

Product Name

Igloo Foam 500 is a registered trademark of Spray Foam Polymers for its .5 lb light density, open cell foam insulation.

Product Description

Igloo Foam 500 is a semi-rigid, totally water blown, .5 lb light density polyurethane foam insulation system which simultaneously insulates and air-seals your building structure. **Igloo Foam 500** is designed to make homes more energy efficient, quieter, healthier and more comfortable. **Igloo Foam 500** is applied as a liquid spray which expands approximately 100 times its initial mass and cures within seconds into a semi-rigid mass. **Igloo Foam 500** fills all building cavities completely sealing all cracks, crevices, and voids where air loss and infiltration are most common. If needed, excess material is easily trimmed off leaving a surface ready for drywall.

Technical Data

Thermal Performance

Thermal resistance R/in.

ASTM C518: R3.83hr.ft² °F/BTU

Average insulation contribution in stud wall:

2"x4"=R13.4 2"x6"=R21.00

Igloo Foam 500 provides greater R value performance than other equivalent R value insulation materials which are air permeable such as fiberglass. **Igloo Foam 500** does not lose R value due to wind, ageing, convection, air infiltration or moisture.

Air Permeance/Air Barrier

Igloo Foam 500 fills any shape cavity including all voids, cracks, and crevices adhering to multiple substrates such as wood, metal, and concrete creating a system with very little air permeance. With **Igloo Foam 500** no additional interior or exterior air infiltration

protection is required.

ASTM E283 Air Leakage
.00015 ft³/s.ft² @ 75Pa (25mph wind)

Sustained Wind Load
60 minutes@1000 Pa (90mph wind)
No Damage

Gust Wind Load Test
@3000 Pa (160 mph wind)
No Damage

Water Vapor Permeance

Igloo Foam 500 is water vapor permeable and will allow structural moisture to escape. For situations requiring a vapor barrier the use of low vapor permeable paint on the interior of drywall is an option.

Water Vapor Transmission Properties:
ASTM E96 data
9.34 perms @ 3.5"

Water Absorption

Igloo Foam 500 is water repellent, will not wick, and does not exhibit capillary properties. Water may be forced into the foam under pressure because of its open cell structure, and will self drain by gravity rather than travel horizontally or vertically as in closed celled foams. Once the foam has dried its thermal performance is at full performance.

Acoustical Properties

Performance in a 2"x 6" wood stud wall.

ASTM E413 STC Sound Transmission
Class 38

ASTM E 90
Hz. Freq. 125 250 500 1000 2000 4000
Trans. Loss 18 29 34 45 46 49

ASTM C 423
NRC Noise Reduction Coefficient = .75
Hz. Freq. 125 250 500 1000 2000 4000
Absorption .23 .52 .87 .71 .77 .75

Actual performance will likely be superior to the above results based on **Igloo Foam's** ability to control air permeation.

Burn Characteristics

Igloo Foam 500 is a Class I insulation and shall be separated from its inhabitants by a 15 minute approved thermal barrier. **Igloo Foam 500** shows less flame propagation than some Kraft faced fiberglass insulation and may be left exposed in attics and crawl spaces. **Igloo Foam 500** might be consumed by flame but will not sustain flame upon removal of the flame source. **Igloo Foam 500** will not melt or drip. **Igloo Foam 500** must be installed in accordance with all applicable building.

ASTM E84 Surface Burning Properties
Flame Spread @ 6" <= 10
Smoke Developed @ 6" <= 250
Class I rating
Fuel Contribution none
ASTM 2863 Oxygen Index 25%

Compressive and Tensile Strength

Igloo Foam 500 has favorable compressive and Tensile strength properties for light density foam.

ASTM D1623 Tensile Strength 4.3 psi
ASTM D1621 Compressive Strength 5.1psi

Open Cell Content

Igloo Foam 500 is considered an open cell foam insulation:
ASTM D2856 <90%

E84, E283 tests results were conducted by a 3rd party testing laboratory. **DISCLAIMER:** Information contained herein is, true and accurate, but all recommendations or suggestions are made without guarantee. Igloo Foam™ products are intended for sale to industrial and commercial customers. Since Spray Foam Polymers exercises no control over its customers appreciation or use of the product manufactured by Spray Foam Polymers and since materials used with the products may vary, it is understood that Spray Foam Polymers can warrant only that our products will meet our written specifications. Nothing herein shall constitute any warranty of merchantability or fitness, nor is protection from any law or patent to be inferred. Our products must be installed in accordance with all applicable building codes and a building inspector's approval should be requested prior to installation. All patent rights are reserved. Spray Foam Polymers requests that customers inspect and test our products before use, and satisfy themselves as to contents and suitability. The exclusive remedy for all proven claims is replacement of our materials and in no event shall Spray Foam Polymers be liable for any consequential, incidental, indirect, or special damages resulting in any manner from the furnishing of the material.



