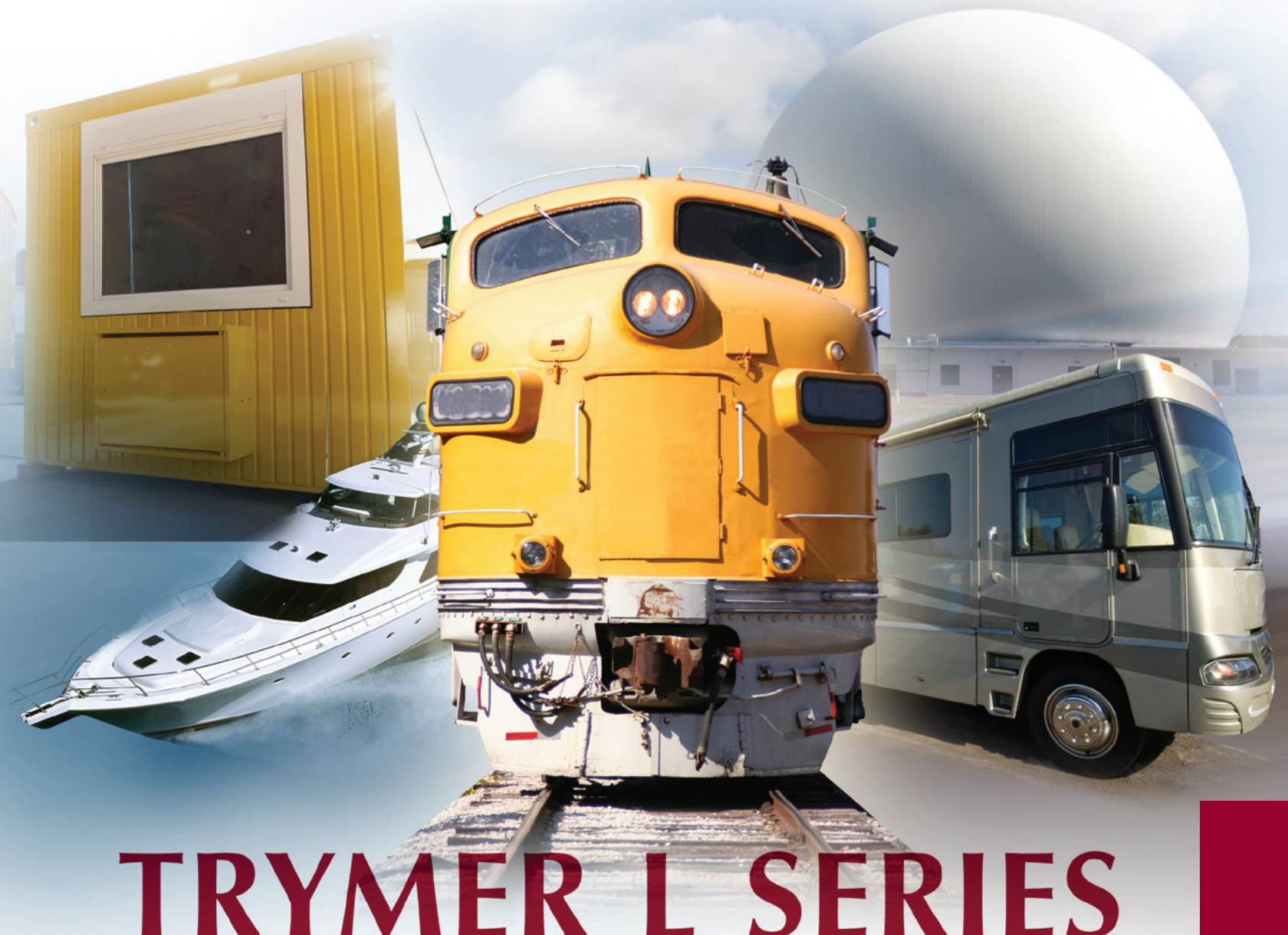


**TW** INSULATION SYSTEMS



# TRYMER L SERIES

**Low Index. High Impact.**

TRYMER® L Series Low Index Polyisocyanurate Foam for Composite and Panel Applications

# Go The Distance

With TRYMER® L Series Products From ITW Insulation Systems

Composite panels, manufactured by several different techniques, are only as good as their components – and a quality core material is essential.

