



Expanded Polystyrene Product Solutions



Expanded Polystyrene – A Unique Engineering Material

Expanded polystyrene (EPS) starts as a polystyrene resin pellet infused with pentane. When exposed to pressurized steam, the polystyrene pellet expands allowing it to be moulded into any desired shape and density needed. Manufacturing EPS does not involve the use of ozone depleting CFCs or HCFCs. The final product is a moisture resistant closed-cell structure that is comprised of 95 percent air.

EPS possesses the physical and mechanical properties ideal for most insulating needs. Due to EPS' closed cell structure, aging has no effect on its long-term thermal resistance. EPS is used as insulation in walls, roofs and foundations as well as a component in structural insulated panels and insulating concrete forming systems. EPS can be cut or moulded into boards or any desired shape to meet specific building code requirements and customized designs.

Expanded polystyrene (EPS) isn't just foam insulation, it is also an innovative material that lends itself to many applications including structural support, packaging and display. Over the past decade, new applications using EPS have exploded and EPS now serves as a powerful design element in many applications.



Plasti-Fab has developed a certification listing under Environment Canada's Environmental Choice™ Program (ECP) allowing us to apply the EcoLogo™ stamp of approval on our PlastiSpan insulation board, Advantage ICF System and PlastiSpan SIP System. Plasti-Fab recognizes that our products are key components in creating an energy efficient building envelope. Our listing under the ECP emphasizes our commitment to environmental responsibility in the manufacture and use of our products.

The ECP is designed to reduce stress on the environment by encouraging the buying and selling of environmentally preferable products and services. To be certified under the ECP, companies need to demonstrate environmental management. A product is assessed on its total life cycle performance, which includes how a product is made, what it is made with, how it is used, what will happen when it is disposed of and its potential for being recycled.

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Plasti-Fab Ltd. and PFB Corporation

PFB Corporation is a public company listed on the Toronto Stock Exchange under the symbol PFB. PFB Corporation, through its wholly owned subsidiary Plasti-Fab Ltd., is a vertically integrated manufacturer of expanded polystyrene products. Plasti-Fab's products are used in a number of applications including residential and commercial building insulation, buoyancy, geotechnical, packaging and display applications.

Plasti-Fab products are manufactured in 6 facilities across Canada and are distributed to customers directly, through resellers or through building supply retailers. We manufacture expandable polystyrene resin in our polymer plant at Crossfield, Alberta which is used exclusively for our own production. We also source EPS resin from other suppliers to supplement our own needs and for use in specialty products.

Our goal is to help our customers build more economical, energy efficient structures by providing innovative EPS products to the construction industry. We are also committed to providing customers with EPS product solutions in other industries such as packaging and display where the lightweight, impact absorbing and structural properties of EPS provide a unique advantage.

We are proud of our history of over 35 years which has positioned us as a leader in the EPS industry. We intend to grow our business by accessing new markets and manufacturing and marketing proprietary products that utilize the insulating and other unique properties of expanded polystyrene.



Quality, Service and Expertise

When people purchase Plasti-Fab products they are purchasing more than EPS. Behind every Plasti-Fab product is our commitment to three key principals – Quality, Service and Expertise.

Quality - Our products meet or exceed the standards that our customers expect for their EPS applications. Our Technical Centre, located at Crossfield, Alberta, ensures Plasti-Fab quality through continuous improvement programs. This Standards Council of Canada accredited laboratory, provides us with the tools to fully understand the performance characteristics of our products right down to the molecular level. Through our technical center analysis capabilities, quality control processes and in-plant testing we ensure our products meet Underwriter Laboratories of Canada (ULC) third party inspection requirements and achieve other code body compliance.

Service – Our objective is to satisfy our customer needs completely. We have proprietary information systems that allow us to track every order from quotation to delivery. We are not scared to climb on top of a roof to confirm measurements or to jump into an excavation to ensure our forming systems are put together properly. Every day, members of the Plasti-Fab team can be found providing hands-on-training in the use of our products and educating customers, engineers and architects on how our products can help them achieve better performance and cost savings.

