ITW INSULATION SYSTEMS

TRYMER® Polyisocyanurate and TRYMER® Supercel 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™) 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 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

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® Supercel Phenolic Pipe Insulation

TRYMER® Supercel 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® Supercel 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® Supercel 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 is 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® Supercel 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® Supercel 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® Supercel 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® Supercel 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® Supercel 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 and TRYMER® Supercel 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® Supercel 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 large buns of TRYMER® 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 fabricators near your LEED facility, contact ITW.

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