



TRAINING MODULE: 8

QUIKRETE® Stucco Products and Wall Systems



Stucco Advantages

Stucco (also known as cement plaster) is a durable traditional exterior cladding finish system. There are many reasons for its continued use from ancient times to contemporary times, including:

- Versatility of design and aesthetic appeal
- Variety of finish styles and color
- Water resistance
- Performance in a wide range of climates, endurance of wet/dry and freeze/thaw cycles
- Fire-resistive properties
- Low maintenance and life-cycle cost ratio
- High abuse and impact resistance

Stucco has proven its performance through thousands of years of use.



The History of Stucco

- 2500 B.C. –Egyptians incorporate stucco in the great pyramids using gypsum and lime.
- 1725 A.D. –The Alamo is built utilizing stucco from mud and straw.
- 1779 A.D. – Bry Higgins obtained patent for exterior stucco. (Limestone formulation)
- 1824 A.D. –Joseph Aspdin, a bricklayer, patents Portland Cement
- 1930 A.D. –Hydrated lime is developed eliminating the slaking process

Great Pyramids of Giza



The Alamo – San Antonio





Beneficial Properties of Stucco

Base Coat (Scratch Coat & Brown Coat)

Hardness

- Impact resistance
- Abrasion resistance

Weather Resistance

- Resistance to rain penetration – Self draining system
- Resistance to extreme thermal and moisture changes
- Resistance to natural environment, acid rain, wind and snow

Vapor Permeable



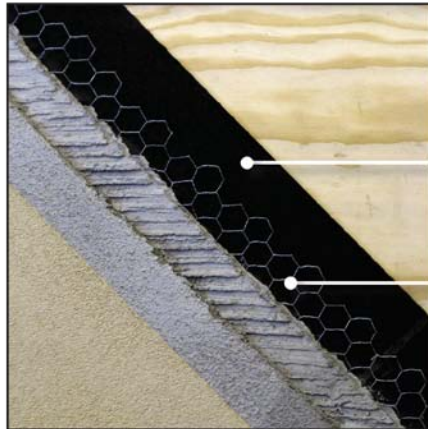
Three Coat System (Traditional Scratch Coat & Brown Coat)

Moisture Protection

Two Layers of Grade D Water Resistant Building Paper.

Lath

1" woven wire stucco netting – 20 gauge galvanized or self-furring diamond expanded metal lath



Grade D Waterproof Building Paper – 2 layers

1" Woven Wire Lath (Stucco Netting) – 20 Gauge Galvanized or Self-Furring Diamond Mesh Metal Lath – 2.5 or 3.5 lb. sq yds



Three Coat System

Total Wall System Thickness 1"

Scratch Coat

Applied at **3/8" thick**, it serves as the foundation for the final two coats. After the scratch coat is applied, it is scored with a special scarifier rake or scratching trowel to promote a better mechanical bond with the brown coat.

Horizontal grooves should be 1/8" deep.

Recommended QUIKRETE® Product:

QUIKRETE® Base Coat Stucco – Scratch & Brown





Three Coat System

Brown Coat

Applied at 3/8” thick as a leveling coat that provides a smooth, flat surface for the application of the color and texture coat.

1. Trowel or spray applied
2. Use a straight board to screed the stucco flat
3. After the stucco has lost it's sheen float the surface smooth
4. Must cure for two days and then air cure for an additional 5 days prior to application of finish/texture coat

Recommended QUIKRETE® Product:

QUIKRETE® Base Coat Stucco – Scratch & Brown





Three Coat System

Finish Coat – Cement Based

Applied with trowel at a **minimum 1/8” thickness**, working from the bottom to the top of the wall. The finish coat is then smoothed and a texture is applied. Moist cure for several days by misting with a fine water spray.