Expertise – Over 35 years of experience with EPS goes a long way in understanding how our products and our competitor's products fit a specific application. Plasti-Fab participates actively on construction industry committees. We are active members in setting the codes and regulations which govern how EPS and other insulation products are used and we contribute enthusiastically to programs to promote energy efficient buildings.



PlastiSpan insulation is used as a component for new construction and re-roofing projects of all sizes.



Roofing Insulation

PlastiSpan rigid insulation board is commonly used as a component in a wide variety of roofing systems including sloped, built up, modified bitumen, single ply, standing seam and cathedral ceilings. It is often the insulation of choice for commercial and residential buildings across Canada.



Using PlastiSpan insulation board helps create a comfortable environment for occupants and energy savings for building owners.

Plasti-Fab has roofing specialists in all its locations. They assist designers in determining the required R-value and product type to include in their roofing design.

PlastiSpan insulation has over 35 years of proven performance used as flat or sloped rigid insulation in roofing systems. Customers include many prominent building owners and managers across North America.

PlastiSpan insulation is installed under concrete floor slabs of artificial ice rinks to provide energy savings. Surrey Sport and Leisure Complex, BC



Wall and Floor Insulation

PlastiSpan insulation can be used in a wide variety of commercial and residential wall systems including: exterior insulating sheathing; metal skin panels; Exterior Insulation Finish Systems; rain screen walls and precast concrete panels.

Commercial and residential floor applications for PlastiSpan insulation include ice rinks, under and over concrete floors, and radiant floor heating.



PlastiSpan insulation is used as the insulation component in exterior finish systems. Exterior Insulation Finish Systems (EIFS) are popular external cladding systems, which are applied over PlastiSpan insulation to provide durable surfaces.

EIFS can be finished in a range of colors and textures and can incorporate a wide range of creative decorative shapes and forms.

Plasti-Fab's insulation has been used as a component in EIFS installations on many high profile buildings across Canada including casinos, movie theatres, restaurants and malls.

Some examples are

Niagara Casino (Niagara Falls, ON),
Club Regent Casino Hotel (Winnipeg, MB),
Palace Casino (Edmonton, AB),
Galaxy Theatre (Edmonton, AB),
Famous Players (Silver City, ON and Chinook Centre, Calgary, AB),
Dantes Bistro (Edmonton, AB),
Metro Town Shopping Centre (BC),
AMC Plaza (ON),
Peace Hills Trust (Fort Qu'Appelle, SK)
Starbucks and Chapters stores.





GeoSpan™ Compressible Fill



GeoVoid Compressible Fill

GeoVoid compressible fill being installed underneath a floor system in a warehouse application.

GeoSpan® & GeoVoid®

Plasti-Fab has the research and development capability to provide many geotechnical engineered applications with demanding requirements.

GeoSpan compressible fill material is designed for use as a compressible medium in applications where soil expansion occurs after construction is completed. GeoSpan is distinguishable from other EPS materials by its brown earth tone color.

GeoVoid compressible fill material incorporates a patented design for use as a compressible medium under structural concrete floor slabs.



GeoSpec™ Lightweight Fill

PlastiSpan lightweight fill materials provide long-term performance solutions for architects and engineers.

Our lightweight fill material is the product of choice where soil settlement problems exist, a common problem where roads are placed over subsoil with low bearing capacity or with high settlement characteristics.



GeoSpec lightweight fill material can be used in road construction and landscape architecture applications where structural loading is an issue.

Project Name: Dougan Lake Project

Place: Duncan, BC

Product Name: GeoSpec Lightweight Fill Material

Project

Description: Road Embankment Project

This section of highway on Vancouver Island had been subject to recurring side slope failure resulting in a portion of the road surface dropping by up to 12 inches.

This type of soil settlement problem usually results from the weight of the road on the subsoil beneath which will continue indefinitely if no action is taken other than continual filling to level the road embankment.



Construction crew backfills over the PlastiSpan lightweight fill blocks.



Construction nearing completion, the load on the subsoil has been greatly reduced.

