1. PRODUCT NAME

#200 Series STUC-O-FLEX™ Flexible Textured Finish

2. MANUFACTURER

PERMA-CHINK SYSTEMS, INC.

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3. PRODUCT DESCRIPTION

STUC-O-FLEX™ is a high build elastomeric stucco-like coating made with resilient acrylic copolymer resins providing 105% elongation and superior weatherability.

Basic Use:
Foam insulation (non-foil faced)
Wood (primed)
Exterior masonry
Concrete block
Poured and pre-cast concrete
Stucco
Steel (primed)
Galvanized metal
Dens-Glass™ & exterior gypsum

Performance Information:
Flexible—105% elongation
Looks like stucco
Low maintenance
Water resistant
Bridges small cracks
Excellent weatherability
Excellent color retention
Salt spray resistant
Chemical resistant
Breathing film
Water clean up
Mildew resistant

Limitations: Do not apply when raining or when rain is imminent, or when ambient or surface temperature is below 40°F or above 100°F or when relative humidity is in excess of 90%.

Do not apply to foil faced, solvent or asphalt impregnated insulation materials.

Protect from freezing. Follow surface preparation instructions carefully to ensure proper performance.

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Color: White #207, Sandstone #215, Tan #219, Light Gray #212, Medium Gray #224. Custom colors available upon special order.

Textures: Medium

4. TECHNICAL DATA

Recommended Coverage Rates:
Foam Insulation .... 115-150 sq. ft./5 gal.
Wood ..... 115-150 sq. ft./5 gal.
Concrete .. 115-150 sq. ft./5 gal.
Coverage will vary due to texture and porosity of substrate.

Recommended Thickness: 60-80 mils wet, 48-64 mils dry depending on substrate.

Drying Time: To the touch—2 hours, complete cure 1 week, depending on relative humidity, substrate porosity and composition.

Composition by Volume:

Pigment	36.5%
TiO_2	2.6%
Extenders	33.9%
Vehicle	63.5%
Copolymer Resin	50.1%
Additives	13.4%
	100% 100%

Volume Solids: 80% +/−1%

Viscosity: 60,000-70,000 cps with F spindle @ 20 rpm.

VOC Content: 25 Grams/Liter

Recommended Substrates: Dimensional lumber, exterior grade plywood, EPS foam insulation (non-foil faced), precast, or poured-in-place concrete, block (CMU) and conventional stucco. Dens-Glass™, Quik-R Board™ Exterior Gypsum, Brick, Durock, Galvanized Steel

Recommended Primers:
Wood-PRIMESEAL™ Stain Blocking Primer
Certain Foam Insulation-PRM™ Polymer Reinforced Mortar
Ferrous Metal-Rust resistant latex primer

Container Size: 2 and 5 gallon containers

Shelf Life: 12 months stored between 40°F and 90°F

Weight per Gallon: 13 # Net

Applicable Standards: Complies with EPA restrictions on VOC content and ICBO criteria for EIFS materials.

Physical Properties:
Surface Burning Characteristics-ASTM E 84-87 (Steiner Tunnel)
Flame Spread Index = 20
Smoke Development Index = 165
Fuel Contribution Value = 19
Rated CLASS A

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Elongation-ASTM D-2370-82 105% to cohesive failure
Tensile Strength-ASTM D-2370-82 91.2 lbs./inch^2
Water Vapor Transmission-ASTM E-96 1.03 Perm Inches.
Weatherability-ASTM G-23-81 (Carbon Arc Test, 2000 hour, 10 yr. equivalent)
PASSED—No effect.
Freeze/Thaw-ASTM D-2243 (10 cycles, 32 hours each)
PASSED—No effect.
Wind-Driven Rain-FTM TT-C-55-B
PASSED—No effect.
Water Ponding-0.024 grams/25cm^2/24 hours
Peel Adhesion-ASTM D-1876
Dry = 6.5 lbs./inch^2
Wet = 1.2 lbs./inch^2
Swelling-(submerged 504 hours in water) 27%
Mildew Resistance-ASTM D-3273-86
PASSED—No growth.

5. INSTALLATION

Methods: In applying STUC-O-FLEX™, work from top to bottom systematically across the wall surface, maintaining a wet edge to ensure a uniform surface without lap marks.

Trowel Application-Using a clean stainless steel trowel, apply STUC-O-FLEX™ starting at one end of the wall section and working from top to bottom. Systematically apply material approximately 1/16" thickness while maintaining a wet edge. Texture the finish coat to match approved sample and desired appearance immediately upon applying product to wall.

Roller Application-Depending upon desired effects, different nap lengths may be used to peak the material. The longer the nap, the taller the peaks in the texture of STUC-O-FLEX™. Use nothing shorter than 1/2" nap. Apply material liberally to the roller and work

from top to bottom allowing 1" overlap between passes. STUC-O-FLEX™ may also be rough applied using a trowel and then textured by roller if desired.

