TechnicalDataSheet

THERMA**DRY**® Insulating Drainage Panels

Drains, Insulates and Protects. All in One Product.

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THERMADRYis manufactured using Dow Styrofoam®

Part 1. Installation Guidelines For Finished Vertical Walls

1.01 Product Description

THERMA**DRY**® Insulating Drainage Panels, manufactured by T. Clear Corporation, are a composite of Styrofoam® brand insulation and fabric, and are available in three compressive strengths and three insulation values. Closely-spaced vertical and horizontal channels on one side of the THERMA**DRY** provide rapid drainage. The filtration fabric covering these channels overlaps the adjacent panels both vertically and horizontally and prevents ingress of soil particles into the drainage system. The panels are 2 ft. x 8 ft., with tongue and groove edges all around, and are erected vertically.

1.02 How To Select The Proper Product

The type and thickness of THERMA**DRY** Insulating Drainage Panel selected will depend on the amount of pressure exerted by the soil and by the thermal resistance desired.

Refer to the following table and select the panel type which meets the strength and insulation requirements of the job.

1.03 Surface Preparation

Surface should be smooth, monolithic and free of coarse aggregate. All debris

Typical Physical Property Values of THERMADRY** Insulating Drainage Panels**

Panel Property	ASTM Method	Type 750			Type 1250		Type 1750	
Thickness: inches		1	1 1/2	2 1/4	1 1/2	2 1/4	1 1/2	2 1/4
R-Value: °F-sf-h/Btu	C518	4.4	6.9	10.6	6.9	10.6	6.9	10.6
Compressive Strength*: psf	D1621	2160	2160	2160	3460	3460	5180	5180
Flow Rate**: gpm/ft	D4716	9.5	9.5	9.5	12	12	12	12

*An appropriate design factor, such as 3-1 should be applied to minimize long term compressive creep.
**Flow rate at 500 lbs. per sq.ft.

CLEAR Protected Membrane Roof Systems

should be cleaned off footings. Waterproofing should be cured and free of solvent.

1.04 Application

THERMA**DRY** Insulating Drainage Panels are supplied with tongue and groove edges to promote a seal between panels and to help with alignment. The tongue can easily be removed with a handsaw when not needed, such as in the corner detail shown in Figure 1.

Mastic adhesives compatible with the foam and the waterproofing should be used in six large, equally-spaced daubs on the non-fabric side of the panels to adhere them to the cured waterproofing temporarily until the backfill is in place.

Begin by installing the first panel vertically, with the long edge flush with a corner and the fabric flap on the right. The fabric flap on the horizontal edge must be at the bottom of the panel and positioned to prevent backfill from entering the channels. Align the tongue of the second panel into the groove of the first. Be sure the fabric on the long edge of the panel overlaps the previous panel. Continue until a corner is reached. Cut and install the corner panels as shown in Figure 1. Use adhesive or staples to hold the flap in place as shown in Figure 2. Additional filter fabric may be needed to assure that all gaps are covered.