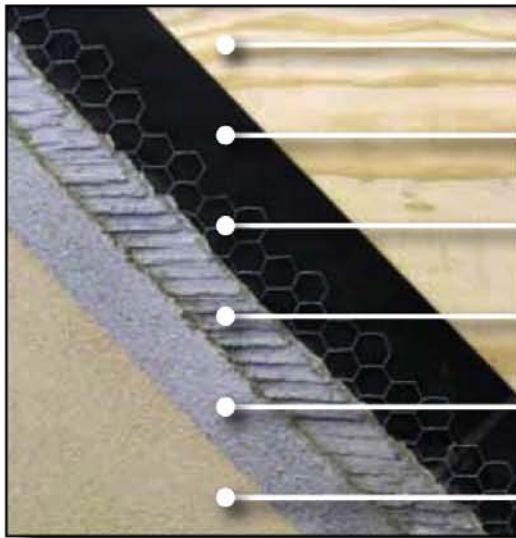


Recommended QUIKRETE® Product:

QUIKRETE® Finish Coat Stucco

3 – Coat System:

Traditional scratch coat, brown coat and finish coat applications



Plywood/OSB Substrate

Grade D Waterproof Building Paper – 2 layers

1" Woven Wire Lath (Stucco Netting) – 20 Gauge Galvanized or
Self-Furring Diamond Mesh Metal Lath – 2.5 or 3.5 lb. sq yds

Scratch Coat @ 3/8"

Brown Coat @ 3/8"

Finish Coat @ 1/8" – 1/4"

Two Coat System

Total Thickness - Over Masonry Walls 3/8"
Over Concrete Walls 3/8" to 5/8"

Wall Substrates

- Masonry Walls (**unpainted**)
- Concrete Walls (**unpainted**)

Moisture Protection

- Grade D Building Paper: **Not required**

Lath

- **Not required** for unpainted porous masonry walls





Two Coat System



Scratch Coat

Not applicable

Brown Coat

Applied directly over the masonry wall at 3/8" thickness.

Concrete Walls: Recommend the application of **QUIKRETE® Concrete Bonding Adhesive** to the wall (allow to dry) prior to application of the Base Coat.

Recommended QUIKRETE Product:

QUIKRETE® Base Coat Stucco – Scratch & Brown

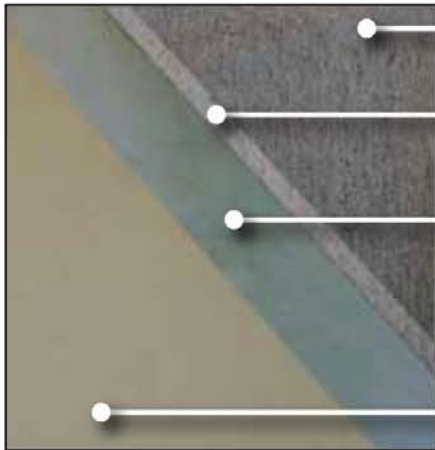
Finish Coat

Applied at 1/8" to 1/4" thickness and textured as desired

Recommended QUIKRETE Product:

QUIKRETE® Finish Coat Stucco

2 – Coat System:
Applied over concrete or
dense masonry surfaces



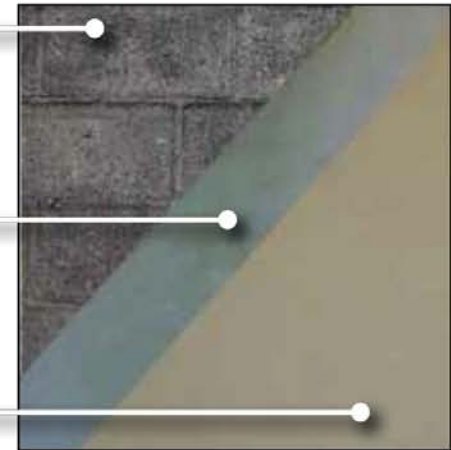
Substrate

Bonding Adhesive

Brown Coat @ 1/2"

Finish Coat @
1/8 – 1/4"

2 – Coat System:
Applied over porous
masonry surfaces





One Coat System

One Coat Stucco Base

Applied at **3/8" to 1/2" thickness in one application.** Screened flat and smoothed with a rubber float.

One-Coat should be moist cured for 2 days then air cured for 5 days prior to application of finish coat.

