



CSI SECTION 09220 - Portland cement plaster (stucco)

PRODUCT OVERVIEW

TeifsScratch & Brown is a factory blended, cement based, fiber reinforced scratch and brown coat designed to be used in a 3-coat stucco system conforming to ASTM C-926. It is a blend of Portland cement, fibers and proprietary ingredients formulated to produce a cohesive material with consistent workability and strength to reduce surface cracking.

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. The extent of stucco basecoat systems is indicated on the drawings.
- B. The types of stucco basecoat systems include:
 - 1. Pre-mixed, fiber-reinforced portland cement stucco base coat for jobsite mixing with water and sand to provide scratch and brown coats to receive acrylic based exterior wall finish coat system.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Sheathing Section: _____
- B. Light gage Metal Framing: Section: _____
- C. Wood Framing: Section: _____
- D. C.M.U. Construction: Section: _____

1.03 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies: Install stucco base coat system to comply with all applicable codes and standards and with requirements of local agencies having jurisdiction.
- B. Applicator Qualifications: Applicators specializing in the installation of exterior stucco systems with a minimum of 5 years experience in work similar to that required by this section.
- C. Allowable Tolerances: Maximum deviation from true plane of 1/4" (6.4 mm) in 8' (2440 mm) as measured by straight edge placed at any location on surface.
- D. Job Mock-up, including Finish Coat System
 - 1. 4'x 4' (1220 mm x 1220 mm) sample panel of same material on same substrates as for project.
 - 2. Show color, texture and workmanship of finished work.
- E. Single Source Responsibility:
 - 1. All stucco base and finish coat material shall be from a single manufacturing source.

1.04 SUBMITTALS

- A. Manufacturer's technical information and product data sheet.
- B. Evaluation report for EIFS shapes applied.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver manufactured materials in original unopened packages or a container, with manufacturer's labels intact and legible.
- B. Keep materials dry, stored off ground, under cover and away from damp surfaces.
- C. Remove wet or deteriorated materials from site.

1.06 JOB CONDITIONS

- A. Environmental Requirements (Cold Weather):
 - 1. Do not use frozen materials in cement stucco.
 - 2. Do not apply cement stucco to frozen surfaces or surfaces containing frost.
 - 3. Do not apply cement stucco when ambient temperature is forecast to be less than 40 °F (4 °C) within a 24 hour period following applications.

- B. Environmental Requirements (Hot Weather):
 1. Protect cement stucco from uneven and excessive evaporation during hot, dry weather.
 2. Do not apply cement stucco when ambient temperature is above 100 °F (38 °C).
- C. Protection:
 1. Protect finish surfaces installed prior to stucco work.
 2. Maintain protection in place until completion of work.
 3. Protect finished work when stopping for the day or when completing an area.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Weather Resistive Barrier:
 1. One layer of grade "D" building felt is required over all new substrates of exterior grade sheathings, two layers as required by UBC for use over all wood based substrates.
 2. TeifsWeatherseal: A non-cementitious, 100% acrylic trowelable air/weather barrier reinforced at sheathing joints with 4-inch strips of open weave fiberglass mesh tape. * The use of this product requires an intervening material such as paper backed Lath
- B. Drainage Mat
 1. Home Slicker patented three-dimensional matrix drainage mat.
 2. HomeSlicker Plus Typar: three-dimensional matrix bonded to Typar housewrap.
 3. Home Slicker Plus Super Jumbo Tex 60 Minute
- C. Expanded Polystyrene: Conforming with ASTM C-578-87 type 1, as tested in accordance with ASTM E 84 fire test. Size, shape and thickness is as indicated on drawings or details.
- D. Metal Accessories: Manufacturer's standard steel products unless otherwise indicated as Zinc Alloy.
 1. Exterior components: Hot dip galvanized finish, minimum of a 17 Gauge Self-Furred Stucco Netting.
 2. Casing Beads: general-purpose type with expanded or perforated flanges.
 3. Cornerite: Manufacturer's standard pre-formed interior corner reinforcement made from 2.5 lbs./square yard of diamond mesh lath.
 4. Edged Corner Beads: expanded or flanged to suite application.
 5. No. 10x Bull Nose Corner Bead: For rounded corner reinforcement.
 6. Control Joints: No. XJ15-3 control joint with 1/4" slot, and 1" grounds, or equal. Control joints must be wire tied to the lath and not nailed or screwed to substrate.
 7. Expansion Joints: No. 40 adjustable expansion joint, free floating with adjustments from 1/4" (6.4 mm) to 5/8" (15.9 mm).
 8. Fasteners: (CMU Applications) Galvanized steel of furring type and length suitable for at least 1/2" (13 mm) penetration of the brick or block substrate.
 9. Fasteners: (Steel or Wood Stud Applications) Furring nails and or screws, galvanized steel of type and length suitable for at least a 1/2" (13 mm) penetration of the stud system.
 10. Expanded metal lath: 3.4 lb for use around all windows, doorways, soffits, fascia, openings and parapets.
- E. Fiber-reinforced portland cement stucco base
 1. Teifs Scratch and Brown: Manufacturer's standard stucco basecoats consisting of portland cement and alkali resistant fiberglass and acrylic fibers and proprietary ingredients. With additional sand requirements:
 - a. Jobsite added sand must be as required by ASTM C-897.
 - b. Sand compliance certificates must be presented with each load of sand.
 - c. Independent third party sand testing may be required at the request of the Architect/Owner.
 - d. Sand must be placed on a protective surface and covered when not in use.
- F. TeifsAdmix 100: 100 percent acrylic emulsion additive for portland cement based products, to enhance curing, adhesion, freeze-thaw resistance and workability.
- G. TeifsBond: acrylic polymer based bonding agent for portland cement based products to increase shear bond adhesion.
- H. Leveling and Reinforcing Coat
 1. TeifsBase: 100% acrylic polymer base, requiring the addition of portland cement.
 2. TeifsBase DB: Copolymer based, factory blend of cement and proprietary ingredients.
 3. TeifsMesh: Weight 4.8 oz per sq. yd. coated for protection against alkali.
- I. Primers:
 1. TeifsPrime: 100% acrylic based coating to prepare surfaces for Teifs finishes. Required with use of any acrylic or elastomeric finish or coating
 2. TeifsSheild Alkali Resistant Primer: 100% acrylic based coating to prepare surfaces for Teifs finishes.

