ACCELLA POLYURETHANE SYSTEMS

1. Product Name

- Foamsulate™ 220

2. Manufacturer

Accella Polyurethane Systems, LLC
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3. Product Description

Basic Use

Foamsulate 220 is an insulation system designed for use in residential, commercial and industrial applications. Use in lieu of more traditional forms of insulating materials such as fiberglass, cellulose or other loose fill products for applications such as:

- Exterior walls
- Vented attics
- Un-vented attic assemblies
- Between floors
- Foundations
- Crawlspaces
- HVAC ducts
- Fluid tanks
- Cold storage units

Unlike fiberglass, cellulose and other traditional types of insulation, our closed cell Foamsulate spray foam products expand to fill even the tiniest cracks and spaces creating a tighter thermal envelope for the most effective, high-quality air barrier that lasts.

The superior insulation properties of closed cell foam make it ideal for residential, commercial office buildings, manufacturing plants, factories and industrial park structures that depend on low-maintenance, energy-efficient solutions to ensure profitable operations.

New Construction

Used throughout a new structure, closed cell Foamsulate products create the tightest thermal envelope around the entire building for reduced heating and cooling costs, improved air quality, advanced temperature control, and stronger structural integrity.

Remodels and Upgrades

Using Foamsulate in residential or commercial remodel projects brings the building to the highest standards for sustainability, energy efficiency, structural integrity and air quality, plus an immediate monthly savings in energy costs.

Composition and Materials

Foamsulate 220 is a two-component, medium density, one-to-one by volume spray applied polyurethane foam. To produce Foamsulate 220 requires the use of an "A" component (ISO) and a blended "B" component (resin) which contains zero ozone-depleting blowing agents, catalysts, polyols and fire retarding materials.

Features and Benefits

Spray Foam Insulation is the material of choice for forming the tightest, healthiest and most energy-efficient thermal envelope in today's construction and remodeling projects.

GREENGUARD Gold Certified and Insulating

Foamsulate 220 is GREENGUARD Gold certified. Closed cell spray foam insulation creates an exceptionally tight seal that will dramatically reduce a building's energy consumption—the most environmentally friendly thing possible.

Air Barrier/Air Quality

Foamsulate 220's air barrier properties blocks pollen, dust and pollution particles from entering the building, protecting the facility and ensuring cleaner air while maintaining precise temperature control.

Safe

Spray Foam Insulation provides a healthier alternative to traditional insulation. Foamsulate closed cell foam provides superior moisture and mold control, creates the toughest air barrier available to keep pollutants and allergens out, and improves air quality indoors.

Affordable

Foamsulate delivers immediate monthly savings in heating and cooling costs, and increases the value of buildings.

Foamsulate pays for itself in energy savings in less than five years.

Accella Contractors

Every contractor in our network of authorized spray foam insulation applicators has the professional training, safety credentials and experience to deliver the highest level of service and customer satisfaction.

Savings Every Month

A tighter thermal envelope saves 30–50% on heating and cooling costs, right away.

Protect the Building's Value

Foamsulate won't sag or settle over time like traditional materials, and its rigidity actually strengthens the building's structure.

Protect Against Mold And Mildew

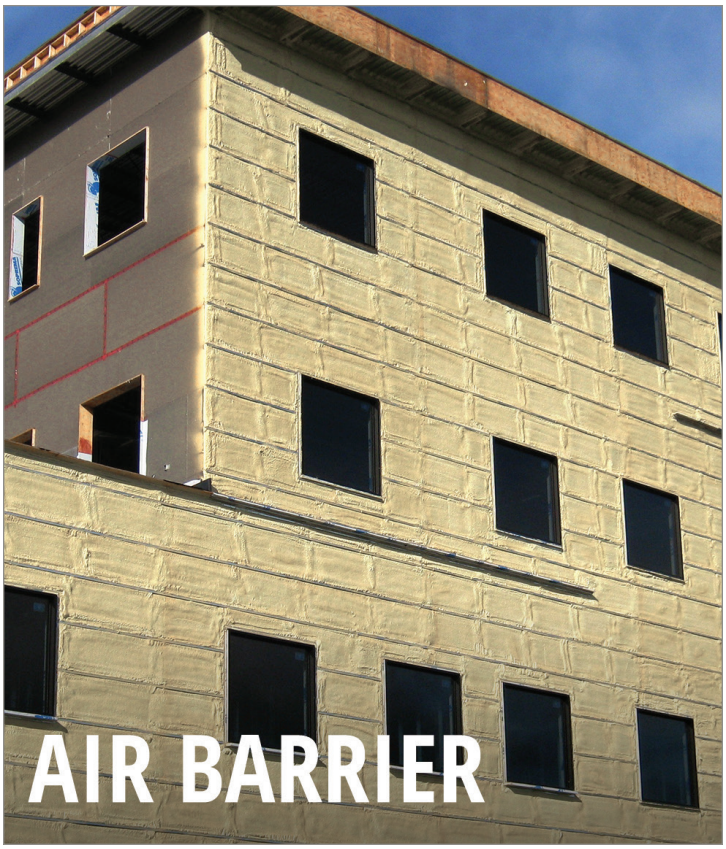
Closed cell Foamsulate's moisture control properties are far superior to traditional loose-fill insulation.