Recommended QUIKRETE® Product:

One-Coat Fiberglass-Reinforced Stucco





One Coat System

Finish Coat

Recommended QUIKRETE® Product:
QUIKRETE® Finish Coat Stucco



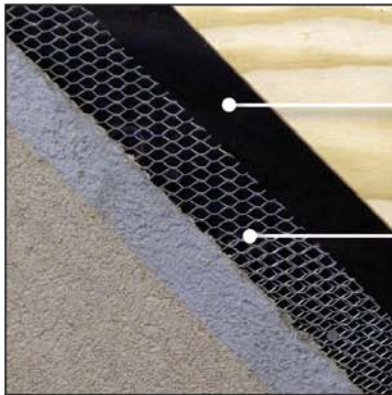
One Coat System

Moisture Protection

- Two Layers of Grade D Waterproof Building Paper

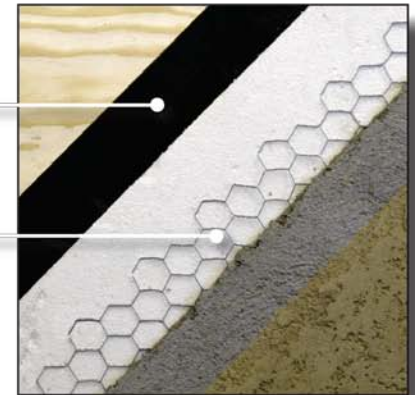
Lath

- 1" Woven Wire Lath (Stucco Netting) or Self-Furring Diamond Mesh Metal Lath

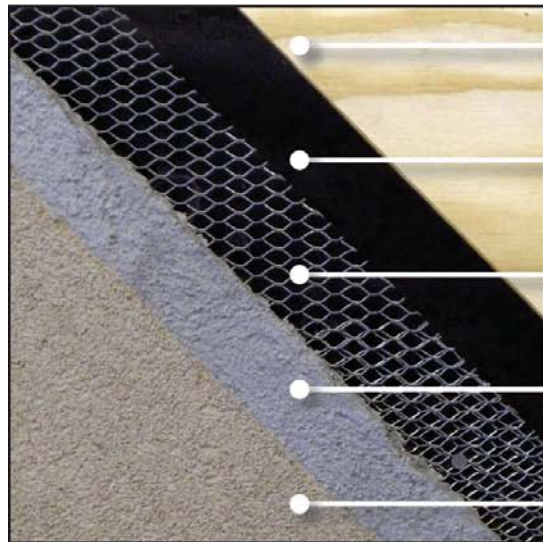


Grade D Waterproof
Building Paper – 2 layers

1" Woven Wire Lath (Stucco
Netting – 20 Gauge Galvanized or
Self-Furring Diamond Mesh Metal
Lath – 2.5 or 3.5 lb. sq yards



1 Coat System:



Plywood/OSB Substrate

Grade D Waterproof Building Paper – 2 layers

1" Woven Wire Lath (Stucco Netting) – 20 Gauge

Galvanized or Self-Furring Diamond Mesh Metal Lath –
2.5 or 3.5 lb. sq yds

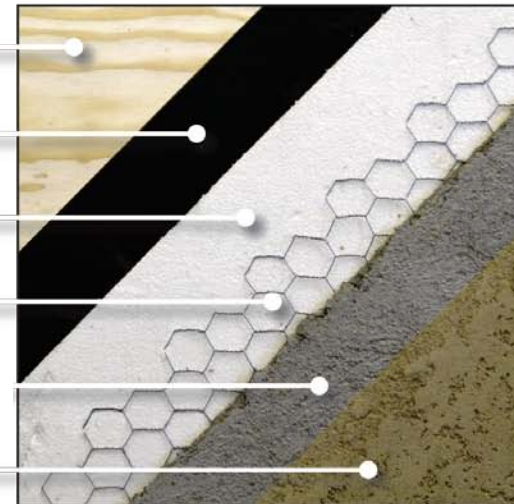
One Coat Fiberglass Reinforced Stucco @ 3/8" – 1/2"

