

TOTAL ONE ICF CLASS ICF

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Hard Coat ICF Coating System

AMERICA'S EIFS AND STUCCO COMPANY!

1. PRODUCT NAME

Total One ICF

Three-Coat Hard Coat Fiber Reinforced Stucco on Insulated Concrete Form (ICF)

2. MANUFACTURER

Total Wall, Inc.
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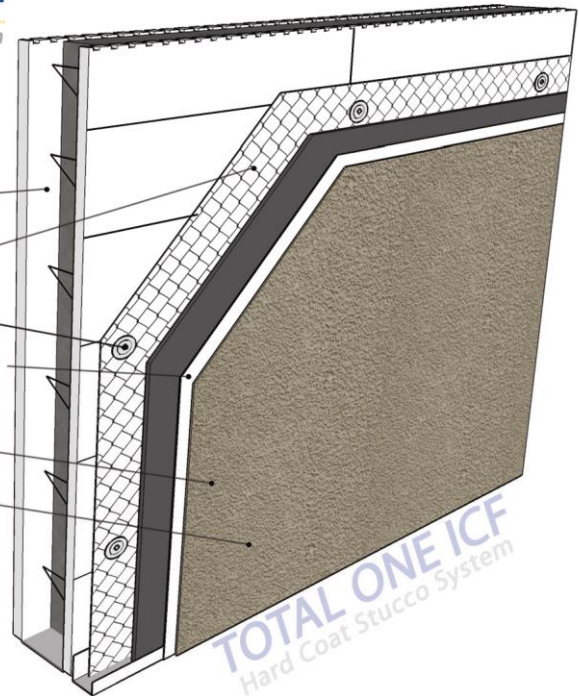
3. DESCRIPTION

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

- It is a relatively low cost yet highly durable cladding
- The exterior is highly impact resistant and able to resist sharp impacts and damage from pests and boring insects
- The cladding will provide an ASTM E119 15-minute thermal barrier when installed 1/2" minimum thickness per NCMA equivalent thickness guidelines for fire rating
- Practically any combination of color or texture can be achieved
- The structure is easily accessorized with architectural enhancements made of the same materials as the wall system (arches, quoins, etc.)
- The system may be installed over practically any ICF substrate

TOTAL ONE ICF Hard Coat Stucco System

ICF Wall
Metal Lath
Fasteners
Total One Coat Stucco Base
Total Prime (optional)
Total Wall Finish Coat



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 and protected from sun and freezing conditions. Total Wall, Inc. products must be installed by certified Total Wall, Inc. registered applicators. Only registered applicator installations are eligible for a System Warranty. Total Wall, Inc. reserves the right to use certified inspectors on any phase of installation.

Materials:

Total One ICF consists of 4 layers or constituents:

1. ICF substrate
2. Reinforcement
3. Stucco base
4. Finish coat

Layer 1 - ICF Substrate

Approved ICF materials as manufactured by:

- Reward Wall
- Arxx
- Polysteel
- Dow Chemical
- Keeva
- Owens Corning
- BuildBlock
- Amvic
- EcoBlock
- Or others, as approved, in writing, by Total Wall, Inc.

Layer 2 - Reinforcement Galvanized Diamond Metal Lath

A 2.5-lb. weight per square yard diamond lath metal reinforcement, galvanized for corrosion control and mechanically fastened to the ICF ties in each block with fasteners, as approved by code and the manufacturer.

Layer 3 - Stucco Base

The combination of scratch and brown coats is called the Portland cement stucco base. The product used for this base 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 jiffy blade, add approximately 6 75 gallons per batch of stucco (one bag plus 220 pounds of sand). 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 4 - 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 them 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 applied or spray applied:

1. Swirl Coarse - generates a traditional wormhole appearance at ~ 0.078"

2. 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"

Applicable Standards:

Total Wall, Inc. has had extensive testing performed on each individual system component and on the assembled system by certified and code approved independent testing laboratories.

- International Code Council (ICC)
- International Building Code (IBC)
- National Evaluation Services (NES)
- Uniform Building Code
- National Building Code
- Standard Building Code
- International Residential Code

Professional Affiliations:

Total Wall, Inc. 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

Chemistry: 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 ICF substrate needs minimal preparation before proceeding. Yellow, dirty or deteriorated ICF surface does NOT need to be cleaned.
- ✓ 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.

✓ Expansion joints should 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
- ✓ Caulk gun
- ✓ Finishing tools
- ✓ Fine-toothed saw
- ✓ Snips
- ✓ Stainless steel trowel
- ✓ Margin trowel
- ✓ Appropriate float
- ✓ A chalk-line or laser-level

C. Installation of Metal Lath and Accessories

Lath must be installed with the long dimension at right angles to the supports. Use corrosion resistant screws with optional corrosion resistant metal plates capable of securing at least 3 strands of metal. The screws must be anchored into the ICF ties at an average fastener density of 1 fastener per square foot minimum.

Lath must not be continuous through joints unless fastening distance prohibits breaking the lath. Lath sections must be lapped a minimum of 2". Lath edges must fully cover accessory flanges. Where end laps occur away from ICF ties and fasteners, the sheets of lath must be wire tied with 0.0475" galvanized, annealed steel wire. Joint construction must be performed in accordance with related sections of this specification, project documents and the applicable building code.

D. Applying TotalOne 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 for 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 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.

A non-absorbing backer rod and approved sealant is required. Optionally, isolation joints or terminations may be sealed with fillet beads of approved sealant.

Joint depth minimums are established by the sealant manufacturer and can be obtained from their literature or by calling Total Wall Technical Services.

All ICF terminations, such as windows and doors penetrations, ground terminations and expansion joints, may be made with PVC or zinc accessories.

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 ordered along with 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 outs; 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, Inc. 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, Inc. makes no other express warranty or warranty of merchantability. Further, Total Wall, Inc. 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, Inc. is not responsible for damage or injury for materials not manufactured by Total Wall, Inc., acts of God, structural movement, or defective materials or their application on the warranted structure.