Plasti-Fab *Advantage ICF System*TM
EPS PRODUCT SOLUTIONS
Insulating Concrete Forming System

THE CEMENT ASSOCIATION OF CANADA

2004 Award for
Design
Excellence



Award presented at the National Conference of the
Canadian Home Builders' Association of Canada



Villaggio
KENSINGTON

LaCosta Housing's Villaggio Kensington multi-family project.

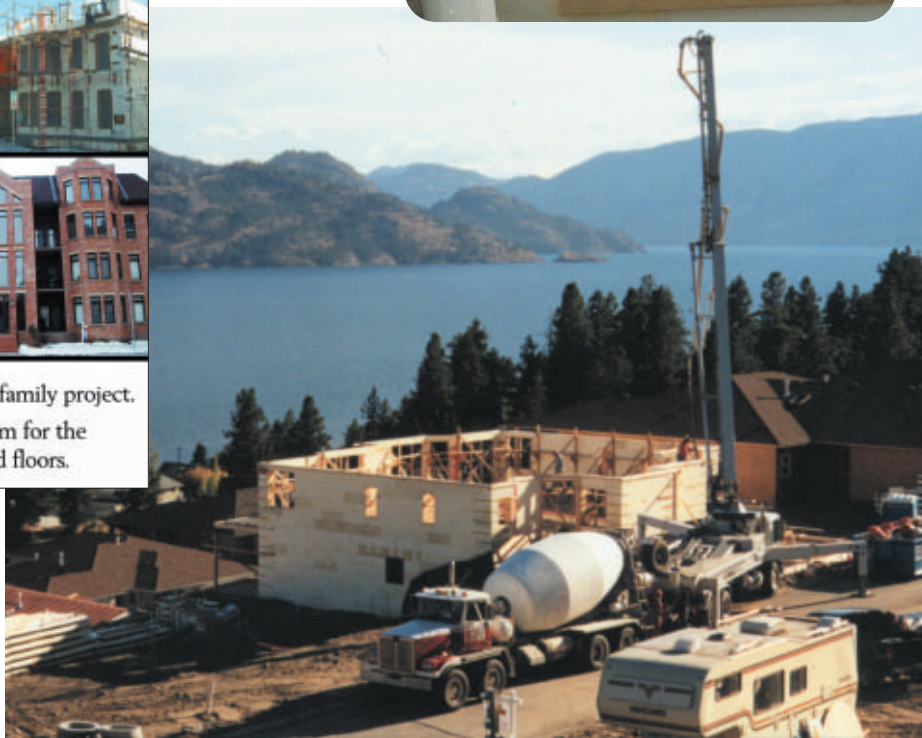
Features Plasti-Fab's Advantage ICF System for the
exterior walls, interior partition walls and floors.

Energy Efficient Building Technology

ICF construction

High energy costs, traffic noise, fire safety and high maintenance costs are all important considerations in the construction of today's homes.

Insulating Concrete Forms (ICF) provide building owners with below grade and above grade walls that satisfy all these considerations. Plasti-Fab's Advantage ICF building system consists of a core of cast-in-place concrete, sandwiched between two panels of Plasti-Fab's rigid expanded polystyrene (EPS) insulation.



Residential

Multi-Family

**Commercial and
Industrial**

Features

- ☐ More energy efficient
- ☐ Reduced sound transmission
- ☐ Resistant to storms and high winds
- ☐ Virtually dust and pollen free
- ☐ Specialty 45° and 90° corner blocks and brick ledge block
- ☐ Wide window sills
- ☐ Fast, year round construction
- ☐ Superior insulation
- ☐ Local supply

Benefits

- ☐ Lower utility bills, saves money, more environmentally responsible
- ☐ Comfort, privacy
- ☐ Safe and secure
- ☐ Healthier living
- ☐ Flexibility in design
- ☐ Versatile interior decoration
- ☐ Convenient construction schedules
- ☐ Comfortable living with warm consistent temperatures throughout house
- ☐ High comfort level - dealing with established local building supply dealer



Energy Efficient Building Technology - Insulspan SIP construction

Slow construction times, drafty homes and high energy costs are all important considerations in the construction of today's homes. Structural Insulated Panel (SIP) construction provides the ultimate solution.

