



**Teifs NUTECH STUCCO WALL SYSTEM
FOR SOFFITS**

SECTION 9220

Complete Guide Specifications

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Complete Guide Specifications

Section 9220

TeifsNuTech Stucco Wall System for SOFFITS

This guide specification section has been prepared by Teifs Wall Systems. This section will assist design professionals in the preparation of a specification section on the exterior wall system.

This section has been prepared according to principles established in the Manual of Practice published by The Construction Specifications Institute (CSI), including the use of section numbers and titles from 1995 Edition of Master Format.

Inch-pound units are contained within parenthesis after the SI (metric) measurements, e.g.: "6-mm (1/4 inch)." Metric measurements are rationalized units based on the SI system of measurement. Delete either the metric or (inch-pound) units of measure depending on project requirements; do not include both units in a project specification, as conflicting requirements or misinterpretation could result.

This guide specification is available in both hard copy and a variety of electronic softcopy formats to suit the more popular word processing programs and operating systems. Please contact Teifs at 1-800-358-4785 for copies of product data or for information on different available electronic soft copy formats.

WARNING:

NUTECH STUCCO is a direct applied coating system without insulation board and is therefore susceptible to cracking due to thermal and building movement. This system requires a code approved weather barrier to be installed behind the cement board however; Teifs does not warrant this system against cracking and therefore does not warrant this system against water infiltration or entrapment as a result of cracking. Teifs offers a variety of EIF systems that offer drainage capabilities and a secondary weather barrier with 7-10 year warranties to protect your walls.

Please visit teifs.com or contact us for details.

WARNING:

This product is a component part of a complete TEIFS WALL SYSTEM. Specifications require that only approved, trained or otherwise knowledgeable applicators install such systems. TEIFS cannot be responsible for deterioration of the substrate, mold, mildew and wood rot due to water intrusion or entrapment from causes such as improperly installed windows; windows that leak at the miter joints, mullions, or through improperly installed glazing; improper flashing, lack of flashing or use of improper flashing materials; use of improper sealants; or inadequate specifications, details or installation of the TEIFS WALL SYSTEM. Sealants and flashing will also deteriorate over time if not maintained. Maintenance of the TEIFS WALL SYSTEM is required. No exterior insulation finish system should be installed on a residential project, (or any other projects as required by the applicable model code), without providing for a secondary weather resistant barrier.

PART 1: GENERAL

1.01 SUMMARY

A. Section Includes:

1. TeifsNUTECH STUCCO WALL SYSTEM: Exterior wall [and soffit] consisting of base coat with reinforcing mesh, and finish coat.

1.02 SYSTEM DESCRIPTION

- #### **A. The TEIFSNUTECH STUCCO WALL SYSTEM is an exterior soffit system comprised of:**
- 1) an approved weather resistive barrier installed over sheathing attached to the supporting framing (if applicable)
 - 2) cement board
 - 3) a minimum 1/16" thick layer of reinforced Teifs BASECOAT and
 - 4) Teifs Finish, a decorative acrylic finish coat.

1.03 PERFORMANCE REQUIREMENTS

A. Individual materials and the assembly of materials to provide:

1. Secure bond to structure and substrate.
2. Allowance for thermal movement caused by changing environment conditions.
3. Weather tightness, resistance to wind, suction, and seismic loads identified by code.
4. Diversion of incidental water at penetrations such as windows, doors, roof/wall intersections, hose bibs and electrical boxes.
5. A weather resistive barrier and flashing elements that are designed and installed to ensure the exit of incidental moisture to the exterior.

B. Physical Properties:

1. Accelerated Weathering (5500 hours) - ASTM G 23: No deterioration or color change.
2. Moisture Resistance - ASTM D 2247: No deleterious effects after 14-day exposure.
3. Salt Spray Resistance - ASTM B 117: 300 hours, no deleterious effects.
4. Water Resistance - ASTM D 2247: No deleterious effects such as cracking, checking, crazing, erosion, rusting or other distress.
5. Freeze Thaw Stability: 60 cycles, no cracking, checking or splitting.

