1. PRODUCT NAME

Total One DS
Three-Coat Hard Coat Fiber Reinforced Stucco or Total One Coat Stucco (OCS)

2. MANUFACTURER

Total Wall, Inc.
P.O. Box 366
Rio, WI 53960
www.TotalWall.com
Phone 888-702-9915
Fax 888-702-9916

3. DESCRIPTION

Total One DS is a non-bearing exterior cladding for commercial and residential structures. This system is used to weatherproof and beautify any structure. The advantages of this exterior cladding system are the following:

- It is a relatively low cost yet highly durable cladding
- The exterior performs as a moisture drainage system by incorporating two different moisture barrier layers which allows any water that enters the system to safely exit through designed exits
- Practically any combination of color or texture can be achieved
- The structure is easily accessorized with architectural enhancements, such as arches, quoins, etc.
- The system may be installed over practically any substrate

Limitations:
Total Wall products must be applied in temperatures of 40° F or higher. The freshly applied products must be protected from precipitation and the temperature must be maintained at 40° F or greater for 24 hours. Stored products must be covered, protected from sun and freezing conditions.
Total Wall products must be installed by approved Total Wall registered applicators. Only registered applicator installations are eligible for a System Warranty.
Total Wall reserves the right to use independent certified inspectors on any phase of installation.
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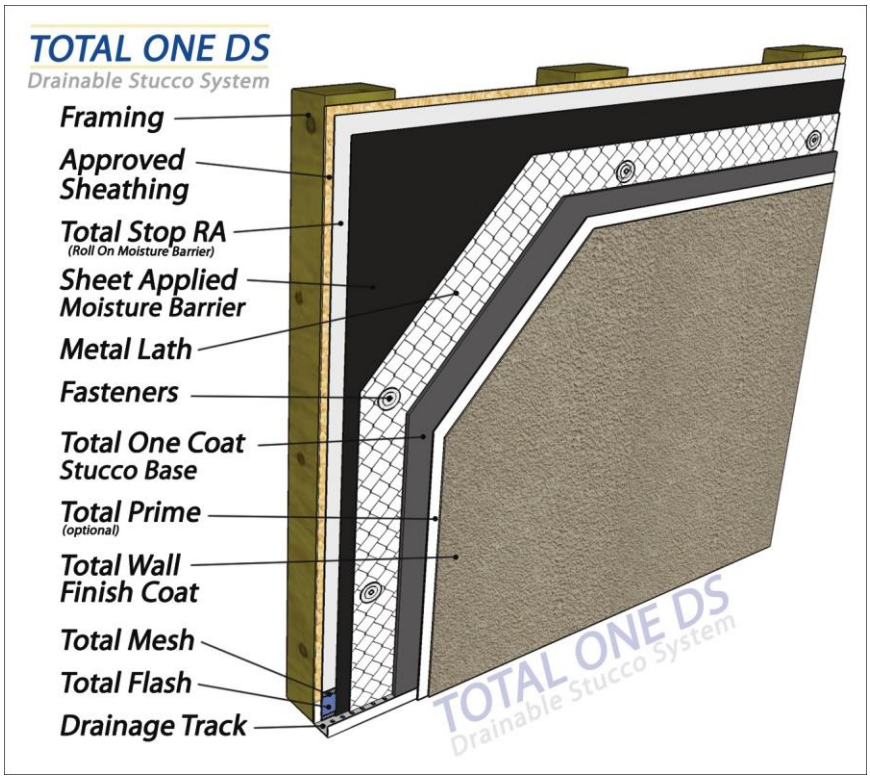

Materials:
Total One DS consists of 6 layers or constituents:

1. Substrate
2. Liquid applied moisture barrier
3. Sheet applied moisture barrier
4. Metal Lath
5. Stucco base
6. Finish coat

Layer 1 - Substrate Framing and Sheathing or Masonry

Approved framing is steel or wood with a maximum span of 16" O.C. The sheathing may be wood, gypsum sheathing, cement board or composite sheathing. The masonry may be raw or coated existing stucco, CMU, concrete or brick.

Layer 2 - Liquid Applied Moisture Barrier

Total Stop RA is a breathable, liquid-applied membrane with integral mold and mildew fighting agents which functions as an air/moisture barrier. This rubbery membrane material, this layer tends to seal fastener penetrations going through it.

Layer 3 - Sheet Applied Moisture Barrier

Approved self-draining moisture barriers are:

- Tyvek StuccoWrap
- RainDrop HouseWrap
- Weather Trek
- Vortec Drainage Barrier
- Grade D building paper
- Standard house wrap
- Paper-backed lath

The moisture barrier is lapped to prevent water that may run down the wall from entering the wall cavity and is installed over a PVC, galvanized metal, or zinc drainage track at the lower system terminations. PVC, galvanized metal or zinc accessories are also used for expansion and control joints in accordance with standard lath and plastering practices and at all window and door penetrations.

