DuPont™ Tyvek® contributes to green building design

WORKING WITH U.S. GREEN BUILDING COUNCIL AND LEED®

U.S. Green Building Council (USGBC), is a nonprofit coalition of leaders from across the building industry dedicated to promoting environmentally responsible, profitable and healthy places to live and work. USGBC developed LEED® (Leadership in Energy and Environmental Design) to establish a common standard of measurement and promote integrated, whole-building design practices. LEED® is a voluntary, consensus-based national standard for developing high-performance, sustainable commercial buildings. The rating system awards points for performance in green design categories including: sustainable sites; water efficiency; energy and atmosphere; materials and resources; indoor environmental quality; and innovation and design processes.

No single product can achieve LEED® points. However, using DuPont™ Tyvek® weather-resistant barriers in your commercial building design can help contribute toward LEED® credits in several categories.

A description of each of the LEED® credits toward which DuPont™ Tyvek® weather-resistant barriers can contribute are listed below.

Energy & Atmosphere (EA)

EA credit 1: Optimize Energy Performance (1-10 points)

Design Intent: Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impacts associated with excessive energy use.

Keeping drafts and wind out of wall cavities seals in thermal performance for greater comfort and reduced energy consumption. DuPont™ Tyvek® helps protect the installed R-value of insulation, regardless of the thickness of the insulation or the type of sheathing used, including tongue-and-groove sheathing and airtight drywall.

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MATERIALS & RESOURCES (MR)

MR credit 2.1, 2.2 Construction Waste Management (1–2 points)

Design Intent: Divert construction debris from landfill disposal, redirect recyclable recovered resources back to the manufacturing process and redirect reusable materials to appropriate sites.

DuPont™ Tyvek® weather-resistant barriers are made of high density polyethylene (HDPE) and therefore can be recycled through a local recycle center or by returning materials to the manufacturing site. Scrap materials made of DuPont™ Tyvek® can be mechanically recycled into products such as underground cable protection piping, automotive parts, blown film, packaging cores, composite lumber and plastic lumber, thus diverting debris from landfills.

MR credit 5.1, 5.2 Regional Materials (1–2 points)

Design Intent: Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the regional economy and reducing the environmental impacts resulting from transportation.

DuPont™ Tyvek® weather-resistant barriers are manufactured in Richmond, VA (zip code: 23234). The distance from the manufacturing facility to the job site can be calculated to determine whether it is within the 500-mile radius necessary to receive the Regional Materials Credit.

INDOOR ENVIRONMENTAL QUALITY (EQ)

EQ credit 2: Increase Ventilation Effectiveness (1 point)

Design Intent: Provide for the effective delivery and mixing of fresh air to support the safety, comfort and well-being of building occupants. For mechanically ventilated buildings, design ventilation systems that result in an air change effectiveness (Eac) greater than or equal to 0.9 as determined by ASHRAE 129-1997.

Removing uncontrolled air leakage allows for optimization of HVAC operations. Indoor air quality is directly related to managing air flow. DuPont™ Tyvek® is an effective air infiltration retarder for helping to reduce uncontrolled inside/outside air flow and temperature differences, thus allowing for a better ventilation plan and ultimately, improved systems operation.

EQ credit 3: Construction IAQ Management Plan: During Construction (1 point)

Design Intent: Prevent indoor air quality problems resulting from the construction/renovation process in order to help sustain the comfort and well-being of construction workers and building occupants. Protect stored on-site or installed absorptive materials from moisture damage.

By installing DuPont™ Tyvek® at the start of construction, building materials are protected from water penetration when exposed to the elements, helping prevent the formation of mold and mildew. DuPont™ Tyvek® CommercialWrap® was specifically designed to withstand the more rigorous construction site conditions of commercial buildings. It is heavier and more durable with higher air and water resistance than other housewraps. And because it does not absorb water like building paper and felt, DuPont™ Tyvek® CommercialWrap® resists tearing and stays flat upon installation.

DuPont™ Tyvek® weather-resistant barriers also help protect workers and future building occupants. DuPont™ Tyvek is easy to install, requiring no special protective apparel for workers and helps to reduce the potential for mold and mildew in the wall system which promotes healthy indoor air and results in fewer illnesses for occupants.

INNOVATION & DESIGN PROCESS (ID)

ID credit 1.1-1.4 (1-4 points)

Design Intent: Provides design teams and projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED Green Building Rating System™ and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System™.

There have been examples when using DuPont™ Tyvek® weather-resistant barriers have contributed toward Innovation and Design Process credits. Because of its superior performance in helping to reduce air leaks (improving energy efficiency) and holding out water (reducing indoor air quality issues), DuPont™ Tyvek® may contribute to the Innovation and Design Credit.

Our Commitment to Sustainable Building Solutions

DuPont is at the forefront of the search for new sustainable building solutions that improve comfort, enhance life around the world and have zero impact on the environment. We will continue to work closely with the U.S. Green Building Council and other nonprofit and government agencies to produce increasingly environmentally sustainable building solutions for a healthy future.

Learn more about DuPont™ Tyvek® and sustainable green design.

DuPont™ Building Innovations™
1-800-44-TYVEK®

www.Tyvek.com

U.S. Green Building Council
www.usgbc.org

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