- #### **C. Fire Performance:** For construction requiring fire performance, materials and construction shall be provided that are identical to those tested for the following fire performance characteristics (evaluation for fire resistive performance should be accomplished by testing and inspection agency recognized by the code body having jurisdiction): Flame Spread - Surface Burning Characteristics: UL 723, ASTM E84; Test specimen consists of base coat, reinforcing mesh and finish coat; Flame spread less than 25 and smoke developed less than 450.

1.04 SUBMITTALS

- #### **A. Product Data:** Provide data on system materials, product characteristics, performance criteria and limitations.

- #### **B. Samples:** Submit two samples, 204-mm x 300-mm (8-inch x 12-inch) in size illustrating coating color and texture range for selection.

- #### **C. Manufacturer's Application Guide for TEIFSNUTECH STUCCO WALL SYSTEM:** Indicate special procedures, perimeter conditions requiring special attention, jointing requirements, and other details.

- #### **D. Test Reports:** Submit copies of test reports verifying performance requirements as requested by owner/architect.

E. Design Calculations:

1. The Architect shall ensure that system deflection does not exceed L/360 for ceilings, based on the stud properties only. All stud-framed construction must be diagonally and laterally braced as required to carry shear loads and to prevent stud rotation. Space lateral bracing a maximum of 4 ft. o.c.
2. For on-site construction, the Architect shall be responsible for assessing the requirements for

expansion/control joints. Location and design of building expansion/control joints shall be the responsibility of the Architect. As a minimum, control joints shall be installed at all building expansion joints, at the intersection of dissimilar substrates or finishing materials, or other major building discontinuities, and at all floor lines in wood frame construction. Surface or casing type control joints shall be installed 20 ft. o.c. maximum in both directions on ceilings/soffits.

3. The Architect shall submit the design of framing construction, and attachment of the TeifsNUTECH STUCCO WALL SYSTEM to the supporting construction.
4. The Architect should determine the requirements for uplift bracing and venting the ceiling/soffit.

1.05 QUALITY ASSURANCE

A. Qualifications:

1. System Manufacturer: Teifs.
2. Materials shall be third-party certified by the Teifs' Manufacturers Verification Program to ensure that the manufactured materials are the same composition as tested materials.
3. Applicator: Company specializing in performing the work of this section approved by system manufacturer.

B. Mock-Up:

1. Construct mock-up, 1.22-m x 1.22-m (4-ft. x 4-ft.), to represent:
 - a. Substrate, insulation board, finish, color, and surface texture.
 - b. Method of attachment and joints.
2. Mock-up shall be maintained at the job site.

1.06 PROJECT CONDITIONS

- A. Materials shall be applied when ambient temperature is 5 °C (40 °F) and rising.
- B. Do not install materials in inclement weather without adequate protection.
- C. Steel or wood framing to receive the sheathing panels shall be structurally sound, free from bow and in general compliance with local building code requirements. Damaged and/or bowed framing shall be replaced before installation of the Panels.
- D. Do not install materials in inclement weather without adequate protection. Reinforcing mesh, basecoat and finishes shall not be applied to surfaces that are wet, frozen or contain frost. After application, and until materials are set and dry, the system shall be effectively protected from rain and excessive moisture.

1.07 DELIVERY STORAGE AND HANDLING

- A. Delivery: Teifs' materials shall be delivered to the job site in original, unopened containers with labels intact. Unsatisfactory materials shall not be used.
- B. Storage: Store Teifs materials in a cool, dry location, out of sunlight and protected from weather and other damage, at a minimum temperature of 5 °C (40 °F).
- C. Protect adhesives and finish materials from freezing.