Figure 1. Corner Detail

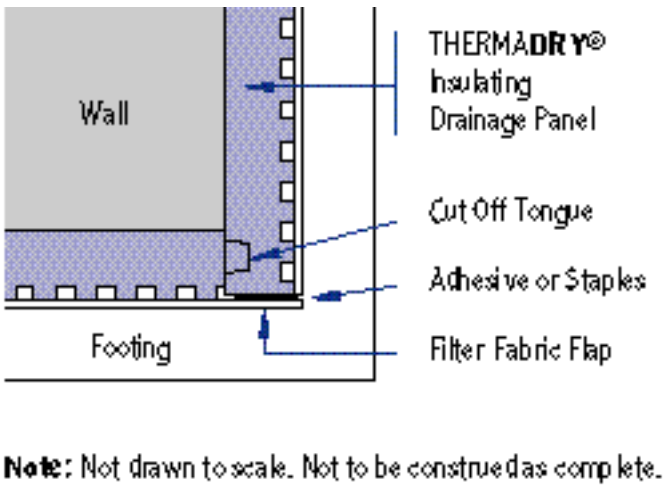
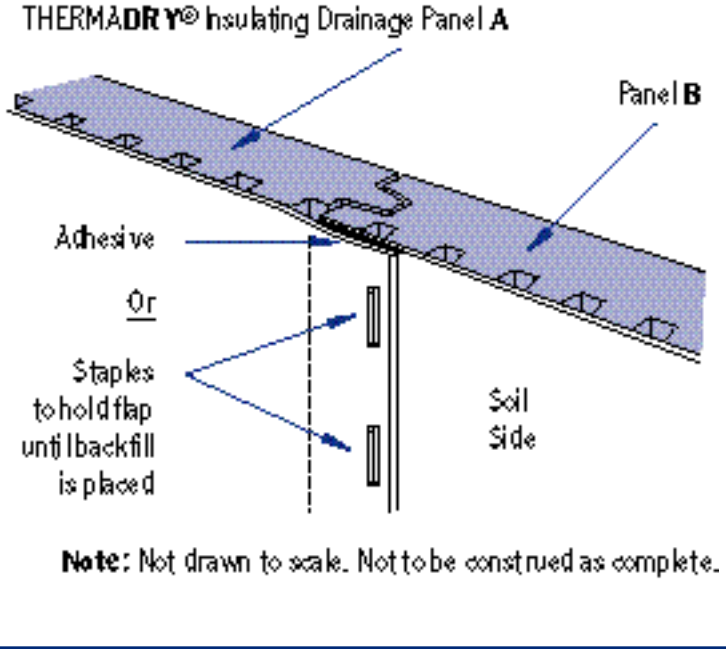


Figure 2. Fabric Overlap at Panel Joint



1.05 Multiple Tier Installation

When additional tiers are required, proceed in a manner similar to that used to install the lower tier. Interlock the tongue and groove edges at both the horizontal and vertical joints and take care that the fabric flap of the upper panels overlaps the lower panels. Use adhesive or staples to hold the overlapping fabric in place.

1.06 Top Edge Finishing

If the top edge of the panels is below grade, the edge should be sealed off to prevent soil entry, using a J- or Z-channel, sheathing tape, or soil fabric.