Igloo Foam 500 - Product Specification

Viscosity & Weights

ASTM D2196 Viscosity	
A Side ISO @ 25°C	250±20
B Side Resin @ 25°C	350±50

ASTM D1475 Weight/Gallon	
A Side ISO @ 77°F	10.2 lbs
B Side Resin @ 77°F	9.8 lbs

Electrical Wiring

Igloo Foam 500 is chemically compatible with all 14/3, 12/2 and other similarly coated electrical wirings. For knob and tube wiring please seek the approval of your local building inspector.

Bacterial and Fungal Evaluation

Igloo Foam 500 is not a source of food for mold, insects or rodents. It has no nutritional value. **Igloo Foam 500** reduces the introduction of moisture, food, and mold spores into the building envelope significantly more than traditional insulation such as fiberglass, cellulose and other non-sealants which do not provide an air barrier.

Environment/ Health/ Safety

Igloo Foam 500 contains no CFC's HCFC's, formaldehyde, or volatile organic compounds. Following installation there will be a 24-48 hour occupancy window before the odors, emissions and gasses have dissipated to a habitable level for individuals highly sensitive to the materials installed.

Igloo Foam 500 is not intended for exterior use or is not to be installed within 3" of heat emitting surfaces where heat dissipated exceeds 185°F.

Suggested Preparation & Agitation

Igloo Foam 500 will perform best when gradually climate controlled to 70°F the night before application. Thirty (30) minutes of medium agitation before use and light agitation during use will result in best results and highest yield. Recirculation of **Igloo Foam 500** to

rapidly heat the product is not suggested and may result in a decrease in catalyst count and product yield. We suggest starting with a temperature of 135°F, using an .01 spray tip and a working pressure of 1200 psi.

Installation Requirements

Product Temperatures

Both Component 'A' and Component 'B' liquid temperatures should be between 77°F prior to use, never falling below 70°F or exceeding 80°F. If these required temperatures are not met the foam will not spray properly and both the yield and physical properties will not be achieved. A laser thermometer is an easy way to check the liquid temperatures within the drums.

Mixing Ratio By Volume

Igloo Foam 500 is required be installed in a precise 1 part A to 1 part B ratio or in other words, an exact 1:1 ratio. As indicated in our training materials, the only way to ensure this is to continuously monitor the installers proportioner to ensure the A and B pressures are even with no more variance than 50lbs differential from the A to the B pressure. Hydraulic machines will produce more consistent pressures than electric machines. Foams that are off ratio can produce permanent and biologically hazardous off gassing and odors that can only be removed by complete removal and remediation of the foam. Foams that are off ratio will also diminish foam properties and characteristics outlined in this data sheet. Typically a heavier A ratio will produce a crunchier foam result, and a heavier B Side ratio will produce a spongier and very odorous result.

Installed Thickness Per Pass

Igloo Foam 500 performs best when installed in passes of 3 inches at a time, never to exceed a maximum of 5" total per pass. Installing foam thicker than recommended will diminish the foams properties as outlined, as well as insulation

performance. Allow approximately 5 minutes between passes for the foam to cool below 80°F.

Product Packaging & Storage

Products are packaged and shipped in 3 Bung 55 gallon closed top steel drums.

Component A- contains 500 lbs of Isocynate.

Component B- 460 lbs of **Igloo Foam 500** proprietary formulated resin.

Both Component 'A' and Component 'B' must be stored between 50°F and 90°F never exceeding either extreme.

Both Component 'A' and Component 'B' must be protected from freezing. If either component freezes it may be deemed useless and will need to be disposed of.

Shelf Life

If stored at the proper required temperatures as outlined, **Igloo Foam 500** has a shelf life of five (5) months past its published manufactured date without loss of physical properties.

WARRANTY

When installed properly be a **Igloo Foam 500™** authorized representative who has completed all training offered by Spray Foam Polymers, **Igloo Foam 500™** warrants that the product will meet all product specifications outlined in this specification document.

Product Availability

Contact Spray Foam Polymers at 800.863.1577 for sales and availability options.



Spray Foam Polymers
Po Box 1182
New Canaan, CT. 06840
800.853.1577
info@SprayFoamPolymers.com

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