

HYDROGUARD®



1. Product Name

Hydroguard®

2. Product Description

Basic Use

Hydroguard provides both insulation and lightweight ballasting for Protected Membrane Roof systems. Composed of STYROFOAM® panels topped with latex modified concrete, Hydroguard acts as a durable barrier, protecting the roofing membrane from temperature extremes and mechanical abuses. Lightweight and easy to install, Hydroguard is ideal for flat roof applications where the use of stone ballast is not practical.

Advantages

- Provides protection to roof membrane from environmental extremes and construction and maintenance traffic.
- Eliminates condensation problems by insulating the roof assembly and keeping the dew point above the roof membrane.
- Smooth, attractive surface is resistant to thermal shock, sun, hail and vandalism.
- CFC free and reusable.

Limitations

- Hydroguard is designed to accept light foot traffic. In applications where excessive foot or construction traffic is anticipated, walkway pads or concrete pavers must be used.
- Depending on site and wind conditions, additional securement may be required.
- Panels should be shielded from direct sunlight until installed.

Composition and Materials

Hydroguard is manufactured in 2 foot by 4 foot panels composed of Dow STYROFOAM® extruded polystyrene foam insulation topped with a latex

modified concrete mortar surface. Tongue and groove edges along the long sides allow each board to be interlocked during installation, creating a continuous layer of thermal protection.

Types

Hydroguard is topped with a nominal 3/8 inch thick surface and weighs on average 4 1/2 pounds per square foot. For applications where additional protection is required, Hydroguard is also available with a thicker concrete topping. Heavy Hydroguard has a 15/16 inch thick surface and weighs approximately eleven pounds per square foot.

Hydroguard comes in six attractive colors, including natural gray (standard), white, red, green, light brown and tan.

A field applied coating of 100% acrylic resin is available in High Reflective White, which meets the Solar Reflectance and Emittance ratings for the Cool Roof Rating Council.

Container/Coverage

Hydroguard is shrink wrapped and shipped on pallets. Standard 2" comes 56 panels to a pallet with coverage of 448 square feet. Standard 3" contains 48 panels on a pallet and covers 384 square feet. Both Heavy 2" and 3" have 24 pieces on a pallet and cover 192 square feet.

Accessories

- Precast Pavers - for perimeter securement and, depending on building and site conditions, additional ballast.
- Adhesive - for securing pavers.
- Factory and Field/Shop Fabricated Metal Securement - for perimeters, internal penetrations, and where tongue and groove integrity has been interrupted.
- Fasteners - for attaching metal securement.

HYDROGUARD PHYSICAL PROPERTIES

Attribute	Value	Test Method
Extruded Polystyrene	Type VI	ASTM C 578
Latex Modified Concrete Face	3/8" thick - Standard 15/16" thick - Heavy	
Finished Overall Dimensions	24" wide by 48" long	
Standard	2.375" thick (2" foam) 3.375" thick (3" foam)	
Heavy	2.938" thick (2" foam) 3.938" thick (3" foam)	
Weight	4.5 lbs./sq. ft. - Standard 11 lbs./sq. ft. - Heavy	
R Value @ 75° F mean temp	5 per inch of foam	ASTM C 518
Water Absorption	< 0.1% by volume (max.)	ASTM C 272
Water Vapor Permeance	0.8 perm (max.)	ASTM E 96
Freeze / Thaw	750 cycles	ASTM C 666 "B"
Compressive Strength (foam)	40 lbs./sq. inch	ASTM D 1621
Steel Ball Impact Test	Slight Indentation	FM 4470
Point Loading (1" x 1")	450 lbs./sq. in. - Standard 1300 lbs./sq. in. - Heavy	

High Reflective White Coating Properties

Solar Relectance	0.84 initial 0.65 3-year aged	D&S Co. SSR (ver.5) w/ASTM E 903
Emittance	0.9	D&S Co. Model AE w/ASTM C1371

3. Technical Data

Typical physical properties of Hydroguard® can be found in the table below.

4. Installation

Please refer to the Hydroguard Installation Guide for more detailed information on installation methods and appropriate securement systems.

Preparation

Install Hydrotech's Monolithic Membrane 6125® Rubberized Asphalt Roofing Membrane and Hydroflex Separation and Protection Course per project specifications. Place Hydroguard panels atop the protection/separation course in a loose laid fashion as outlined below.