Initially, wet the roller with water and squeeze out the excess. This will prevent the roller from absorbing moisture from the material.

Spray Application-Using the latest polymer technologies, this finish coat is formulated for spray applications. Used in conjunction with proper spray equipment, numerous textures can be achieved, including but not limited to, a fine sand finish unique to STUC-O-FLEX, a skip trowel, knock down, or a highly rough and bold texture, all with only one finish coat.

Keep the nozzle fixed approximately 18" to 36" away from the surface of the substrate and apply the material in long consistent horizontal strokes overlapping them slightly to insure adequate uniform coverage. As a final touch after material has developed a skin on surface, back away from wall surface 8 to 10 feet and lightly fog area to insure uniform color and texture. Coverage rates will vary with thickness and substrate. At minimum thickness of 60 mils wet, there will be an average of 150 square feet per 5 gallon pail. As with any type of spray application, finish will vary with applicator technique.

Surface Preparation: All surfaces should be clean, dry, free of all dirt, mildew, fungi, oil, release agents, water repellants, etc.

Fill large cracks, voids, wall penetrations, etc. using sound construction practices.

All surfaces to which STUC-O-FLEX™ is to be applied must have a minimum 4 in 12 pitch.

All finished edges, especially lower level panel edges, doors, windows, expansion joints, wall penetrations, etc. should be caulked with PERMA-CHINK™ elastomeric textured sealant after finish coat has cured to prevent moisture intrusion behind the system. A sealed structure is highly important to long term system performance.

Do not extend the system more than 6" below grade.

Cementitious Substrates: Cement stucco, brick, block, precast, tilt up, poured in place, stone, (exposed aggregate), etc.

Expansion Joint Treatment-Expansion joints are required only where dissimilar substrates abut, at floor lines, and where expansion joints occur within structural design of the building.

Substrate Preparation-Depending on substrate condition two options are available for treatment; this is dictated by desired final appearance.

Normally a layer of P.R.M.™ is applied over the substrate (spray or trowel applied) in a thickness adequate to flush out entire surface of wall section prior to STUC-O-FLEX™ finish being applied. Allow P.R.M.™ to dry. In order to assure the best possible finished appearance there should be no variations greater than 1/8" in 8 feet.

If substrate is level and smooth, (i.e. tilt up, precast concrete, traditional stucco, etc.) or there is not a concern if the depression from joint lines shows through the finish coat (i.e. brick, block, etc.) then all that is necessary is to apply a coat of PRIME SEAL™ by way of roller, brush, or spray equipment and allow to dry.

Finish Coat Application-Choice of application techniques must be in conjunction with user preference, approved sample, and desired final appearance.

Drying Time-Normally products will dry to the touch in 2 hours, become hard in 24 hours and cure in 1 week. Drying times will be affected by temperature and humidity. Products MUST be protected from inclement weather (rain, snow, freezing temperatures, etc.) for a minimum of 24 hours or until dry.

Foam Insulation Materials: EPS board (wall system grade, expanded polystyrene), fiberglass matted polyisocyanuarate foam board, extruded polystyrene insulation.

Panel Installation-Insulation sheets should be installed in accordance with both manufacturer's recommendations and PERMA-CHINK™ application instructions using proper adhesives and mechanical fasteners (when required).

Fiberglass mesh-Using 38" wide fiberglass mesh, install over entire surface of insulation by way of embedding into wet P.R.M.™ overlapping a minimum of 2.5" on the edges.

Option-For Quik-R insulation only (joint and seam treatment) apply a 6" wide fiberglass mesh to all butt joints and seams. Apply P.R.M.™ *on top of the fiberglass and press into the mesh while also smoothing this area out flush with balance of wall surface.*

Mechanical Fasteners-When mechanical attachment is required, fasteners must be installed slightly under flush 1/32" in the pattern specified by architectural drawings or PERMA-CHINK™ technical center. They should then be spotted with P.R.M.™ to insure these areas are flush with the wall surface. *All fasteners MUST be galvanized, plastic, or equal.*

Corner Treatment-To insure straight level corners, 6" wide corner mesh is available. The mesh is to be embedded in wet P.R.M.™ and smoothed out flush. This also provides additional reinforcement and structural strength to corner details. Both regular and high impact fiberglass mesh corners are available.

Surface Preparation-Coat the entire surface of insulation board with a layer of P.R.M.™ in approximately 1/16" to 1/8" inch thickness while also embedding the reinforcing fiberglass mesh. Allow P.R.M.™ to dry a minimum of 24 hours or until dry prior to STUC-O-FLEX™ application. NOTE: Double check substrate for high spots or hollow areas prior to finish coat installation to insure best possible finished appearance.

Application-STUC-O-FLEX™ may be applied by spray equipment, hawk and trowel, or in some cases a nap roller can also be used as described in GENERAL APPLICATION INSTRUCTIONS.