- J. Teifs Finish:
 1. TeifsLastic Finish: Factory blended, 100% acrylic polymer based elastomeric finish, integrally colored. Finish type, texture and color as selected by Architect.
 2. TeifsFlex Finish: Factory blended 100% acrylic polymer based finish, integrally colored. Finish type, texture and color as selected by Architect.
- K. EPS formed shapes: TeifsFlex Standard System Exterior Insulation and Finish System.
- L. Sand:
 1. Comply with all requirements of ASTM C 897.
- M. Water: Shall be cool, clean, potable and free of foreign matter.

2.02 MIXES

- A. General:
 1. Accurately proportion materials for each stucco batch with measuring devices of known volume.
 2. Size batches for complete use within maximum of one hour after mixing.
 3. Re-temper stucco stiffened from evaporation, but do not use or re-temper partially hydrated cement stucco.
 4. Do not use frozen, caked or lumpy materials, and remove such materials from jobsite immediately.
 5. Mix factory prepared cement stucco in accordance with manufacturer's written instructions.
 6. Use moist, loose sand in proportions recommended by basecoat concentrate manufacturer.
 7. Withhold 10% of mixing water until mixing is nearly complete, then add as needed to produce desired working consistency.
 8. 1 Quart of TeifsAdmix 100 may be added to 1 bag of Teifs Scratch and Brown.
- B. Mechanical Mixing:
 1. Clean mixer of set or hardened materials before loading new batch.
 2. Maintain mixer in continuous operation while adding materials.
 3. Conform to mixing sequence, cycle of operations, and time recommended by the manufacturer of the basecoat mix materials.
- C. Hand Mixing:
 1. Do not hand mix stucco basecoat system materials unless authorized by Architect/Engineer.
 2. Use waterproof mixing boxes and water barrels when mixing within building.
 3. Mix TeifsBase & TeifsBase DB following the mixing instructions printed on the pail or bag and also published in the Product Data Sheets.
 4. Add amount of water to the acrylic finish coats needed to achieve workability. To avoid color variations, add same amount of water to each pail of finish. No other admixtures are allowed.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Verify that surfaces to plaster are free of dust, loose particles, oil and other deleterious materials which would affect bond or proper hydration of cement stucco.
- B. Verify that lath is tight, properly secured and overlapped, and that all accessories are properly set and secured.
- C. Isolation: Where lathing and metal support system abuts building structure horizontally, and where partition wall work abuts the overhead structure, isolate work from structure movements. Install expansion joints to absorb deflections but maintain lateral support. Frame both sides of expansion and control joints separately and do not bridge joints with furring or lathing.
- D. Examine substrates, grounds and accessories to insure that finished stucco work will be true to line, plane, level and plumb.
- E. Verify that masonry and concrete surfaces to receive direct bond applications of stucco base coats are rough, free from form release agents or otherwise properly prepared to provide for adequate bond with base coat system.
- F. Installer notify General Contractor and Architect/Engineer in writing of any conditions detrimental to proper and successful installation of stucco system. Do not proceed with installation until unsatisfactory conditions are corrected to satisfaction of Architect/Engineer and installer.