TRYMER® L Series products from ITW Insulation Systems form a high-performance foam core for use in a wide range of commercial, industrial and residential products. The low index polyisocyanurate foams are highly valued for their versatility and proven performance in even the most demanding applications and harshest environments.

## Low Index. Less Dust.

TRYMER® L Series products have a lower polyisocyanate-to-polyol ratio when compared to conventional polyisocyanurate foams.

This attribute contributes to better fabrication and improved handling and machinability, as well as improved strength properties. The optimized composition of the TRYMER® L Series products creates less dusty foams with fewer voids and pockets, enabling fabrication of products with a smooth, uniform surface. This leads to improved adhesion, dependable bonding and reduced resin waste. The foams can also be sculpted or carved into unique and complex shapes, and will hold their shape for repeated use as composite plugs.

Like all TRYMER® polyisocyanurate foams, TRYMER® L Series products are produced as bunstock in lengths up to 16 feet. The buns are shipped to highly specialized fabricators in North America. This network of strategically appointed fabricators works closely with original equipment manufacturers (OEMs) and detailed customer specifications, ensuring the highest standards are fulfilled.



## CORE ADVANTAGE

Table 1 – Physical Properties of TRYMER® Core Materials

Property/Units	ASTM Method	TRYMER® 200L	TRYMER® 250L	TRYMER® 350L	TRYMER® 400L	TRYMER® 6000 <sup>(1)</sup>
Density, pcf (kg/m <sup>3</sup> )	D1622	2.0 (32.0)	2.5 (40)	3.5 (56.1)	4.1 (57.7)	6.0 (96)
Compressive Strength, psi (kPa), parallel to rise	D1621	30 (207)	45 (310)	60 (414)	75 (517)	140 (970)
Tensile Strength, psi (kPa), 3D ave	D1623	30 (207)	50 (345)	60 (414)	75 (517)	95 (654)
Shear Strength, psi (kPa), average of parallel to rise and extruded directions	C273	23 (159)	30 (207)	35 (241)	40 (276)	80 (550)
Flexural Strength, psi (kPa), parallel to rise	C203	39 (269)	65 (448)	90 (621)	100 (689)	160 (1,100)
Water Absorption, % by vol, 24-hour immersion	C272	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
R-Value per inch, °F·ft <sup>2</sup> ·h/Btu (m <sup>2</sup> ·°C/W)	C518	5.3 (0.93)	5.3 (0.93)	5.3 (0.93)	5.3 (0.93)	5.5 (0.97)

1. TRYMER® 6000 polyisocyanurate foam features a higher polyisocyanate-to-polyol index than TRYMER® L Series foams. With its high density and exceptional compressive strength, TRYMER® 6000 foam is ideally suited for a variety of thermal insulation and high-strength specialty applications.

®™Trademark of ITW Insulation Systems

# Applied Knowledge

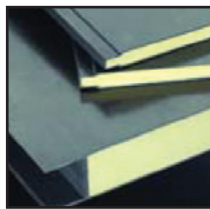
## Transportation

In weight conscious transportation applications, the lightweight TRYMER® L Series products lend strength and durability to the roofs, walls and floor panels of trucks and railcars. With improved thermal efficiency, TRYMER® L Series foams allow the design of thinner panels than can be achieved by typical 1.5 pcf expanded polystyrene (EPS) foam. The lightweight and aerodynamic designs can also help improve fuel efficiency.



## Pultrusion

The ability of TRYMER® L Series products to withstand very high temperatures up to 300°F, maintain their physical integrity and resist many chemicals makes them highly desirable core materials for pultrusion applications. Among the numerous pultruded products that incorporate TRYMER® core foams are insulated doors, bridge girders and decks, and lightweight, high-strength, corrosion-resistant enclosures for chemical processing operations.



## Temporary/Mobile Shelters

TRYMER® foams are commonly specified as a core material in military shelters due to their consistent quality. They are also well-suited for insulated sandwich panels in mobile shelters, as well as modular panels for temporary housing, sunrooms, conservatories, poultry incubators and livestock pens.