Finish

1 Coat Insulated System:

- Plywood/OSB Substrate
- Grade D Waterproof Building Paper – 2 layers
- Expanded Polystyrene (EPS) Foam Insulation Board
- 1" Woven Wire Lath (Stucco Netting) – 20 Gauge Galvanized or Self-Furring Diamond Mesh Metal Lath – 2.5 or 3.5 lb. sq yds
- One Coat Fiberglass Reinforced Stucco @ 3/8" – 1/2"

Finish





QUIKRETE® Stucco Product Review

COMMERCIAL GRADE **QUIKRETE** Stucco



Base Coat Stucco – Scratch & Brown Coat

QUIKRETE® Base Coat Stucco (No. 1139-80) is a contractor grade pre-blended Portland cement based scratch and brown coat stucco mix.

Use for:

- Scratch and brown coat in 3-coat stucco application
- Apply directly to masonry walls in a 2-coat stucco application
- May be trowel or spray applied

COVERAGE:

- Approximately 25 sq ft @ 3/8" thickness per 80 lb bag.



COMMERCIAL GRADE **QUIKRETE** Stucco



Base Coat Stucco – Pump Grade

QUIKRETE® Base Coat Stucco - Pump Grade (No. 1139-86) is a factory blended, Fiber Reinforced Portland cement based scratch and brown coat stucco mix designed for use in spray applications. Formulation significantly reduces shrinkage cracking.

Use for:

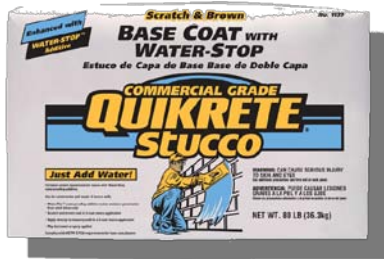
- Scratch and brown coat in 3-coat stucco application
- Apply directly to masonry walls in a 2-coat stucco application

COVERAGE:

- Approximately 25 sq ft @ 3/8" thickness per 80 lb bag.



COMMERCIAL GRADE **QUIKRETE** Stucco



Base Coat Stucco with Water-Stop

QUIKRETE® Base Coat Stucco with Water-Stop (No. 1139-89) is water resistant, factory blended Portland cement based scratch and brown coat stucco mix. Base Coat Stucco with Water-Stop contains waterproofing additives designed to resist penetration of wind-driven rain. It complies with ASTM C 926 requirements for cement base plasters.

Use for:

- Scratch and brown coat in 3-coat stucco application
- Apply directly to masonry walls in a 2-coat stucco application
- May be trowel or spray applied

COVERAGE:

- Approximately 25 sq ft @ 3/8" thickness per 80 lb bag.

COMMERCIAL GRADE **QUIKRETE** Stucco



One Coat Fiberglass Reinforced Stucco (FRS)

QUIKRETE® One Coat Fiberglass Reinforced Stucco (No. 1200-80 Sanded) is a one-coat stucco designed for use over plywood or OSB sheathing and exterior insulation wall panel systems.

- Achieves a one-hour fire rating when applied over the combination of OSB and EPS foam and plywood and EPS foam.
- Fiberglass Reinforced Stucco can be pumped and spray applied or trowel applied.
- Shrinkage compensated formulation resists cracking from drying shrinkage

COVERAGE:

- 80 lb QUIKRETE® One Coat FRS – Sanded - approximately 25 sq ft @ 3/8" thickness.



Foam Coating

QUIKRETE® Foam Coating (No. 1219) is a polymer-modified, Portland cement based rigid coating for use over rigid insulation panels, foam shapes and insulated concrete foam systems (ICF). QUIKRETE® Foam Coating can be used above or below grade in interior or exterior applications.

COLORS

White & Gray

Rigid Foam Coatings:

Applied directly to rigid foam shapes and EPS panels



Foam Shape or Panel

Foam Coating 1/4"



QUIKWALL® - Surface Bonding Cement (SBC)

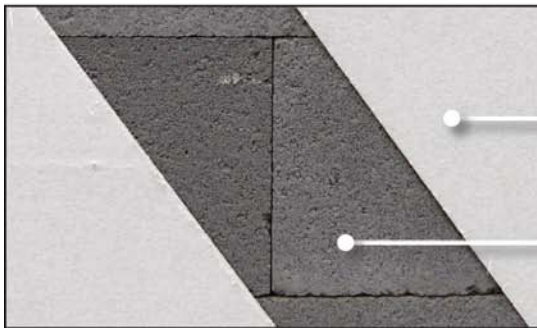
QUIKWALL® Surface Bonding Cement (No. 1230) is an alkali-resistant (AR), fiberglass reinforced portland cement design for use in dry stack masonry wall construction. QUIKWALL® is used in a one coat application providing both structural strength and a textured stucco finish.

