



Technical Data Sheet

DOWSIL™ HPI-1000 Building Insulation Blanket

Thin-profile, flexible, high-thermal-resistance blanket

Features & Benefits

- Reduces thermal bridging
- Significantly increases thermal resistance in space-limited situations
- Enables new design possibilities
- Easy to install in difficult profiles such as curves and corners
- Fast installation with simple tools
- Fire-resistant
- High water vapor permeability

Composition

- Reinforced silicon aerogel insulation blanket

Applications

- For insulating challenging interface conditions in building envelopes, such as where glazing systems meet cavity walls, where below-grade systems meet above-grade systems, at slab edge and where parapets meet roofs.

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Test ¹	Property	Unit	Result
	Color		Gray
	Thickness	In mm	0.4 10
ASTM C518	Thermal Conductivity (Average) (at 100°F (37.5°C) and 2 psi compression)	W/m-K Btu/hr-ft-F	0.015 0.00867
ASTM C518	Thermal Resistivity – R-value (Average) (at 100°F (37.5°C) and 2 psi compression) as supplied		
	0.4" (10mm) nominal thickness	hr-ft ² -F/Btu	3.8
	1" (25mm) nominal thickness	hr-ft ² -F/Btu	9.6
ASTM C518	U-value (Average), (at 100°F (37.5°C) and 2 psi compression) as supplied		
	0.4" (10mm) nominal thickness	W/m ² -K	1.49
	1" (25mm) nominal thickness	W/m ² -K	0.59
	Weight	lb/ft ² kg/m ²	0.33 1.55

1. ASTM: American Society for Testing and Materials

Typical Properties (Cont.)

Test	Property	Unit	Result
ASTM C165	Compressive strength at		
	10% strain	psi kPa	8 55
	25% strain	psi kPa	30.5 210
ASTM E84	Fire Resistance		Class A
	FSI		5
	SDI		5
ASTM C1511 (modified)	Water Retention by Volume	%	< 8
ASTM E96	Permeability	U.S. perms ng/Pa-m ² s	33 1,877
ASTM E90	Acoustic Performance, 0.4" (10mm) nominal thickness	STC	16
		OITC	13

Description

DOWSIL™ HPI-1000 Building Insulation Blanket is an insulation product with significantly improved thermal resistance compared to conventional insulation products. Its thin profile, superb flexibility and compression resistance allow for thermal protection in difficult-to-insulate spaces. DOWSIL HPI-1000 Building Insulation Blanket is fire-resistant, is hydrophobic and does not settle over time.

How To Use

DOWSIL HPI-1000 Building Insulation Blanket can be cut with simple hand tools to conform to complex shapes and tight curvatures. DOWSIL HPI-1000 Building Insulation Blanket can be attached to building substrates by a variety of methods, including adhering with Dow adhesive sealants.

The following illustrations are provided to suggest how DOWSIL HPI-1000 Building Insulation Blanket may be incorporated into a project. Dow does not offer design services.

