

SPECIFICATION

TOTAL WALL

This Specification Data Sheet is designed to conform to a standard industry format used most frequently by Specifiers, Architects, and Registered Design Professionals.

1. PRODUCT NAME

TOTAL WALL Type DA
Direct Applied Exterior Finish
System (DEFS)

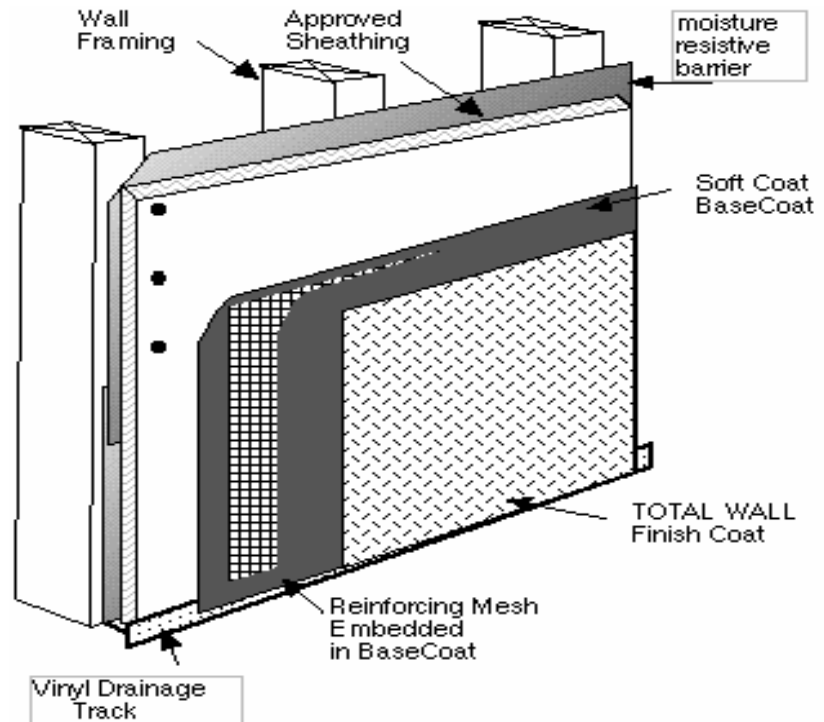
2. MANUFACTURER

Total Wall, Inc.
P.O. Box 8098
Madison, WI 53708
Phone 888-702-9915
Fax 888-702-9916
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Rio, Wisconsin 53960

3. DESCRIPTION

TOTAL WALL Type DA Direct Applied System is a non-bearing exterior cladding for commercial and residential structures. The TOTAL WALL Type DA DEFS is used to weatherproof and beautify any structure. Among the advantages of this exterior cladding system are the following:

- it is light weight and will not stress the design structure;
- it is a relatively low cost yet highly durable cladding;
- when installed with a moisture resistive barrier and proper details, the exterior performs as a moisture drainage system which allows any water that enters the system to safely exit;
- 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.) used to cover an existing sheathing. The existing sheathing may be exterior gypsum, plywood,



or OSB. The moisture barrier is lapped to prevent water from entering the wall cavity.

Limitations:

Total Wall products must be applied in temperatures of 40 F or higher and protected from freezing and precipitation for 24 hours. Stored products should be covered and protected from freezing conditions. Total Wall products and systems are to be installed by Total Wall Qualified Applicators and their installations are eligible for a Total Wall System Warranty. Total Wall reserves the option to have a trained inspector on the jobsite for quality control purposes.

Materials: Total Wall Class DA DEFS consists of 5 layers or constituents:

Layer 1, Framing and Sub-sheathing
Approved Framing is steel or wood with a maximum span of 16" O.C. The sub-sheathing is optional and may be wood or siliconized-core gypsum sheathing.

Layer 2, Moisture Barrier
An approved moisture barrier such as Tyvek StuccoWrap, RainDrop HouseWrap, or Weather Trek is installed over the sub-sheathing. Any approved grade D moisture barrier is acceptable over open framing. The moisture barrier is lapped to prevent water running down the wall from entering the wall cavity. In either case, the moisture barrier is installed over a PVC drainage track or starter track with weeps at the lower system termination. PVC accessories are used also at expansion joints and all window and door penetrations.

Layer 3, Approved Sheathing
For exterior wall areas that are exposed to the elements, the sheathing must be a cement board such as Durock, Permabase, or equivalent. For protected areas such as soffits or entrance ways, a siliconized-core gypsum board such as DensGlass, Fiberock, or GlasRoc, in addition to cement board, is approved. The sheathing is installed with galvanized, zinc or climacoat screw fasteners.