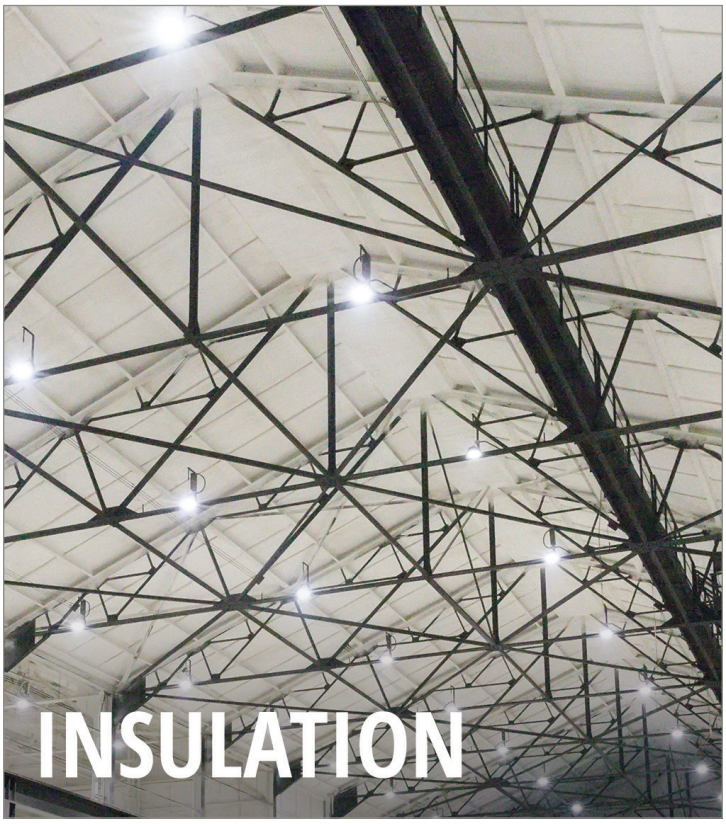
Wiring and Plumbing Accommodations

Foamsulate is fully compatible with typical electrical wiring coverings, as well as direct contact with CPVC piping systems.

Safety Data Sheets (downloadable)

- **Foamsulate A Component**
- **Foamsulate 220 Resin M B-Component**
- **Foamsulate 220 Resin R S B-Component**
- **Foamsulate 220 Resin W B-Component**





4. Technical Data

Applicable Standards

ASTM International

- **ASTM C423** Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
- **ASTM C518-2010** Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- **ASTM C1029** Standard Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation
- **ASTM D1621-2010** Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- **ASTM D1622-2008** Standard Test Method for Apparent Density of Rigid Cellular Plastics
- **ASTM D1623-2009** Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
- **ASTM D2126-2009** Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
- **ASTM E84** Standard Test Method for Surface Burning Characteristics of Building Materials

- **ASTM E96/E96M-2010** Standard Test Methods for Water Vapor Transmission of Materials
- **ASTM E283-2004 (2012)** Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
- **ASTM E413** Classification for Rating Sound Insulation
- **ASTM E2032** Standard Guide for Extension of Data From Fire Resistance Tests Conducted in Accordance with **ASTM E119**

International Association of Plumbing and Mechanical Officials (IAPMO)

- **Report 0352**

International Code Council (ICC)

- **ICC-ES AC377** Appendix X

Florida Building Code

- **FL 17185.1** FL Building Code 2010 RULE 61G20-3
- **FL 17185.2** FL Building Code 2010 RULE 61G20-3

National Fire Protection Association (NFPA)

- **NFPA 259**
- **NFPA 285** Compliant For Use In Building Types: I, II, III, IV, V
- **NFPA 286** Complies with the applicable requirements of ICC-ES AC377 Appendix X for use in attics and crawlspaces without a prescriptive ignition barrier

UL LLC

- **GREENGUARD certified**
- **GREENGUARD Gold certified**
- **UL 1715** Standard for Fire Test of Interior Finish Material
- **UL 2818 - 2013** (certificate number 81884-410)
- **UL 2818 - 2013** (certificate number 81884-420)
- **FWFO.EWS0028**
- **FWFX.R38039**
- **FWFO.EWS0013**

Environmental Considerations

This product contributes to:

