

## Roofing Underlayment

### Grace Ice & Water Shield® Specification

#### Part 1 General

##### 1.01 Summary

A. Section Includes: Grace Ice & Water Shield® self-adhering membrane as a sloped roof underlayment.

B. Related Sections:

1. Section 06100—Rough Carpentry
2. Section 07220—Roof and Deck Insulation
3. Section 07311—Asphalt Shingles
4. Section 07313—Metal Shingles
5. Section 07315—Slate Shingles
6. Section 07317—Wood Shingles and Shakes
7. Section 07320—Roof Tiles
8. Section 07610—Sheet Metal Roofing
9. Section 07620—Sheet Metal Flashing and Trim

##### 1.02 References

A. American Society for Testing and Materials (ASTM)

1. D412 Standard Test Methods for Vulcanized Rubber and Elastomeric Tension
2. D461 Standard Test Methods for Felt
3. D903 Test Methods for Peel or Stripping Strength of Adhesive Bonds

4. D1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection

5. D3767 Standard Practice for Rubber—Measurement of Dimensions

6. E96 Standard Test Methods for Water Vapor Transmission of Materials

##### 1.03 Submittals

A. Manufacturer's product data sheet and product sample.

##### 1.04 Quality Assurance

A. Manufacturer Qualifications: Self-adhesive membrane roofing underlayment shall be manufactured and marketed by W. R. Grace & Co.—Conn., Grace Construction Products, Cambridge, MA or a firm with a minimum of 25 years experience in the production and sales of self-adhered membrane roofing underlayments.

##### 1.06 Delivery, Storage and Handling

A. The membrane and accessory products must be handled properly. Read all product labels and Material Safety Data Sheets (MSDSs) for proper handling and disposal. Deliver all materials in manufacturer's unopened packages and store all materials under cover. Do not double stack palletized material.

## Part 2 Products

### 2.02 Manufacturers and Products

- A. Acceptable Products and Manufacturers:  
Grace Ice & Water Shield manufactured by  
W. R. Grace & Co.–Conn., Grace  
Construction Products, Cambridge, MA.

### 2.03 Materials

- A. Grace Ice & Water Shield is a cold-applied,  
self-adhering membrane composed of a  
high density, cross laminated polyethylene

film coated on one side with a layer of  
rubberized asphalt adhesive. An embossed,  
slip resistant surface is provided on the  
polyethylene. Grace Ice & Water Shield is  
interwound with a disposable silicone-  
coated release sheet. Membrane shall  
conform to the physical properties as listed  
in the chart below:

### 2.04 Accessories

- A. Accessory Products: Perm-A-Barrier® WB  
Primer.

Property	Value	Test Method
Color	Gray-black	
Thickness, membrane	40 mil (1.02 mm)	ASTM D3767 procedure A (Section 9.1)
Tensile strength, membrane	250 psi (1720 kN/m <sup>2</sup> )	ASTM D412 (Die C modified)
Elongation, membrane	250%	ASTM D412 (Die C modified)
Low temperature flexibility	Unaffected @ -20°F (-29°C)	ASTM D1970
Adhesion to plywood	3.0 lbs/in. width (525 N/m)	ASTM D903
Permeance (max)	0.05 perms (2.9 ng/m <sup>2</sup> s Pa)	ASTM E96
Material weight installed (max)	0.3 lb/ft <sup>2</sup> (1.3 kg/m <sup>2</sup> )	ASTM D461

## Part 3 Execution

### 3.02 Preparation

- A. Install the membrane directly on a clean,  
dry, continuous structural deck. Some suit-  
able deck materials include plywood, wood  
composition, wood plank, metal, concrete,  
or gypsum sheathing. Remove dust, dirt,  
loose nails, and old roofing materials.  
Protrusions from the deck area must be  
removed. Decks shall have no voids,  
damaged, or unsupported areas. Repair  
deck areas before installing the membrane.
- B. Prime concrete, masonry surfaces and  
DensDeck® with Perm-A-Barrier WB  
Primer at a rate of 250–350 ft<sup>2</sup>/gal (6–8 m<sup>2</sup>/L).

Prime wood composition and gypsum  
sheathing with Perm-A-Barrier WB Primer  
if adhesion is found to be marginal. (Refer  
to Technical Letter 12, *Use on Oriented  
Strand Board (OSB) Roof Sheathing.*)  
Apply at same rate.

- C. Priming is not required for other suitable  
surfaces provided that they are clean  
and dry.

### 3.03 Installation

- A. Install in strict accordance with manufac-  
turer's printed application procedures,  
precautions, and limitations.

[www.graceathome.com](http://www.graceathome.com)  
[www.graceconstruction.com](http://www.graceconstruction.com)

For technical assistance call toll free at 866-333-3SBM (3726)

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