
- Framing: Accurately position and securely fix to give full support to fixtures, fittings and service outlets.
 - Support to board edges and perimeters: As recommended by board manufacturer to suit type and performance of board.
- 610 FIXING PLASTERBOARD BACKINGS TO TIMBER
- Fixings, accessories and installation methods: As recommended by board manufacturer.
 - Fixing: At the following centres (maximum):
 - Nails: 150 mm.
 - Screws to partitions/ walls: 300 mm. Reduce to 200 mm at external angles.
 - Screws to ceilings: 230 mm.
 - Position of nails/ screws from edges of boards (minimum):
 - Bound edges: 10 mm.
 - Cut/ unbound edges: 13 mm.
 - Position of nails/ screws from edges of supports (minimum): 6 mm.
 - Nail/ screw heads: Set below surface. Do not break paper or gypsum core.
- 612 JOINTS IN PLASTERBOARD BACKINGS
- Ceilings:
 - Bound edges: At right angles to supports and with ends staggered in adjacent rows.
 - Two layer boarding: Stagger joints between layers.
 - Partitions/ walls:

- Vertical joints: Centre on studs. Stagger joints on opposite sides of studs.
Two layer boarding: Stagger joints between layers.
 - Horizontal joints:
Two layer boarding: Stagger joints between layers by at least 600 mm. Support edges of outer layer.
 - Joint widths (maximum): 3 mm.
- 630 BEADS/ STOPS FOR INTERNAL USE
- Material: Galvanized steel to BS EN 13658-1.
- 634 BEADS/ STOPS (For external use)
- Manufacturer: Sto Limited,
Unit 3, Lyon Road,
Linwood, industrial Estate,
Paisley, PA3 3BQ.
Tel: 01505 324262 Fax: 01505 323618
 - Product reference: Sto Bellcast / Stop / Movement beads.
 - Material: PVC or stainless steel proprietary beads, corrosion resistant at least equal to grade 304 of BS 1449: Part 2
 - Application: Provide beads / stops at all arrases and stop-ends except where specified otherwise. Cut neatly and from mitres at return angles. Fix securely using the longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with the background.
- 636 BEADS/ STOPS FOR EXTERNAL USE
- Stainless steel: To BS EN 10088-1, grade 1.4301.
- 637 BEADS/ STOPS (For external use)
- Manufacturer: As Clause 160.
 - Product reference:
 - Sto Edge Protection Profile / Aluminium Ventilation Profile/ Roof Vent Profile / Rain Repelling Profile / Stop / Movement beads.
 - Sto PVC Mesh Angle bead to external arris.
 - Sto Armor Angle to internal arris.
 - Material: PVC
 - Application:
 - Provide profiles/beads/stops at all arris and stop-ends except where specified otherwise.
 - Cut neatly using the longest possible lengths and form mitres at return angles.
 - Plumb, square and true to line and level, ensuring full contact of wings with the StoVentec Render carrier Board.
- 640 BEADS/ STOPS GENERALLY
- Location: External angles and stop ends, except where specified otherwise.
 - Corners: Neat mitres at return angles.
 - Fixing: Secure, using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
 - Beads/ stops for external render: Fix mechanically.
 - Finishing: After coatings have been applied remove surplus material, while still wet, from surfaces of beads/ stops exposed to view.
- 650 MOVEMENT JOINTS FOR EXTERNAL RENDER.
- Manufacturer: As clause 160.

- Product reference: Sto-Movement joint Bead PVCu.
 - Installation: Centred over joint in substrate.
 - Fixing: To manufactures recommendations.
- 651 MOVEMENT JOINTS FOR EXTERNAL RENDER GENERALLY
- All movement joints and/or shrinkage zones within the structural substrate must be replicated in the Sto Ventec Render Carrier Board and subsequent render coatings.
- 653 SEALANT MOVEMENT JOINTS WITH STOP BEAD EDGINGS (Generally)
- Stop beads: As clause 634
 - Installation: Centred over joint in substrate.
 - Joint width: As indicated on drawing / to suit that of the structural movement joint in background
 - Fixing: As recommended by manufacturer
 - Sealant:
 - Manufacturer: Adshead Ratcliffe
Derby Road, Belper,
Derbyshire, DE56 1WJ
Tel: 01773 826661 Fax: 01773 821215
 - Product reference: Arbosil 1070
 - Colour: To be confirmed from standard range.
 - Minimum Joint Width; 10mm
 - Preparation and application: Ensure the joint surfaces are clean, dry and free from all contamination. Prime the joint faces with Arbo Primer 2650 and allow to dry. Insert 15mm of mineral wool into the joint, allowing for a 15mm minimum seal depth. Apply Arbosil 1070 to solidly fill the joint and tool to a satisfactory finish
- 659 PLASTERBOARD JOINTS
- Joints and angles (except where coincident with metal beads): Reinforce with continuous lengths of jointing tape.
- 673 PLASTERBOARD OVER CONDUITS/ SERVICE CHASES
- General: Prevent cracking over conduits and other services.
 - Services chased into substrate: Isolate from coating by covering with galvanized metal lathing, fixed at staggered centres along both edges.

INTERNAL PLASTERING

- 710 APPLICATION GENERALLY
- Application of coatings: Firmly and in one continuous operation between angles and joints. Achieve good adhesion.
 - Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
 - 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.
 - Drying out: Prevent excessively rapid or localized drying out.
- 715 FLATNESS/ SURFACE REGULARITY
- Sudden irregularities: Not permitted.

SPECIFICATION
1954 St Mary's CE High School
BLOCK 14
Lyster Grillet & Harding Ltd Architects

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

725 UNDERCOATS GENERALLY

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

742 THIN COAT PLASTER

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

777 SMOOTH FINISH

- 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

810 APPLICATION GENERALLY

- Application of coatings: Firmly and in one continuous operation between angles and joints. Achieve good adhesion.
- Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
- 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.
- Drying: Prevent excessively rapid or localized drying out.

820 DUBBING OUT RENDERING

- General: Correct substrate inaccuracies.
- Thickness of any one coat (maximum): 16 mm.
- Total thickness (maximum): 20 mm, otherwise obtain instructions.
- Mix: As undercoat.
- Application: Achieve firm bond. Allow each coat to set sufficiently before the next is applied. Comb surface of each coat.

840 UNDERCOATS GENERALLY

- General: Rule to an even surface. Comb to provide a key for the next coat. Do not penetrate the coat.
- Undercoats on metal lathing: Work well into interstices to obtain maximum key.

856 FINAL COAT – PLAIN FLOATED FINISH

- Finish: Even, open texture free from laitance.

880 CURING AND DRYING

- General: Prevent premature setting and uneven drying of each coat.
- Curing coatings: Keep each coat damp by covering with polyethylene sheet and/ or spraying with water.
- Curing period (minimum): 3-4 days

- Final coat: Hang sheeting clear of the final coat.
- Drying: Allow each coat to dry thoroughly, with drying shrinkage substantially complete before applying next coat.
- Protection: Protect from frost and rain.