PART 2: PRODUCTS

2.01 Teifs MATERIALS

A. Teifs Base Coats:

1. Cementitious Base Coat - 100% acrylic-based compound formulated for field mixing with Portland cement 1:1 by weight:
 - a. TeifsBASE
 - b. TeifsBASE FR - fiber reinforced
2. Cementitious, dry powder to be field mixed with water: TeifsBASE DB

B. Teifs Reinforcing Mesh: Balanced alkali-resistant treated, open-weave glass fiber fabric, compatible with system materials, to ASTM D 578 and the following weight requirements:

1. TeifsMESH: Standard Weight Reinforcing Fabric, not less than 4.8 oz./yd².

2. TeifsBAKRAP: Strip Reinforcing Fabric, not less than 4.8 oz./yd² for special shapes, backwrapping and detail work.
 3. TeifsKORNERRAP: Reinforcing Fabric, not less than 8.0 oz./yd² for corners.
- C. Finish Coat: 100% acrylic-based, factory mixed, integral color and texture. Coating Color, Finish and Texture: as selected by architect.
1. Standard Finish: 100% water-based acrylic, resin-based, factory mixed, integral homogenous coloring and texture, by Teifs.
 - a. TeifsFLEX CUARZO: Variable textured pattern.
 - b. TeifsFLEX TEJAS: Creamy sand texture using marble aggregate.
 - c. TeifsFLEX TEJAS FINE: Light sand texture using marble aggregate.
 - d. TeifsFLEX FREEDOM: Allows for almost any ornamental trowel texture.
 - e. TeifsFLEX PIEDRA GRANDE: Produces a stucco - like sand texture.

2.02 MATERIALS BY OTHERS

- A. Cement: Portland cement Type I - II ASTM C 150, white or gray, fresh, no lumps.
- B. DUROCK® Exterior Cement Board; 1/2"x 48" x 8', 5/8" x 48" x 8', 1/2" x 32" x 8', 5/8" x 32" x 8'; Custom lengths available (as manufactured by USG.)
- C. PermaBase Cement Board; 1/2" or 5/8" thickness, 2 ft. 8 in., 3 ft., or 4 ft. widths, 4 ft., 5 ft., 6 ft., 8 ft. or custom lengths (as manufactured by National Gypsum.)
- D. Screws/Fasteners:
 1. DUROCK:
 - a. Steel Framing: 1 1/4", 1 5/8", or 2 1/4" wafer head, with anti-corrosive coating; 14 to 20 gauge.
 - b. Wood: Wood Screws: 1 1/4", 1 5/8", or 2 1/4" wafer head, with anti-corrosive coating.
 2. PermaBase:
 - a. Wood: Galvanized roofing nails, 1 1/2" long with hot dipped galvanized coating for use with wood framing.
Nails should meet Federal Specification #FF-N105B/ type 2 style 20 or Corrosion resistant cement board screws or equivalent, 1 1/4" or 1 5/8" long.
 - b. Steel Framing: Corrosion resistant cement board S-12 screws or equivalent, 1 1/4" or 1 5/8" long, for use with 20 gauge or heavier.
- E. Weather Resistive Barrier (Some local codes may require a weather resistive barrier behind soffit board unless fascia extends 12" (300 mm) beyond soffit line.
 1. Stuccowrap by Tyvek, No. 15 asphalt saturated rag felt or 60 minute Grade D building paper or equivalent water and air infiltration barrier, complying with local building codes. Wood based sheathings require 2 layers of #15 asphalt saturated weather barrier under some building code jurisdictions.
 2. TeifsWEATHERSEAL: A non-cementitious, 100% acrylic trowelable air/weather barrier with Joint Reinforcing Fabric.
- F. Trims.
 1. Type, style and manufacturer shall be indicated on construction documents.
 2. In corrosive environments, accessories manufactured of PVC or zinc are recommended.
 3. Steel accessories shall meet ASTM C841.
 4. PVC accessories shall meet ASTM D1784 and C1063.
 - a. All trim components shall be manufactured from weather resistant grade, lead free, 100 % virgin vinyl compounds, formulated and tested for exterior use.
 - b. All flanges designed to receive basecoat and finish products shall have 1/4" diameter holes, staggered, with a minimum 1/8" space between all holes on all rows. Flanges shall have a minimum thickness of .060".
 - c. All grounds used for terminating basecoats and finishes shall have a maximum height of 3/32". The use of grounds help ensure the proper basecoat thickness over the flange.