Layer 4 - Metal Stucco Base Reinforcement

Metal lath, such as self-furring galvanized 2.5 lb. diamond lath or 3.4 ribbed lath, or galvanized stucco netting with 1" or 1.5" openings is used for reinforcement. The metal reinforcement is installed with fasteners, as approved by code and the manufacturer.

Layer 5 - Stucco Base

The combination of scratch and brown coats is called the Portland cement stucco base. The product used for this is Total One Coat Stucco.

Total One Coat is trowel applied. The first pass is a scratch coat that is typically 1/4" - 3/8" in thickness and allowed time to set. A 24-hour minimum hydration of scratch coat is recommended.

The scratch coat is followed by a brown coat, which is filled out to near the specified total thickness of the plaster coat. (Allow for the thickness of the finish coat). The brown coat is recommended to be moist cured for 48 hours and air dried for an additional 24 hours minimum, before application of the synthetic finish coat.

Mixing: Add up to 220 pounds of clean silica sand (approximately 45-70 mesh) per 80-pound bag of Total One Coat Stucco Concentrate. Using a low-speed mixer with a jiffler blade, add approximately 6.75 gallons per batch (one bag plus 220 pounds of sand) of stucco. For improved performance and extended warranty, replace 1 gallon of mix water with 1 gallon of Total Wall Liquid Acrylic Additive. After initial mixing, allow the mix to stand for 2-5 minutes, and then remix, adding a small amount of water to adjust workability if necessary. Mix pot-life will vary depending on temperature and batch size. An average pot-life of 40 minutes can be anticipated. Total One Coat Stucco mix may be re-tempered one time if mix becomes too stiff. Final consistency should be a creamy, light and easily troweled mixture.

Total Prime, an optional primer, may be applied over the stucco base before applying the finish coat, to maximize coverage of the finish coat and to even out the suction of the base coat.

Layer 6 - Finish Coat

The Finish Coat is the outer coating that gives color and texture to the system. The Finish coat also provides protection against weather, mildew, and pollution. All Total Wall Finishes are 100% acrylic based, giving superior durability, and are available in two grades:

1. Premier Grade
Premier grade is rich with internally plasticized acrylic polymer, which provides for exceptional movement.

2. Journeyman Grade
Journeyman grade is designed for superior workability and performance.

Total Wall Finishes are available in the following textures and may be trowel or spray applied:

1. Swirl Coarse - generates a traditional wormhole appearance at ~ 0.078"
2. Swirl Ultra-Coarse - generates a very coarse wormhole appearance at 0.098"
3. Swirl Fine - generates a traditional wormhole appearance at ~ 0.065"
4. Shot Blast Coarse - generates a coarse limestone appearance at ~0.059"
5. Shot Blast Medium - generates a coarse limestone appearance at ~ 0.078"
6. Shot Blast Fine - generates a very fine limestone appearance at ~ 0.044"
7. Freestyle - generates a variety of hand-applied textures at varying thicknesses
8. Gemstone - generates a variety of marble grain looks using colored aggregates in a clear acrylic base at ~ 0.046"

Professional Affiliations:
Total Wall maintains memberships and involvement with these organizations:

- Exterior Design Institute (EDI)
- American Society for Testing and Materials (ASTM)
- Federation of Societies for Coatings and Technology (FSCT)
- Association of the Wall and Ceiling Industries (AWCI)
- Northwest Walls and Ceilings Bureau (NWCB)

4. TECHNICAL DATA

Acrylic Polymer coating over Portland cement stucco.
Flame Spread < 5 ASTM E84
Weight ~ 3 - 9 lb. (lamina only) per sq. ft. based on thickness

5. INSTALLATION

A. Substrate Preparation

✓ The substrate must be clean and in sound condition. Any deteriorated, damaged, or soft areas must be repaired before proceeding.
✓ The wall must be uniform. Planar irregularities greater than 1/4" in 10' must be addressed prior to installation.
✓ The ground termination must have a weep base.
✓ Create control joints and expansion joints at appropriate design locations, such as window and door corners, for example. The window head receives a weep base, providing the window detailing and design permits this detail.
✓ Floor lines in wood frame construction must have an expansion joint. The moisture barrier is continuous behind all joints.
✓ Expansion joints must be placed at all through-wall joints, at intersections of dissimilar substrate materials, and anticipated high stress areas. Install control joints in accordance with lath and plastering guidelines and manufacturer specifications.

B. Minimum Tools and Equipment

✓ Drill mixer 1/2" and jiffy mix-blade
✓ Screw gun and staple gun
✓ Razor knife
✓ Tape measure
✓ Level
✓ Hammer
✓ Bucket brush
✓ A caulk gun
✓ Finishing tools
✓ Fine-toothed saw
✓ Snips
✓ A chalk-line or laser-level
✓ A stainless steel trowel
✓ Margin trowel
✓ Appropriate float

C. Applying Total Stop RA

Open a new pail of Total Stop RA and mix on low speed (500 rpm maximum) with a jiffler style paddle for 30 seconds. Avoid over mixing or air entrapment of the product. Using a steel trowel, fill all sheathing joints with Total Stop RA and embed reinforcing mesh into wet Total Stop RA.