Layer 4. Base Coat and Reinforcing Mesh

In Direct Applied Systems, the sheathing joints are treated with Base Coat and a strip of reinforcing mesh followed by the entire surface of the sheathing being covered with Base Coat and reinforcing mesh. This protects the sheathing joints with a double layer of mesh and Base Coat.

Base Coats:

1. T 2000 Base Coat

T-2000 is a dry powder that contains Portland cement, polymer and specialty aggregates. It is available in 50-lb. bags. Mix with water using a jiffy mixer blade and drill (or a mortar mixer) until a mortar-like consistency is achieved (about 5 quarts of water per 50-lb. bag). Wait 5 minutes and remix. Pot life will be from 30 to 45 minutes. If the mix stiffens during use, add a few ounces of water and remix.

2. EZ Base NCB (Non Cement Base)

This product is a ready to use, fully synthetic base coat. Mix before use. Product may be thinned by adding 4 - 6 ounces

of water per 5-gallon pail of TOTAL WALL EZ Base while mixing. Mix with a low speed jiffy mixer blade on a drill.

3. TOTAL WALL Foam N' Base Coat

This product contains a liquid acrylic polymer plus specialty aggregates and modifiers. Mix in a 1:1 ratio by weight with Type I Portland cement at the job site. Add 16 - 24 ounces of water to a 5-gallon pail of mix to adjust to a mortar-like consistency. Wait 5 minutes and remix. Pot life will be from 30 to 45 minutes. If the mix stiffens during use, add a few ounces of water and remix.

Reinforcing Meshes:

1. Standard Mesh

A polymer coated woven fiberglass mesh with a weight of 4.3 ounces per yard and a relative impact resistance of 25-35 in-lbs.

2. Detail Mesh

A polymer coated woven fiberglass mesh with a weight of 4.3 ounces per yard and a relative impact resistance of 25-35 in-lbs. Available in narrow widths.

Layer 5. 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, which gives them superior durability.

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

1. Swirl Coarse- generates a traditional worm hole appearance at ~ 0.078”;

2. Swirl Fine- generates a traditional worm hole appearance at ~ 0.065”;

3. Swirl Ultra Coarse- generates a traditional worm hole appearance at

4. ShotBlast Coarse- generates a very coarse limestone appearance at

5. ShotBlast Medium- generates a coarse limestone appearance at ~ 0.078”;

6. ShotBlast 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 has had extensive testing performed on each individual system component and on the assembled system by certified and code approved independent testing laboratories. International Residential Code (IRC)

International Building Code (ICC)
Standard Building Code (SBCCI)
National Building Code (BOCA)
Uniform Building Code (ICBO)

Professional Affiliations:

TOTAL WALL maintains memberships and involvement with these organizations:

ASTM (American Society for Testing and Materials)
EDI (Exterior Design Institute)
AWCI (Association of the Walls and Ceilings Industries)
AIA (American Institute of Architects)

CSI (Construction Specifications Institute)

4. TECHNICAL DATA

Chemistry Acrylic Polymer coating over coated fiberglass embedded in polymer modified Portland cement
Flame Spread < 5 ASTM E84
Weight ~ 0.7 - 0.8 lb (lamina only) per sq ft

5. INSTALLATION

A. Substrate Preparation and Panel Inspection

- The exterior sheathing should be clean and in sound condition with rough side facing in toward the framing. Any deteriorated, damaged, or soft areas must be repaired before proceeding.
- The wall should be uniform. Planar irregularities greater than 1/4" inch in 8 feet should be addressed prior to installation.
- The ground termination should have a PVC weep base.
- Board Joints should be "L" cut around windows and doors with a 1/2" gap to allow for sealant joint construction with a casing bead or a 45 degree PVC trim accessory bead along jambs and sills and will later receive the sealant. The window head receives a weep base, providing the window detailing and design permits this detail.
- Floor lines in wood frame construction must receive a 1/2" to 3/4" expansion joint with each side of the joint terminated with a PVC casing bead. The moisture

barrier is continuous behind all joints.

- 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 the sheathing manufacturer specifications.
- All sheathing boards are loosely butted, and not gapped, unless required by the sheathing manufacturer.
- Exterior sheathing joints should not align with any sub-sheathing joints. Vertical joints should be staggered so that ends are not in a straight line.
- Fasteners should be corrosion resistant screws of proper length to penetrate either steel framing by 1/2" or wood framing by 1".
- Fasteners should be installed a maximum of 16" O.C. horizontally and 8" O.C. vertically, with heads flush with the panel surface.
- All PVC accessories should be attached with either stainless steel or galvanized staples or nails.

