This specification consolidates essential information about Plasti-Fab PlastiSpan roof insulation for specifiers and other professionals involved in a construction project.

1. GENERAL

Product Names
PlastiSpan Insulation Board
PlastiSpan HD Insulation Board
PlastiSpan XD Insulation Board

Product Type
Moulded expanded polystyrene (EPS) insulation.

2. MANUFACTURER

Plasti-Fab Ltd.

Contact Information:
Toll-free Number: 1-888 THINK EPS (1-888-446-5377)
E-mail: mailbox@plastifab.com
Website: www.plastifab.com

3. PRODUCT DESCRIPTION

Description
PlastiSpan insulation board is a moulded expanded polystyrene (EPS) product that does not contain any CFCs, HFCs or HCFCs.

Basic Use
PlastiSpan insulation board provides a continuous thermal blanket that eliminates thermal bridges and is ideal for roofing applications that use typical roofing materials, including Built-Up Roofing (BUR), Ethylene Propylene Diene Monomer (EPDM) and modified bitumen. The insulation boards are useful in flat roofing applications and can be adapted to most roof coverings.

The boards may be cut and laid to a pre-determined design to create a drainage system on a roof, thus allowing the drainage pattern of a flat roof to be provided by the insulation.

Composition and Materials
PlastiSpan insulation is inert, non-nutritive and will not decompose, decay or produce undesirable gases or leachates. It is lightweight, rigid and easy to handle, and the closed-cell structure assures constant thermal resistance (R-Value) and resists water absorption.
**Insulation Board Sizes**
Typical board sizes are: 1,220 mm x 1,220 mm (48" x 48"). However, other sizes requested by customer can be accommodated by Plasti-Fab.

**Limitations**
- Rigid foamed plastic insulation products, such as PlastiSpan insulation, are combustible. Although product contains a combustion modifier to inhibit accidental ignition, the product should not be exposed to a large, continuous fire source.
- The continuous service temperature limit of PlastiSpan insulation is 75 °C (170 °F). Constant exposure to temperatures above 75 °C (170 °F) will shrink and warp the product.
- Petroleum products will cause EPS insulation to soften and collapse. Attention must be given to the selection of adhesives, coatings and separation sheets to ensure compatibility with EPS insulation.
- Insulation must be protected from extended periods of exposure to direct sunlight by covering with a tarpaulin or opaque, light-coloured polyethylene film.

**4. TECHNICAL DATA**

**Applicable Standards**
ASTM International (ASTM)
- ASTM C203-05a, Standard Test Method for Breaking Load and Flexural Properties of Block-Type Thermal Insulation.
- ASTM C390-08e1, Standard Practice for Sampling and Acceptance of Thermal Insulation Lots
- ASTM C585-10, Standard Practice for Inner and Outer Diameters of Thermal Insulation for Nominal Sizes of Pipe and Tubing (NPS System)
- ASTM D 618-08, Standard Test Method for Conditioning Plastics for Testing
Canadian General Standards Board (CGSB)
- CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.
- CGSB 71-GP-24M, Adhesive, Flexible, for Bonding Cellular Polystyrene Insulation.

National Research Council (NRC)
- CCMC #12424-L, PlastiSpan/PlastiSpan Type 1/PlastiSpan EFS/DuroFoam.
- CCMC #12425-L, PlastiSpan HD/PlastiSpan HD Type 2/PlastiSpan M24/DuroFoam HD.
- CCMC #12426-L, PlastiSpan XD/PlastiSpan XD Type 3/PlastiSpan M28/DuroFoam XD.

Underwriters’ Laboratories of Canada (ULC)
- CAN/ULC-S107-03, Fire Tests of Roof Coverings.

Environmental Considerations
- Energy consumption associated with HVAC operations will be reduced through use of insulation with high thermal efficiency.
- PlastiSpan insulation board is not manufactured with a blowing agent such as a HFC or HCFC intended to enhance R-value; therefore, it is not subject to thermal drift and will provide a constant R-value over time.
- PlastiSpan insulation will not produce any undesirable gases or leachates, and is recyclable where facilities exist.