Plasti-Fab Ltd., a leader in energy efficient SIP building technology, offers home owners walls and roofs that satisfy all these considerations. Plasti-Fab offers the Insulspan SIP System which combines oriented strand board (OSB) structurally laminated to a core of expanded polystyrene (EPS) insulation. In addition,

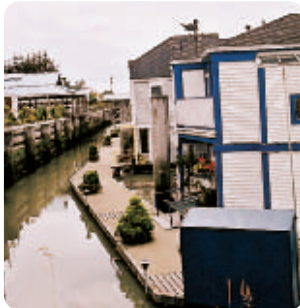
Plasti-Fab's Advantage Insulating Concrete Forming (ICF) System can be used for the foundation.

Insulspan, the North American market leader in SIPs technology, is now available from Plasti-Fab across Canada. Its industry leading "ready to assemble" (RTA) process gives contractors a real competitive advantage over traditional stick frame construction. Potential home owners can pick a home design they like giving them the peace of mind that their energy costs will be the lowest possible for the life of their home.

The benefits for builders are numerous. SIPs buildings require less skilled labour and there is also less labour time spent on site.

Secondly, the building envelope can be locked up and ready for other sub trades quickly and be secured against theft keeping costs down. Finally, there will be fewer call backs keeping costs down and builder's reputation up.

Buoyancy



Plasti-Fab manufactures a range of flotation products for buoyancy applications, used in docks, marinas and in floating homes.

Plasti-Fab flotation billets are suitable for either fresh or salt water and are unaffected by winter temperatures. They can be coated with a number of compatible finishes.

Over many years, Plasti-Fab has developed technical expertise which has provided customers with innovative buoyancy solutions.



Project Name: Canoe Pass Floating Village, Ladner, BC by International Marine Flotation (IMF) Systems Inc.

Place: Ladner, BC

Product Name: PlastiSpan Flotation billets

Project

Description: Floating Home Pod Construction

IMF's unique floating home designs are built on floating foundation platforms – a structural concrete shell with a core of PlastiSpan flotation billets.



Manufacturing a floating foundation platform with PlastiSpan flotation billets.



Concrete floating foundation with PlastiSpan flotation billets inside.



The floating foundation platforms are moved by tug boat to a construction site for residential or commercial construction to begin.

Packaging & Display



Fabricated Packaging

Manufacturers across Canada use Plasti-Fab packaging material solutions to protect products during shipping and handling.

For example, various furniture and equipment manufacturers use Plasti-Fab EPS packaging materials to prevent expensive customer call backs for damaged products.

Other companies use our EPS products as fabricated packaging material for the products they create. Our EPS products are cut to custom sizes to fit their product design.

Product flexibility and on-time delivery are key deliverables that our packaging customers demand.



Plasti-Fab provides professional service and expertise to ensure that product recommendations meet both the end users' requirements and our own customers' packaging needs.

Movie, Stage and Photo Set Design

Plasti-Fab EPS products are ideal for use in sculpting and fabricating custom shapes to create displays used in movie or stage set designs and for custom foam props. When our EPS products are combined with a designer's imagination, it opens the door to endless possibilities, bringing the most creative ideas to life for displays or foam props for use in cinemas, malls and commercial buildings.

Plasti-Fab has the expertise to provide its customers with the right foam products to bring the most creative designs to life.



Decorative Details

Our EPS products provide solutions for architects, designers and building owners to explore and create endless design possibilities. Specialty cut decorative details like columns, arches, reliefs and other shapes can be created for either exterior or interior applications.

Several companies use our EPS products to create and design decorative details and mouldings used in commercial and residential construction.