COLORS

Gray & White

Surface Bonding Cement:

Applied directly to dry stacked masonry block



QUIKWALL® Surface Bonding Cement

Masonry Substrate-Dry Stack
Construction

COMMERCIAL GRADE **QUIKRETE** Stucco



Finish Coat Stucco

QUIKRETE® Finish Coat Stucco (No. 1201 & 1202) is a Portland cement based finishing plaster. It is designed for use as a decorative finish over Portland cement base coats or QUIKRETE® One Coat Fiberglass-Reinforced Stucco (No. 1200).

COLORS

White & Gray



Stucco & Mortar Colors

QUIKRETE® Stucco and Mortar Color (No. 1319) can be added to the mixing water prior to the addition of the dry Finish Coat Stucco or QUIKWALL® to provide permanent integral color. 20 standard colors are available. QUIKRETE® Stucco Color (No 1419) dry pigments are also available.



Stucco Repair

QUIKRETE® Stucco Repair (Product No. 8650-10) is a sanded acrylic formula that blends with the surrounding stucco surface. The weather resistant formula fills and seals cracks in stucco up to 1/2" wide.

COVERAGE:

- 10.1 fl oz tubes yield about 12 lineal ft for 3/8" diameter bead



Pre-Mixed Stucco Patch

Pre-Mixed Stucco Patch (No. 8650-32) is a sanded acrylic latex repair compound for making repairs to cracks, holes and breaks up to 1/4" thick in exterior or interior stucco surfaces. Trowel applied low-shrinkage formulation dries to a durable flexible finish.

COLOR:
Off-white





1. The minimum stucco thickness of a traditional three- coat stucco system is:
 - a) 3/8"
 - b) 1/2"
 - c) 3/4"
 - d) 1"

2. A two coat stucco system can be applied directly to a masonry wall without stucco netting or diamond lath.
True
False

3. Cement base coats should be "moist" (water) cured for a minimum of _____ days and air cured for an additional 5 days before applying finish coat.
 - a) No curing is necessary
 - b) 1 day
 - c) 2 days
 - d) 5 days
 - e) 28 days



4. The scratch coat and brown coat are each a minimum _____ thickness?
 - a) 3/8"
 - b) 1/4"
 - c) 3/4"
 - d) 1"

5. One 80 lb Bag of Base Coat Stucco will cover approximately _____ Square Feet at 3/8" thick?
 - a) 10
 - b) 25
 - c) 50
 - d) 100

6. QUIKRETE® Base Coat Stucco can be used for both two-coat and three-coat stucco applications.
True
False



7. Which QUIKRETE product can be used to construct a dry-stack (without mortar) wall?
 - a) Base Coat Stucco – Pump Grade
 - b) QUIKWALL® - Surface Bonding Cement
 - c) Foam Coating
 - d) Finish Coat Stucco
 - e) None of the above

8. Which QUIKRETE product can be used to apply a rigid coating over foam shapes?
 - a) Finish Coat
 - b) Liquid Stucco
 - c) Masonry Coating
 - d) Foam Coating
 - e) All of the above



9. QUIKRETE® Stucco & Mortar colors can be added to the mixing water or brushed on the finish coat surface while it is still wet.
True
False

10. QUIKRETE® Pre-Mixed Stucco Patch can be applied to a full depth of 1” in one application.
True
False



QUIZ ANSWERS:

1.d) 1"

2.True

3.c) 2 days

4.a) 3/8"

5.b) 25

6.True

7.b) QUIKWALL® - Surface
Bonding Cement

8. d) Foam Coating

9. False

10. False