Physical/Chemical Properties
Thermal resistance values given below are for a material thickness of 25 mm (1").
- Thermal resistance @ 24°C (75°F) mean temperature (to ASTM C 177 or ASTM C518):
  - Type 1: 0.65 m²·°C/W per 25-mm (3.75 ft²·hr·°F/BTU per inch).
  - Type 2: 0.70 m²·°C/W per 25-mm (4.04 ft²·hr·°F/BTU per inch).
  - Type 3: 0.74 m²·°C/W per 25-mm (4.27 ft²·hr·°F/BTU per inch).
- Compressive strength @ 10% deformation (to ASTM D 1621 – Procedure A):
  - Type 1: 70 kPa (10 psi).
  - Type 2: 110 kPa (16 psi).
  - Type 3: 140 kPa (20 psi).
- Flexural strength (to ASTM C 203 – Procedure B):
  - Type 1: 170 kPa (25 psi).
  - Type 2: 240 kPa (35 psi).
  - Type 3: 300 kPa (44 psi).
- Water vapour permeance (to ASTM E 96):
  - Type 1: 300 ng/Pa·s·m² (5.2 perms).
  - Type 2: 200 ng/Pa·s·m² (3.5 perms).
  - Type 3: 130 ng/Pa·s·m² (2.3 perms).
- Water absorption (to ASTM D 2842):
  - Type 1: 6% by volume.
  - Type 2: 4% by volume.
  - Type 3: 2% by volume.
5. INSTALLATION

Preparatory Work
Handle, store and protect boards in accordance with Plasti-Fab recommendations. Ensure product secured against movement from wind storms at the storage location and handle boards carefully so corners are not broken off or otherwise damaged. Protect from direct sunlight exposure with tarpaulins or light-coloured polyethylene sheets if stored on site for extended periods of time (more than a few weeks).

Methods of Application
Installation methods may vary with specific applications. Instructions for all applications can be found in various Plasti-Fab brochures, in the full version of the applicable Masterformat Specification or on the Plasti-Fab website at www.plastifab.com.

Precautions
- Rigid foamed plastic insulation, such as PlastSpan insulation, is combustible and should be treated with normal care accorded to all combustible materials. Although EPS insulation contains a combustion modifier to inhibit accidental ignition, the product should not be exposed to a large, continuous fire source. Avoid open flames, welding torches and high intensity lamps, and if welding is necessary in proximity to the EPS insulation, protect the insulation with fire-rated gypsum board or similar products.
- Do not leave plastic foam insulation exposed in inhabited areas. A protective barrier or thermal barrier is required as specified in the appropriate Building Code.

Building Codes
Installation must comply with all applicable local, provincial and National code jurisdictions. Plasti-Fab can offer technical assistance as needed.

6. AVAILABILITY AND COST

Availability
Plasti-Fab Ltd. is headquartered in Calgary, Alberta, Canada and has been serving customers in Canada and the US for over 40 years. Contact Plasti-Fab using any of the methods listed in Part 2 of this specification for current list of facilities and agents.

Cost
Contact Plasti-Fab using any of the methods listed in Part 2 of this specification for current pricing information. Cost information may also be obtained from a local Plasti-Fab dealer.
7. WARRANTY
It is the responsibility of the contractor to install PlastiSpan insulation board in accordance with Plasti-Fab Ltd. published recommendations. Plasti-Fab assumes no liability resulting from a failure to follow these instructions. Plasti-Fab offers a warranty for RSI value (R-value) retention over time. Plasti-Fab’s liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to Plasti-Fab within 30 days from the date it was, or reasonably should have been, discovered. Further information on warranty conditions, duration and remedies may be obtained from Plasti-Fab.

8. MAINTENANCE
PlastiSpan insulation products are maintenance free when installed according to Plasti-Fab’s published recommendations.

9. TECHNICAL SERVICES
Plasti-Fab’s broad distribution network ensures exceptional customer service. One of the most comprehensive design manuals in the industry is available to assist engineers, architects and specification writers to determine how to make the best use of EPS. For more information, contact Plasti-Fab using any of the methods listed in Part 2 of this specification.

10. FILING SYSTEMS
Additional product information is available upon request from Plasti-Fab.