Drying Time-Normally products will dry to the touch in 2 hours, become hard in 24 hours, and cure in 1 week. Drying times will be affected by temperature and humidity. Products MUST be protected from inclement weather (rain, snow, freezing temperatures, etc.) for a minimum of 24 hours or until dry.

Substrate Sheathing Products: Dens-Glass,™ exterior grade gypsum, exterior plywood, T-111

Isopanel, durock board, etc.

Panel Installation-Sheathing product panels will be installed in accordance with manufacturer's specifications using galvanized (or equal) nails or screws in order to secure sheets to structural members. Panels will be installed vertically to reduce horizontal butt joints and all butt joints will occur over studs or blocking. Fastener spacing is a maximum of 6" O.C. on edges and 12" O.C. in the field.

Substrate Sealer-In order to assure proper adhesion and moisture resistance of the substrate a layer of PRIME SEAL™ must be applied to the entire surface. This can be accomplished by way of a roller, brush, or spray equipment. Normally PRIME SEAL™ will dry in about 1-2 hours.

Wood substrates should normally have 2 coats of sealer, because laminate glues used in manufacturing could possibly bleed through into the finish coat without it.

Joint and Seam Treatment-If optimum strength is desired, cover the entire surface with 38" wide rolls of fiberglass mesh overlapping 2.5" on the ends. This is accomplished by embedding the mesh in wet P.R.M.™ and troweling the area smooth and flat.

Option-A 6" wide, self-adhering fiberglass mesh is recommended over all butt joint details. It can be secured by lapping 3" on each side to reinforce and strengthen this area. This also assists in flushing or smoothing out uneven butt joints.

Corner Treatment-All corners should be reinforced using galvanized, plastic, (or equal) corner bead in 1/16"-1/8" ground (size) attached with fasteners (treated) spaced a maximum 10" O.C. This insures a solid, straight corner detail will be achieved.

Option-Fiberglass mesh in 6" wide rolls can be used in lieu of corner bead. This is accomplished by embedding mesh in wet P.R.M.™ lapping 3" on each side and trowelling to a smooth surface flush with balance of wall surface.

Surface Preparation-Using P.R.M.™, coat the entire surface of approved sheathing (spray or trowel applied) in a thickness adequate to flush out wall sections prior to STUC-O-FLEX™ application. This step is highly important to the finished appearance of the project. Insure that butt joints are level and feathered out so that upon applying the finish, no shadowing of these areas will occur. In order to assure the best possible appearance there should be no variations greater than 1/8" in 8 feet.

Application-Choice of application techniques must be in conjunction with user preference, approved sample, and desired final appearance. Note application instructions for STUC-O-FLEX.™

Drying Time-Normally products will dry to the touch in 2 hours, become hard in 24 hours and cure in 1 week. Drying times will be affected by temperature and humidity. Products MUST be protected from inclement weather (rain, snow, freezing temperatures, etc.) for a minimum 24 hours or until dry.

Storage: Store in a cool dry place, (between 40°-100°F) in tightly sealed containers. Do not store in direct sunlight. Prevent from freezing.

Cautions: Do not take internally. If swallowed, drink two (2) glasses of milk or water and induce vomiting. Contact a physician immediately. Avoid prolonged exposure to skin. Avoid contact with eyes, wear eye protection if spraying materials. Keep out of reach of children. Use in well-ventilated area.

6. AVAILABILITY AND COST

Availability: STUC-O-FLEX™ is available through a network of distributors and dealers in the United States, Canada and Japan. For detailed information about local dealers and distributors contact the nearest sales office.

Cost: Product costs may vary due to complexity and size of project. Contact a local dealer or distributor for an accurate quote.

7. WARRANTY

Five Year Warranty: PERMA-CHINK SYSTEMS, INC. warrants that STUC-O-FLEX™ as supplied, when applied in accordance with manufacturer's specifications and installation instructions, is free from defects, and will perform as described in the manufacturer's sales literature.

This warranty does not apply to any defects resulting from mishandling, misuse, improper storage, application on substrates not approved by the manufacturer, or in the event of improper application and/or installation.

PERMA-CHINK SYSTEMS, INC.'s sole responsibility under this warranty is to supply replacement materials for any materials shown to be defective when originally supplied, provided that not more than five (5) years have elapsed since their original application. In no event will PERMA-CHINK SYSTEMS, INC. be liable for any incidental or consequential damages. No other warranties are expressed or implied.

8. MAINTENANCE

No particular maintenance is required. However, should any cracks or separations occur because of unusual conditions, simply apply material into cracks or separations and texture as needed.

9. TECHNICAL SERVICES

Installation guidelines and technical advice on suitability of material for specific applications and end use requirements are available from authorized distributors, dealers and sales representatives in the U.S., Canada and Japan.

10. FILING SYSTEMS

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Additional product information is available upon request.