5. 45-Bead: A surface mounted trim used around openings whose angled shape provides an excellent surface for adhering sealant without the need for a backer rod.
6. Casing Bead: Used to encase the edges of the cement board where the starter track is not used and the drainage is not needed. Provides a bonding surface for sealant application around windows and doors.
- G. Sealant: Design and detailing of control joints or building expansion joints, and selection of sealant type and color shall be the responsibility of the Architect/Engineer-of-Record. This includes joint type, configuration, width and depth.
 1. Sealant shall have written sealant manufacturer's approval for use on the exterior.
 2. See Teifs Current Sealant Tek Tip or contact Teifs.
 3. Use only sealants that will accommodate a 50% negative movement (compression), such as DOW CORNING 790 and 795 Silicone Building Sealants, or equivalent at all horizontal control joints in wood framed construction.
 4. Sealant primer, if required, shall be used as specified by the sealant manufacturer for the selected sealant to ensure suitable bond of sealant to materials on both sides of the joint. The sealant and sealant primer shall be jointly approved by the Exterior Products Manufacturer, Architect and sealant manufacturer prior to sealant installation.
 5. Use only closed-cell backer rod or equivalent.
- H. Furring Channel: Furring channels in suspended ceiling systems must be 20 gauge or heavier with a corrosion resistant coating equivalent to G60 hot dipped galvanized.

PART 3: GENERAL

3.01 SUMMARY

- A. General:
 1. Verify that surfaces and wall openings are ready to receive work.
 2. Correct unsatisfactory conditions prior to installation.
 3. Architect or General Contractor shall ensure that all needed flashings and other water proofing details have been installed correctly.
- B. Substrates
 1. Acceptable Substrates:
 - a. DUROCK® Exterior Cement Board as manufactured by National Gypsum.
 - b. PermaBase Cement Board as manufactured by National Gypsum
 2. Verify that substrate and adjacent materials are dry and sound, free of foreign substances that will impair bond or successful installation. Ensure that the substrate is not frozen.
 3. Verify substrate surface is flat and free of surface irregularities: Maximum 6-mm (1/4 inch) measured within any 1.22-m (4-foot) radius.

3.02 PREPARATION

- A. Report discrepancies materially different from Contract Documents to architect prior to commencement of installation.
- B. Protect adjacent work areas from moisture, deterioration, and soiling resulting from system installation. Provide temporary coverings and other measures to protect other work.

3.03 EXAMINATION

- A. Inspect structural framing for:
 1. Stud size/spacing/depth -- minimum 18 gauge, 3 5/8 inch (91 mm) metal studs or kiln dried 2 inch by 4 inch (50 x 100 mm) wood studs spaced a maximum of 16 inches (400 mm) on center.
 2. Straightness, trueness and uniformity of dimension.
 3. Compliance with tolerances -- horizontal alignment within 1/8 inch in 10 feet (3 mm in 3 m) of the soffit length.
 4. Framing construction -- framing members provided wherever joints in sheathing occur and

constructed in accordance with applicable building code requirements.

5. Compliance with specification tolerances record areas that are out of tolerance (greater than ¼ inch in 8 feet [6mm in 2438 mm] deviation in plane).

3.04 INSTALLATION

A. Follow TeifsNuTECH STUCCO WALL SYSTEM APPLICATION GUIDE.

B. Sealant:

1. Apply sealant at system perimeter and prepared joints to requirements of Section 07900 and manufacturer's written instructions.
2. Allow Base Coat to cure at least 2 days before applying sealant.
3. Use bond breaker tape for joints too shallow to receive backer rod.

3.05 CLEANING AND PROTECTION OF FINISHED WORK

A. Remove temporary covers and barriers protecting adjacent construction after installation.

B. Do not permit finish surface to become soiled or damaged.

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