- ASHRAE 189.1
  - 8.4.2.6 : Ceiling & Wall Systems
  - 8.5.2 d : Insulation
- Australian Green Star - Office Interiors
  - IEQ Credit 11 : Furniture/Wall Systems
- CHPS
  - 2.2.6 : Ceiling Systems
- Green Globes
  - 3.7.2.1.4 Volatile Organic Compound - Flooring & Other Interior Products
- Green Guide for Health Care 2.2
  - EP Credit 3.1 : Ceiling Systems
  - EP Credit 3.2 : Wall Systems
- International Green Construction Code
  - 806.6 : Insulation
  - A108.5 : TVOC Project Elective
- LEED 2008 for Homes
  - MR Credit 2.2 : Low-Emissions Materials
- LEED 2009 for Commercial Interiors
  - ID Credit : Insulation
  - SS Credit 1: Option L : Insulation
- LEED 2009 for Core & Shell
  - ID Credit : Insulation
- LEED 2009 for Existing Buildings
  - ID Credit : Insulation
- LEED 2009 for New Construction
  - ID Credit : Insulation
- LEED 2009 for Retail: Commercial Interiors
  - IEQ Credit 4: Option F : Ceiling & Wall Systems
- LEED 2009 for Retail: New Construction
  - IEQ Credit 4: Option F : Ceiling & Wall Systems
- LEED 2009 for Schools
  - ID Credit : Insulation
  - IEQ Credit 4.6 : Ceiling and Wall Systems
- LEED v4 - Building Design & Construction
  - EQ Credit 1: Enhanced Indoor Air Quality Strategies – Option 2 Additional Enhanced IAQ Strategies - D
  - EQ Credit 4: Indoor Air Quality Assessment - Option 2 Air Testing
- LEED v4 - Homes
  - EQ Credit 2: Contaminant Control – Option 4 Air Testing
  - EQ Credit 7: Low-Emitting Materials
- LEED v4 - Interior Design & Construction
  - EQ Credit 1 - Enhanced Indoor Air Quality Strategies- Option 2D
  - EQ Credit 2: Low-Emitting Materials
  - EQ Credit 4: Indoor Air Quality Assessment - Option 2 Air Testing
- LEED v4 - Operations & Maintenance
  - MR Credit 2: Purchasing – Facility Maintenance and Renovation – Option 1
- NAHB Green Building Standard (ICC 700)
  - 901.11 : Insulation
  - 901.8 : Wall Coverings

Product Limitations

- Not to be installed within 3 inches (76 mm) of heat-emitting devices or where the temperature is in excess of 200 degrees F (93 C)
- Thermal or ignition barriers are required per page 2 of Tech data sheet
- Applicators must not exceed 2 inches (51 mm) thickness per pass

Table 1—Technical Properties		
Standard	**Property**	**Foamsulate 220 results**
ASTM C518	R-Value	7.0 at 1 inch
ASTM D1622	Core Density	2 lb/ft^3
ASTM E413	Sound Transmission Coeffecient	38
ASTM E96	Water Vapor Transmission - Permeance	1.49 Perms at 1" 0.92 Perms at 1.5" 0.77 Perms at 2"
ASTM E283	Air Impermeable	< 0.005 (L/s-m^2)
ASTM C423	Noise Reduction Coefficient	0.10
ASTM D1623	Tensile Strength (Psi)	58
ASTM D2126	Dimensional Stability	< 0.27%
ASTM D1621	Compressive Strength (Psi)	41

Application guidelines: Polyurethane foam systems should be processed through commercially available spray equipment designed for that purpose by a qualified professional applicator. Consult the current Premium Spray Products application guidelines for Foamsulate 220 prior to installation. It is the responsibility of the professional applicator to thoroughly understand all equipment technical information and safe operating procedures that pertain to a spray polyurethane foam application.

Material handling: Due to the reactive nature of these components respiratory protection is mandatory. The liquid aerosols present during application and for a short period thereafter must be considered—and appropriate protective measures taken—to minimize potential risks from overexposure through inhalation, skin, or eye contact. These protective measures include: adequate ventilation, safety training for installers and other workers, use of appropriate personal protective equipment, and a medical surveillance program. It is imperative that the applicator read and become familiar with all available information on proper use and handling of spray polyurethane foam. Additional Information is available at spraypolyurethane.org, polyurethane.org or by contacting the Premium Spray Products Technical Services dept. of Accella Polyurethane Systems, LLC.

5. Installation

Follow manufacturer instructions to maintain warranty and consult with **Accella Foamsulate Application Guide.**

6. Availability and Cost

Please contact manufacturer for both availability and cost.

Accella Foamsulate 220 manufacturing facilities and an extensive warehouse network are located throughout the US and Canada.

7. Warranty

Foamsulate 220 has a limited lifetime warranty.

8. Maintenance

No maintenance necessary.

9. Technical Services

For additional assistance please contact the Technical Services dept. of Accella Polyurethane Systems, LLC. at (770) 607-0755.

10. Filing Systems

- ConstructConnect
- Additional product information is available from the manufacturer upon request