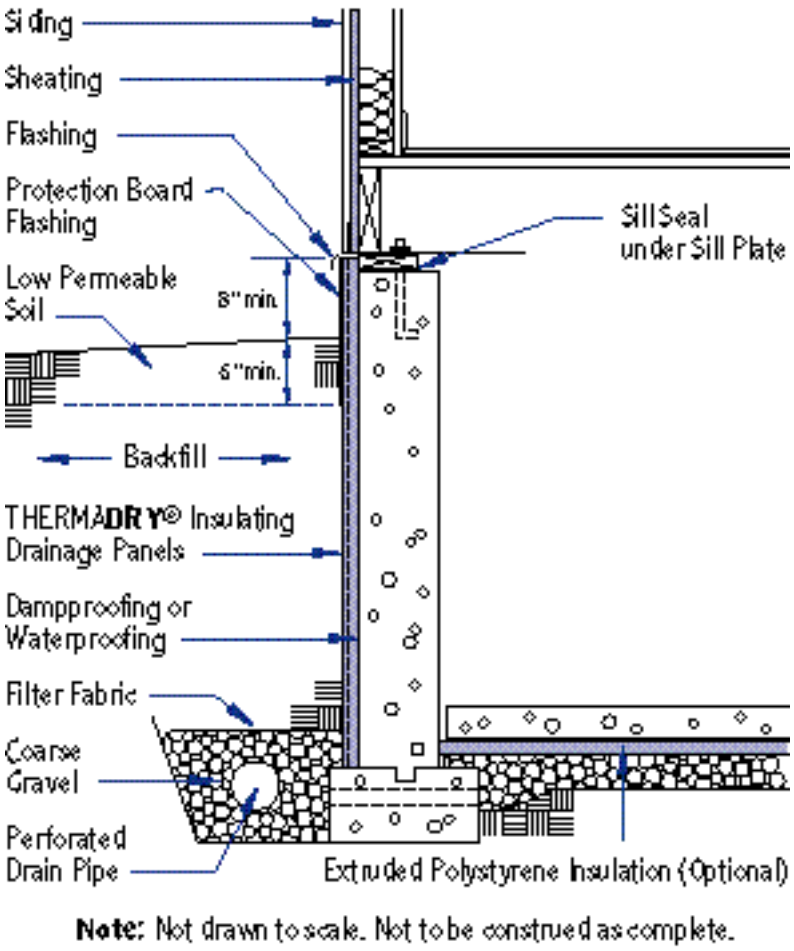
1.07 Above Grade Installation

If the panels extend above grade, the exposed area should be protected from physical damage and from ultra-violet exposure with a mechanically-attached protection, such as pre-painted aluminum, vinyl, pressure-treated wood or latex coating.

1.08 Completing the Drainage System

The panels must be connected to a conventional subsurface tile and gravel bed drainage system capable of carrying away water drained through the channels of the panel. One method is shown in Figure 3, where the drain pipe and gravel are wrapped in filter fabric. Note how the gravel extends above the bottom edge of the panel. This insures the connection between the panels and the subsurface drainage system. Backfill as soon as possible, sloping the gradeline away from the wall to minimize the possibility of surface water overloading the drain system.

Figure 3. Typical Panel Installation and Connection at Footing Drain Line



1.09 Limitations

THERMA**DRY** Insulating Drainage Panels should not be exposed to petroleum solvents or fuels, and should be protected from prolonged sunlight exposure to prevent ultra-violet degradation.

1.10 Additional Information

For additional information on the physical properties and installation for THERMA**DRY** Insulating Drainage Panels, contact T. Clear Corp. at **1-800-544-7398**.

NOTICE: Extruded polystyrene will burn and should be stored, handled and installed properly. For proper use consult applicable building code requirements, for regulations, and specific instructions available from your supplier or the T. Clear Corp., 3255 Symmes Road, Hamilton, OH 45015 (1-800-544-7398).

SPECIFIC INSTRUCTIONS: Extruded polystyrene foam insulation should be protected from the living area of the building by code-acceptable finishes such as masonry, concrete, gypsum board or equivalent. For proper protection of plastic foam in storage, consult your insurer, local fire department or other authority having jurisdiction.

The components used in the manufacture of THERMADRYInsulating Drainage Panels have no food value to attract or support insects. However, due to the fact that the extruded polystyrene foam insulation sometimes covers the exterior surface area of below grade walls and slabs, it may be difficult to detect termites entering a building structure. Building codes prohibit the use of plastic foam insulation on exterior foundations and crawl spaces in certain southern and western states. In other areas where termites may be a concern, construction techniques and industry practices that can reduce the potential for termite infestation should be considered. Consult a local building official for specific requirements in your area.

NOTICE: T. CLEAR CORP. believes the information and recommendations herein to be accurate and reliable as of August 1997. However, since any assistance furnished by T. CLEAR CORP. with reference to the proper use and disposal of its products is provided without charge, and since use conditions and disposal are not within its control,T. CLEAR CORP. assumes no obligation or liability for such assistance and does not guarantee results from use of such products or other information herein; no warranty, expressed or implied, is given nor is freedom from any patent owned by T. CLEAR CORP. or others to be inferred. Information herein concerning laws and regulations is based on U.S. federal laws and regulations except where specific reference is made to those of other jurisdictions. Since use conditions and governmental regulations may differ from one location to another and may change with time, it is the Buyer's responsibility to determine whether T. CLEAR CORP.'S products are appropriate for Buyer's use, and to assure Buyer's workplace and disposal practices are in compliance with laws, regulations, ordinances, and other governmental enactments applicable in the jurisdiction(s) having authority over Buyer's operations.

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THERMADRY® is a trademark of T. Clear Corporation

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