

# **TRYMER<sup>®</sup> Polyisocyanurate and TRYMER<sup>®</sup> Green Phenolic Pipe Insulations and LEED v3**

## **LEED Explanation**

The U.S. Green Building Council (USGBC) is a nonprofit coalition promoting high-performance green building design. Its members represent all segments of the building industry.

To encourage the design of green buildings, the USGBC developed a system to rate the environmental designs of buildings. The Leadership in Energy and Environmental Design (LEED<sup>™</sup>) Green Building Rating System is a voluntary, consensus-based standard that recognizes the life-cycle costing of construction.

The LEED Green Building Rating System allows design professionals to accumulate credits based on meeting certain criteria pertaining to the use of environmentally friendly, sustainable, and energy-efficient products and systems. Buildings may attain one of four LEED certification levels by reaching certain point levels in each of the LEED categories. Using the LEED design process offers numerous benefits, including financial incentives in some states and localities.

*To download the USGBC Rating System for New Construction and Major Renovations (LEED 2009, Version 3), visit [www.usgbc.org](http://www.usgbc.org).*

## **TRYMER Polyisocyanurate Pipe Insulation**

TRYMER polyisocyanurate (PIR) pipe insulation is a polyurethane modified polyisocyanurate rigid insulation formulated with a high concentration of polyisocyanurate linkages. It has a very low average k-factor (measure of thermal conductivity) and is especially effective in the temperature range of -297°F to 300°F.

## **TRYMER Green Phenolic Pipe Insulation**

TRYMER Green Phenolic pipe insulation is a phenolic foam designed to provide the lowest thermal conductivity of any standard material combined with excellent flammability performance, closed-cell, and good water and water vapor resistance. These properties make Trymer Green Phenolic Insulation the ideal material for use as pipe insulation on chilled water, cold water, and hot water pipe located in the air plenums of commercial buildings where flammability is the greatest concern but energy efficiency is still important and governed by codes.

## **Contribution of TRYMER Insulation to LEED v3 Credit**

Incorporating TRYMER polyisocyanurate or TRYMER Green phenolic insulation on the chilled water, cold water, and hot water pipe, tanks, and equipment in your building designs can help obtain LEED v3 credits in eight categories. The total possible LEED points in these categories are 33. 40 points is needed for LEED certification and 80 points for platinum level certification

The remainder of this document describes the official categories in which Trymer Insulation might help contribute to LEED v3 points.

## **Sustainable Sites (SS)**

### **SS CREDIT 7.2 (1 POINT POSSIBLE) HEAT ISLAND EFFECT: ROOF**

To qualify for LEED credit, reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimates and human and wildlife habitats.

TRYMER PIR or TRYMER Green insulations used on hot and cold piping and equipment may reduce the urban heat island effect.

## Water Efficiency (WE)

### WE PREREQ 1 & CREDIT 3 (REQUIREMENT & 2-4 POINTS POSSIBLE)

#### WATER USE REDUCTION

To qualify for LEED credit, the water efficiency within buildings must be increased to reduce the burden on municipal water supply and wastewater.

The use of TRYMER PIR or TRYMER Green insulations may help reduce potable water usage by reducing heat flow between the pipes and surroundings thus speeding delivery of desired temperature water to the fixture.

## Energy & Atmosphere (EA)

### EA PREREQUISITE 2 (REQUIRED)

#### MINIMUM ENERGY PERFORMANCE

To qualify for LEED credit, the proposed building and systems must meet a minimum level of energy efficiency to reduce environmental and economic impacts associated with excessive energy use.

The use of TRYMER PIR or TRYMER Green insulations will help the building design meet/exceed ASHRAE Standard 90.1 or the local energy code, whichever is more stringent.

### EA CREDIT 1 (1-19 POINTS POSSIBLE)

#### OPTIMIZE ENERGY PERFORMANCE

To qualify for LEED credit, the proposed building and systems must achieve increased levels of

energy performance beyond prerequisite standards.

TRYMER PIR and TRYMER Green insulations can help achieve high energy efficiencies by providing stable, long-term insulation for hot and cold piping and equipment.

### EA CREDIT 4 (2 POINTS POSSIBLE)

#### OZONE PROTECTION

To qualify for LEED credit, reduce ozone depletion and support early compliance with the Montreal Protocol while minimizing direct contributions to climate change.

TRYMER PIR and TRYMER Green insulations are manufactured without the use of chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) blowing agents.

In addition, the VOC levels are low with both TRYMER PIR Insulation and TRYMER Green Phenolic having less than 3% by weight VOC.

### EA CREDIT 5 (3 POINTS POSSIBLE)

#### MEASUREMENT AND VERIFICATION

To qualify for LEED credit, provide for the ongoing accountability of building energy consumption over time.

TRYMER PIR and TRYMER Green insulations may help by complying with installed mechanical systems and equipment requirements for energy efficiency.

## Materials & Resources (MR)

### MR CREDIT 4 (1-2 POINTS POSSIBLE)

#### RECYCLED CONTENT

To qualify for LEED credit, increase demand for building products that incorporate recycled content materials.

Trymer PIR Insulation contains 5-10% postconsumer and about 65% preconsumer recycled content.

### MR CREDIT 5 (1-2 POINTS POSSIBLE)

#### LOCAL/REGIONAL MATERIALS: 20% MANUFACTURED REGIONALLY

To qualify for LEED credit, increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

While the large buns of TRYMER PIR and TRYMER Green insulation are manufactured in or near Houston, Texas, these are actually just one of the key raw materials used to form the actual pipe and equipment insulation systems.

The actual insulation systems are produced at the fabricator's facilities which are usually located regionally. Obtain credit for locations within 500 miles of the fabricator's facility. For more information on the location of fabricators near your LEED facility, contact ITW.

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### ITW Insulation Systems

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COMBUSTIBLE: Protect from high heat sources. For more information, consult MSDS or call ITW Insulation Systems at 1-800-231-1024.