PlastiSpan Insulation Properties

MATERIAL PROPERTIES	TEST METHOD	NOTE	UNITS	CAN/ULC-S701 TYPES			NOTE	UNITS	ASTM C578 TYPES			
				1	2	3			I	VIII	II	IX
Thermal Resistance Minimum	ASTM C 518	1	$\frac{\text{m}^2 \cdot ^\circ\text{C}}{\text{W}}$	0.65	0.70	0.74	4	$\frac{\text{ft}^2 \cdot \text{hr} \cdot ^\circ\text{F}}{\text{BTU}}$	3.60	3.80	4.00	4.20
Water Vapour Permeance Maximum	ASTM E 96	2	$\frac{\text{ng}}{\text{Pa} \cdot \text{s} \cdot \text{m}^2}$	300	200	130	5	perms	5.0	3.5	3.5	2.0
Dimensional Stability Maximum	ASTM D 2126		% change in dimension	1.5	1.5	1.5		% change in dimension	2.0	2.0	2.0	2.0
Flexural Strength Minimum	ASTM C 203		kPa	170	240	300		psi	25	30	35	50
Water Absorption Maximum	ASTM D 2842	3	% by volume	6.0	4.0	2.0	3	% by volume	4.0	3.0	2.0	2.0
Compressive Resistance Minimum @ 10% Deformation	ASTM D 1621		kPa	70	110	140		psi	10	13	15	25
Limiting Oxygen Index Minimum	ASTM D 2863		%	24	24	24		%	24	24	24	24

NOTES:

- Values are minimum thermal resistance per 25-mm of thickness at mean temperature of 24° C (75° F). Multiply by 5.768 to obtain R-Value per inch of thickness in units of (ft² • hr • °F)/BTU.
- Values quoted are maximum values for 25-mm thick samples.
- Water absorption test values determined using ASTM D2842 for CAN/ULC-S701 types and using ASTM C272 for ASTM C578 types.
- Values are minimum thermal resistance per 1.0-inch of thickness at mean temperature of 24° C (75° F). Multiply by 0.176 to obtain RSI-Value per 25.4 of thickness in units of (m² • °C)/W
- Values quoted are maximum values for 1.0-inch thick samples.
- PlastiSpan insulation board has a Flame Spread Rating of 290 and a Smoke Developed Rating greater than 500 for minimum thickness of 12.5 mm when classified in accordance with CAN/ULC-S102.2M. PlastiSpan insulation board has a Flame Spread Rating of 20# and a Smoke Developed Rating of 300# for maximum thickness of 6 inches classified in accordance with ASTM E84.

For more information on Plasti-Fab EPS Product Solutions, consult the following brochures:

ROOF & DECK INSULATION

- Roof Applications – Selection, Application & Specification
- Built Up Roofing
- Cathedral Ceilings
- Fire Rated Assemblies
- Single Ply Roofing
- Sloped Roofing
- Standing Seam

BUILDING INSULATION

Wall Insulation

- Wall Insulation – Selection, Application & Specification
- Commercial / Industrial
- Exterior Insulation Finish Systems (EIFS)
- Exterior Insulation Sheathing New or Retrofit Construction
- Interior Systems
- PlastiSpan M Insulation
- Precast Concrete Wall Panels
- Rain Screen (Cavity) Walls

Floor Insulation

- Floor Insulation – Selection, Application & Specification
- Floor Insulation Systems
- Insulation for Radiant Floor Heating Systems
- Split Slabs

Foundation Insulation

- Foundation Insulation – Selection, Application & Specification

- Exterior Perimeter Foundation Insulation Systems
- Exterior and Interior Foundation Walls
- Frost Protected Shallow Foundation
- GeoDrain Foundation Insulation Board

Ice Rinks

- Ice Rink Slab Insulation

CONCRETE FORMWORK

- Advantage ICF System
- Enermizer ICF System

MECHANICAL INSULATION

- Cold Storage Applications
- Pipe and Vessel Applications

ROOF & WALL PANELS

- PlastiSpan SIP System

BUOYANCY SYSTEMS

- Buoyancy Systems – Selection, Application & Specification
- Floating Dock or Marina
- Floating Rafts

GEOTECHNICAL ENGINEERED APPLICATIONS

- Geotechnical Engineered Applications – Selection, Application & Specification
- GeoSpan Compressible Fill
- GeoSpec Lightweight Fill
- GeoSpec Lightweight Fill
- GeoVoid Compressible Fill
- Utilities Insulation



Insulation



Building Systems



Buoyancy



Geotechnical Engineered Applications



Packaging and Display

1-88-THINK-EPS
1-888-446-5377



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