3.02 APPLICATION

- A. General:
 1. Install Weather barrier in accordance with manufacturer's instructions and recommendations, and in compliance with requirements of applicable codes.

2. Install Optional Home Slicker in accordance manufacturer's instructions and recommendations. A weather barrier must also be installed over the Home Slicker Product before installation of the Metal Lath.
 3. Apply stucco base coat in accordance with manufacturer's instructions and recommendations, and in compliance with requirements of applicable codes, regulations and agencies having jurisdiction.
 4. Interrupt or delay stucco application only at junctions of stucco planes, at openings, or at control joints.
- B. Scratch Coat:
1. Apply scratch coat to a minimum thickness of 3/8", using sufficient trowel pressure to key stucco into lath or to create bond to substrates as applicable.
 2. Prior to initial set, scratch horizontally to provide key for bond of brown coat.
- C. Optional Bond Coat: TeifsBond should be applied after the Scratch coat is dry and within 15 – 60 minutes of the Brown Coat applications.
- D. Brown Coat:
1. Apply brown coat to a minimum thickness of 3/8", using sufficient trowel pressure to key stucco into scratch coat.
 2. Rod surface to true plane.
 3. Trowel to smooth and uniform surface to receive acrylic polymer finish coat.
 4. Tool brown coat to provide a V-joint at intersection of stucco with frames or items of metal, wood, or plastic.
- E. Optional Leveling Coat
1. Using a stainless steel trowel, apply the TeifsBase over the brown coat at a thickness of 1/16 – 3/32 in. and trowel smooth.
- F. Optional Leveling and Reinforcing Coat
1. Using a stainless steel trowel, apply the TeifsBase over the brown coat at a thickness of 1/16 – 3/32 in.
 2. Embed the TeifsMesh Standard reinforcing mesh immediately into the wet base coat material with a trowel until the reinforcing mesh is fully embedded and the base coat thickness is approximately 1/16 inch.
 3. The color of the reinforcing mesh should not be visible at the surface of the base coat.
- G. Optional EPS-formed shapes
1. EPS shall conform to ASTM C 578 Type I, flame spread index 25 or less, smoke developed 450 or less as tested in accordance with ASTM E 84.
 2. Adhesively attach the shapes as noted on drawings with TeifsBase.
 3. Allow to fully dry a minimum of 24 hours.
 4. Apply TeifsBase over the EPS and onto cement plaster brown coat a minimum of 2-1/2" (64 mm). Backwrapping the shapes is preferable to wrapping onto the stucco.
 5. While base coat material is still wet, embed TeifsMesh reinforcement and smooth flush with brown coat, taking care to completely embed fiberglass mesh into wet base coat and a minimum of 2-1/2" onto the brown coat.
- H. Finish Coat:
1. Apply Teifs primer by brush, roller, or spray according to manufacturers written instructions in order to achieve sufficient coverage as required. TeifsPrime is required with use of any acrylic or elastomeric finish or coating
 2. Apply finish coat to thickness recommended by manufacturer to achieve texture indicated and to match approved sample.

3.03 CURING

- A. Moist cure scratch coat with clean potable water in accordance with ASTM C 926 and/or building codes following initial application (unless brown coat is applied after the scratch coat has achieved sufficient rigidity to support the brown coat).
- B. Moist cure brown coat with clean potable water in accordance with ASTM C 926 and/or building codes.
- C. Allow brown coat to dry thoroughly to a ph of 9.5 or lower before applying acrylic primers or finish coats if the optional Leveling Coat or Leveling and Reinforcing Coat is not applied.
- D. If optional Leveling Coat or Leveling and Reinforcing Coat is applied, allow to cure for 24 hours before application of the Teifs Primer and Teifs finish. (Note: cementitious finishes are not recommended to be used over the optional Leveling Coat or Leveling and Reinforcing Coat.)
- E. Air cure acrylic based finish coats only, do not wet cure.

3.04 ADJUST AND CLEAN

- A. Patching:
 1. Upon completion, point up exterior wall finish coat around trim and other locations where finish coat terminates or meets dissimilar materials.

2. Cut out and replace defective or damaged exterior wall finish coat.
 3. Match pointing and patches to surrounding finish coat in form and texture.
- B. Cleaning:
1. Remove exterior wall finish and protective materials from perimeter trim and adjacent surfaces.
 2. Remove all excess materials from the project site.
 3. Maintenance kit: Shall include enough materials to repair 100 square feet.
 - a. Containers of liquids shall remain un-opened.
 - b. All materials shall be stored properly

END OF SECTION



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Obligatory Disclaimer Statement

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**TeifsScratch and Brown Specifications
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