Board Placement

Always start at the corner closest to the source of the prevailing wind with the 4 foot long side of the board in the direction of the roof slope. Boards must be installed with joints staggered. All boards must be tightly butted to adjacent boards to maintain tight tongue and groove integrity.

Special Installation Considerations

The concrete mortar surface on the boards must not be in contact with terminations such as parapets, curbs, etc. Use of 1/2 inch thick polyethylene foam is suggested.

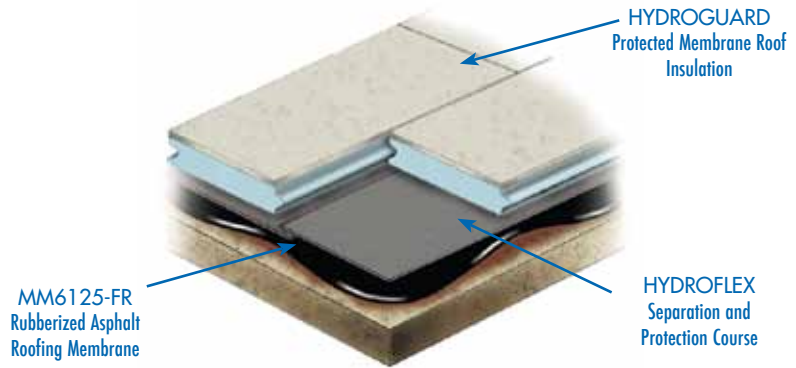
- Insulation boards must not bridge over uneven portions of the deck. In such cases, the boards must be cut and additional securement added.
- Wherever tongue and groove integrity is lost or cuts made through the boards, metal strap securement shall be added to tie the system together.
- All foam exposed directly to the sun shall be coated with exterior grade latex paint or otherwise protected.

Perimeter Securement

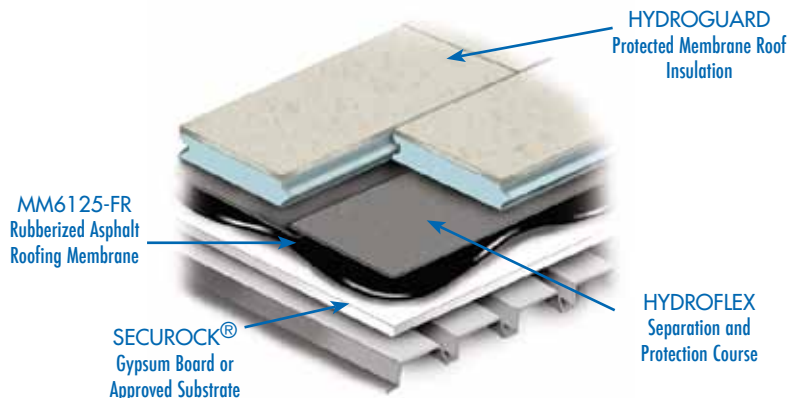
The installed system must be secured at all perimeters. The securement system must restrain any movement of the roof insulation at termination points.

There are two acceptable methods for securing Hydroguard at the perimeters:

Installation Over Concrete Deck



Installation Over Metal Deck



1) Concrete pavers or 2) Fabricated metal counter flashing/gravel stop securement piece or an extruded aluminum factory fabricated metal securement piece.

Additional Securement

Depending on wind conditions, building height and parapet height, additional securement may be required. To meet individual job requirements, Hydrotech employs three different securement systems utilizing pavers. Please refer to Hydroguard installation guide.

5. Availability and Cost

Hydroguard is readily available through Hydrotech representatives worldwide.

6. Guarantees

When Hydroguard is used in conjunction with MM6125® Rubberized Asphalt Roofing Membrane and Hydroflex

Separation and Protection Course, Hydrotech offers a single source warranty for the entire assembly. Contact a Hydrotech representative for specific warranty information.

7. Maintenance

Properly installed, Hydroguard requires no maintenance. As a condition of the warranty, inspection of the roof system is required once every six months to determine if repairs are necessary to insure integrity of the system and perimeter securement.

8. Technical Services

Technical support is provided by a trained network of sales representatives and Hydrotech's technical services department.



American Hydrotech, Inc.
303 East Ohio Street, Chicago, Illinois 60611
800.877.6125; 312.337.4998
312.661.0731 (fax)
www.hydrotechusa.com

Hydrotech Membrane Corporation
10,951 Parkway, Ville D'Anjou, Quebec H1J 1S1
800.361.8924; 514.354.6649 (fax)
Toronto 800.668.8963; 905.471.6699 (fax)