## Telecommunications Shelters

TRYMER® L Series core materials answer the call for superior strength and durability in a lightweight profile for telecommunications shelters worldwide. In radomes, for example, insulated panels with TRYMER® foam at the core protect sensitive telecommunications equipment and electronics in severe weather conditions.



Radome photo courtesy of L-3 Communications ESSCO, Concord, Mass.

## Cold Storage

Walk-in coolers and freezers, refrigerated warehouses and other temperature-controlled environments benefit from the improved strength, exceptional thermal efficiency and moisture resistance of TRYMER® L Series products.



## Marine

ITW Insulation Systems offers a complete line of TRYMER® polyisocyanurate foams in compressive strengths up to 140 psi (970 kPa) and densities up to 6.0 pcf (kg/m<sup>3</sup>). High strength-to-weight ratio, superior dimensional stability and the smooth, uniform surface of custom-fabricated TRYMER® L Series foams make them ideal composite materials for stringers, decks, transoms, motor enclosures and hull plugs.



Photo courtesy of DLBA Robotics, Ltd.

*TRYMER® L Series foams meet the toughest military specifications for core materials in a wide range of demanding applications.*

TRYMER® L Series foam is produced as bunstock in different densities and strengths for a broad range of applications.

# Fabrication Ease and Accuracy Unparalleled

TRYMER® L Series foam is designed to meet a wide range of fabrication and end use specifications. As core materials for composite products, TRYMER® L Series products offer many benefits over conventional polyurethane foams.

## Better Bonding.

TRYMER® L Series foams are specially engineered for structural sandwich panels and other composite applications where adhesion and bonding of facers is critical. Due to its exceptional quality and product consistency, TRYMER® L Series foam can be precision-fabricated. The foams are compatible with thermoset resins and most solvent-based adhesives. Because of the smooth, uniform surface of the foams, resin can be applied more efficiently, reducing process costs.

## Improved Handling.

TRYMER® L Series foam is formulated for optimal tooling and machinability. Long sheets, custom edge treatments and intricate shapes are easily fabricated. Compared to other rigid foams, TRYMER® L Series products hold their shape better during fabrication and various manufacturing processes. Furthermore, the products resist breakage and damage during both fabrication and installation adhesives. Because of the smooth, uniform surface of the foams, resin can be applied more efficiently, reducing process costs.

## Improved Impact Strength.

Available in compressive strengths up to 140 psi (970 kPa), TRYMER® core materials are able to withstand high impact and heavy loads such as those typical in cold storage racking systems, bridge decks, platforms and other demanding applications.



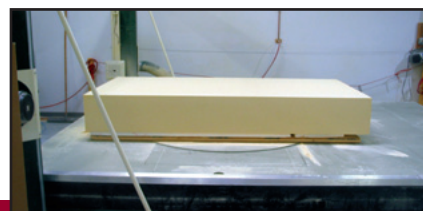
*The consistent cell structure and density of TRYMER® foam enables simple and accurate Computer Numerical Control (CNC) routing.*

## A Powerful Partnership: ITW Insulation Systems and the Authorized Fabricator Network

Nearly 60 years of foam manufacturing expertise are behind every TRYMER® L Series product – that's a history of experience no other rigid foam manufacturer can offer. The superior quality of TRYMER® core foams is matched only by the caliber of the fabricators, molders and laminators that make up ITW's exclusive Authorized Fabricator Network. Located conveniently and strategically throughout North America to best meet OEM and customer needs, ITW Authorized Fabricators are carefully selected for their fabrication expertise, attention to detail and ability to help guide product selection for optimal performance. Put the power of this unique partnership to work for you, with TRYMER® L Series low index polyisocyanurate foam from ITW Insulation Systems.

## Improved Structural/Strength Properties.

When a core material with high shear, tensile and flexural strength is required for long, support-free spans, TRYMER® L Series products are an excellent choice.



Photos courtesy of Polyceel, Inc.



## **ITW** INSULATION SYSTEMS

**ITW Insulation Systems  
1370 East 40th Street  
Houston, TX 77022-4104**

**For Sales and Technical Information: 1-800-231-1024**

**[www.itwinsulation.com](http://www.itwinsulation.com)**