B. Minimum Tools and Equipment

- Drill mixer 1/2" and jiffler mix-blade
- A screw gun and staple gun
- A razor knife, tape measure, level, hammer, bucket brush
- A caulk gun, finishing tools, a fine-toothed saw and snips
- A stainless steel trowel, a margin trowel, and appropriate float
- A chalk-line or laser-level

C. Applying Base Coat and Mesh

1. Using a trowel or knife, fill the gaps between the boards with Base Coat and allow to dry.
2. Using a steel trowel, apply Total Wall Base Coat mix to the surface of the board joints in a 1/8" skim coat.
3. Immediately embed minimum 4-1/2" width Total Wall detail mesh in the Total Wall Base Coat.
4. Using a steel trowel, apply Total Wall Base Coat mix to the remaining surface of the sheathing boards in a 1/16" skim coat. Immediately embed Total Wall 4.5-ounce reinforcing mesh into the wet base coat. Lap runs of mesh a minimum of 2-1/2". Install 9" x 12" butterflies of mesh at natural stress points, such as window corners, where control joints do not already exist. Using a trowel, press the mesh into the Base Coat by starting at the center and working toward the edges. Press out the air voids and wrinkles to produce a smooth Base Coat. Apply additional Base Coat as necessary to completely cover the mesh so that the fabric pattern is not visible or barely visible. The reinforcing mesh and Base Coat should cover the entire surface and overlap the flanges of the trim accessories. Level the Base Coat with a second pass of the trowel to produce a smooth and even coating.
5. Allow Total Wall Base Coat to cure for a minimum of 18 hours while protecting from freezing and precipitation.
6. Remove any trowel marks by rubbing a pumice stone over the surface.

D. Applying the Finish

1. 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.
2. Immediately texture or float the Finish with the proper floating tool and motion to achieve the desired result.
3. Allow the finish to cure by protecting from freezing and precipitation for 24 hours.

E. Installing Sealant

With the exception of esthetic joints, all isolation joints should be a minimum width of 1/2" and all expansion joints should be a minimum of 1/2" to 3/4" or 4 times the expected movement, whichever is greater.

Protected or covered areas that are using siliconized-core gypsum sheathing do not require PVC accessories except at expansion joints. Isolation joints or terminations are 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 cement board terminations, such as windows and doors penetrations, ground terminations and expansion joints, shall be made with PVC 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 or use bond-breaker tape if the joint depth is insufficient for backer rod. The depth is to allow for the desired thickness caulk bead. The backer rod should be a closed cell polyethylene or an extruded polyolefin with a non-absorbing skin. Prepare the sealant according to the manufacturer's instructions. Apply the sealant with 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.

F. 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 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, completely finished shapes which match or accent the flat wall system can be mounted to the base coated or finished system. An example of an architectural enhancement is placing quoins (corner reveals) on the building corners. The quoins can be made at the job site, or they

can be ordered (from American Prefab 888-702-9918) completely prefabricated and ready to mount to the wall.

G. Precautions:

Although this system will safely release water that inadvertently gets behind the DEFS, it is designed to be constructed to prevent water intrusion. Therefore, all details must be properly constructed. These details include all caulking details, kickout diverters, flashings, terminations, and utility penetrations.

6. AVAILABILITY

TOTAL WALL materials are manufactured in Rio, WI, and are purchased by Approved Applicators or Certified Applicators through TOTAL WALL Distributors. Contact your local Distributor for a list of Qualified Applicators, or call 888-702-9915 for assistance.

7. WARRANTY

Standard Total Wall Material or Performance Warranty

TOTAL WALL, Inc. warrants its system against delamination, fading*, or material defects when properly installed by an Approved or Certified TOTAL WALL Applicator according to current TOTAL WALL and job specifications in force at the time of installation. The Warranty must be requested before system installation and a properly completed and signed inspection check list must be submitted at the job completion prior to issuance of any Warranty. TOTAL WALL reserves the right to review any claim and make the final

determination as to the validity of the claim and the cause of the claim. At no time shall the value of the Warranty exceed the original purchase price of the materials. Should TOTAL WALL receive a valid claim, TOTAL WALL, at its option, will repair the damage, replace materials, or refund in US dollars for the amount of damaged TOTAL WALL materials.

No Warranty stated herein shall be effective until the goods and labor subject to 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 shall 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.

Fading is defined as a DE of 2.0 or greater on an ACS colorimeter. Accent and deep colors are not warranted against fading.

End of Specification