Fill any cracks, splits, knotholes or craters in the face of the sheathing using a trowel stroke of Total Stop RA. Allow curing a minimum of 4 hours or until dry to the touch before beginning coating.

Add up to 24 ounces of water to 5 gallons of Total Stop RA for roller application. Use a 1/2" nap roller to apply a heavy 15-20 mil wet coat of Total Stop RA to the entire sheathing face. Cross-roll the wet coating horizontally and vertically to ensure complete coverage. Allow the Total Stop RA to dry and inspect the coating for pinholes or voids. If pinholes or voids are present, apply a second coat of Total Stop RA in an 8-10 mil wet thickness. Allow coating to dry a minimum of 18 hours before proceeding with the installation.

D. Applying Total One Coat Mix

Using a trowel, apply the stucco mix to the wall surface. If lath or netting has been installed, key the stucco mix thoroughly into the reinforcement.

The first pass is a scratch coat and is typically 1/4" to 3/8" thickness. The next pass is the brown coat. Use multiple passes or lifts to achieve the desired thickness.

Apply stucco mix in accordance with ASTM C926 in either a two-coat process or a three-coat process. Keep a wet edge and work to natural stops such as corners or joints. A darby, slicker or rod is used to assist in leveling the applied stucco.

The stucco should be moist cured for a minimum of 48 hours and allowed to dry and cure an additional 24 hours minimum, while protecting from freezing and precipitation.

Remove any trowel marks by rubbing a pumice stone over the surface.

An optional layer of Total Wall primer may be applied to the base coat to assure finish coat color consistency. It is highly recommended to apply a primer before applying any vibrant finish color.

E. Applying the Finish

a) Apply the Total Wall Finish of choice directly out of the bucket onto the cured base coat using a stainless steel trowel. The thickness of the finish is gauged by the largest aggregate in the texture selected.
b) Immediately texture or float the finish with the proper floating tool and motion to achieve the desired result.
c) Allow the finish to cure by protecting from freezing and precipitation for 24 hours.

F. Installing Sealant
Except for aesthetic joints, all isolation joints must be a minimum width of 1/2” and all expansion joints must be a minimum of 3/4” or 4 times the expected movement, whichever is greater.
Joint depth minimums are established by the sealant manufacturer and can be obtained from their literature or by calling Total Wall Technical Services.
All insulation board edges must be back-wrapped with mesh and base coat.
Apply a primer when recommended by the sealant manufacturer. Insert a proper diameter backer rod to allow for its compression into the joint at a uniform depth. The depth is to allow for the desired thickness caulk bead.
The backer rod must be a closed cell polyethylene material or an extruded polyolefin with a non-absorbing skin.
Prepare the sealant according to the manufacturer’s instructions. Apply the sealant with a pressure gun and properly sized nozzle. Fill the surface of the prepared joint with a smooth, solid, even bead of sealant. The bead must be free of sags, voids and wrinkles. Tool the joint to eliminate air pockets and force contact with the joint surfaces.

G. Architectural Enhancements
Architectural shapes such as quoins, corners, arches, and cornices can be added after the base coat has cured. Foam shapes can be mounted using Total Wall Blue Mastic Adhesive or EnerFoam and temporary or permanent mechanical attachment as applicable. These shapes are then base coated and finished to match the flat wall application described above. Alternatively, finished shapes which match or accent the flat wall system can be mounted to the base coated or finished system.
The quoins may be made at the job site, or can be ordered, as well as any architectural enhancement, from Total Wall, Inc. Architectural enhancements are prefabricated and ready to mount to the wall.

H. Precautions
All details must be properly constructed. These details include all caulking details, kick out diverters, flashings, terminations, and utility penetrations.

6. AVAILABILITY

Total Wall, Inc. materials are manufactured in Wisconsin and are purchased by Registered Applicators through Total Wall Distributors. Contact your local distributor for a list of Registered Applicators or call Total Wall, Inc. (888-702-9915) customer service for assistance.

7. WARRANTY

Total Wall, Inc. warrants its system against delamination or material defects when properly installed by a Registered Total Wall Applicator according to current Total Wall and job specifications in force at the time of installation.

No warranty stated herein must be effective until the goods and labor subject to the said warranty have been paid for in full. Total Wall makes no other express warranty or warranty of merchantability. Further, Total Wall makes no warranty that the products of its manufacture are fit for any particular purpose.

Defects caused by misuse, improper storage, mishandling or improper application must not be warranted.

Total Wall is not responsible for damage or injury for materials not manufactured by Total Wall, acts of God, structural movement, or defective materials or their application on the warranted structure.