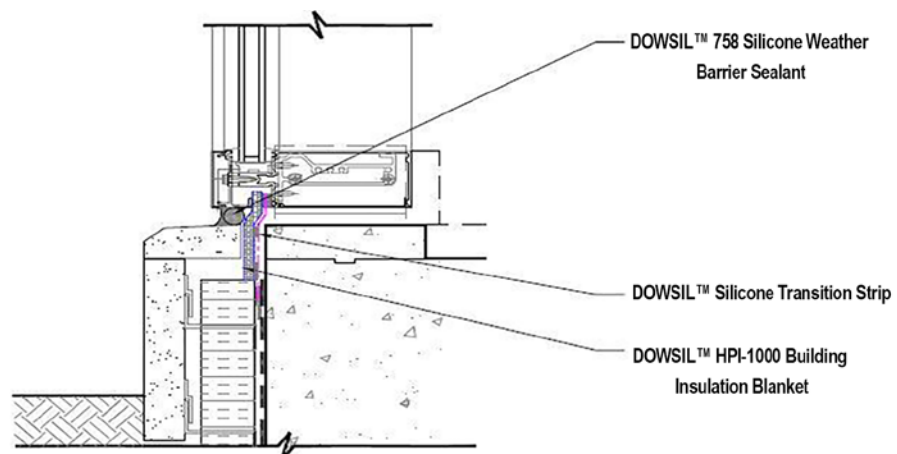


Figure 1:
Section Detail: Alternate Base Wall with Curtainwall

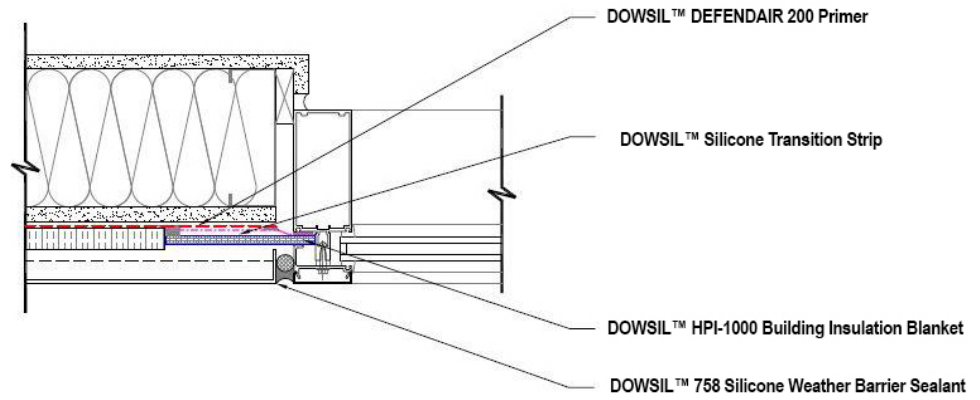


Figure 2:
Plan Detail: Alternate Exterior Wall with Curtainwall

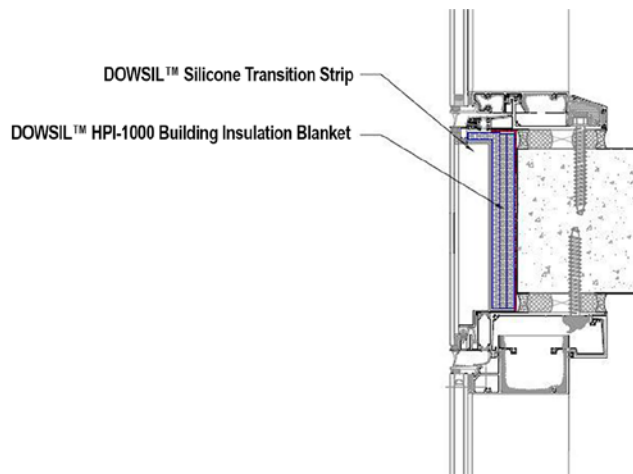


Figure 3:
Section Detail: Alternate Slab Edge with Window Wall

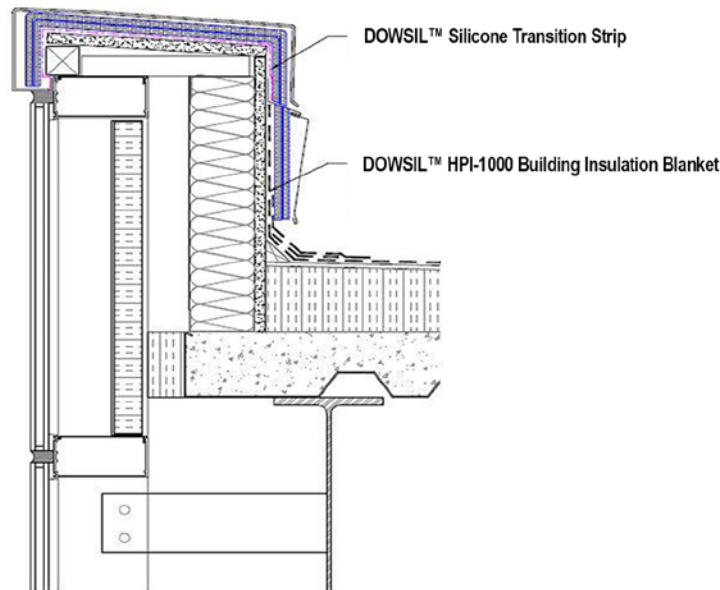


Figure 4:
Section Detail of Parapet-to-Roof Transition

Handling
Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT WWW.CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Usable Life And
Storage

DOWSIL HPI-1000 Building Insulation Blanket should be stored in its original packaging, in a dry environment, out of harsh weather conditions such as rain or snow. If excessively handled, the material can fluff larger than its original dimension.

Packaging
Information

DOWSIL HPI-1000 Building Insulation Blanket is supplied in large rolls, which are 58 inches (± 2 inches) wide and approximately 150 feet long, with 750 sq ft feet per roll; (1473 mm \pm 50 mm wide and 46.7 m long, with 69 square meters per roll.

DOWSIL HPI-1000 Building Insulation Blanket is also available in smaller 50 foot (15.2 m) rolls in standard size widths (see below). Custom widths and shapes are available upon request.

Packaging Information (Cont.)

Table 1: Packaging

Width, in	Length, ft	Width, mm	Length, m
1	50	25.4	15.2
2	50	50.8	15.2
3	50	76.2	15.2
4	50	101.6	15.2
5	50	127	15.2
6	50	152.4	15.2
7	50	177.8	15.2
8	50	203.2	15.2
9	50	228.6	15.2
10	50	254	15.2
11	50	279.4	15.2
12	50	304.8	15.2

Limitations

Not recommended for long-term exposure to, or submersion in, water or other fluid mediums.

Not recommended for use in applications that result in permanent direct UV exposure. Partially concealed (e.g. open-joint) cladding applications are acceptable.

Not recommended for applications that subject the product to:

- Repeated striking
- Mechanical abrasion
- Contact with oils and solvents
- Applications for air handling vents, or HVAC

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Health And Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, www.consumer.dow.com or consult your local Dow representative.

<http://www.consumer.dow.com>

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

