trusscore
material + science

LEED v4.1 Solution Guide

Explore how Trusscore can be used to create sustainable buildings and contribute to LEED certification

Who is Trusscore?

Trusscore is a material science company that's changing residential and commercial construction by combining sustainable building materials with nanotechnology. With environmental responsibility and sustainability at the core of our corporate mission, we're creating products that are durable, reusable, and recyclable.

Made from PVC, the Trusscore product line replaces conventional wall systems made from plywood, painted drywall, and Fiberglass Reinforced Plastic (FRP) panels in a broad range of applications including office spaces, commercial kitchens, and recreation and healthcare facilities.

There are several key benefits that make Trusscore wall and ceiling panels an ideal choice over alternatives when designing sustainable buildings:

Environmentally Friendly

Our products are 100% recycled and can be reground and reused to make new materials, keeping our products from ending up in the landfill.

Lightweight & Easy-to-Install

Trusscore Wall&CeilingBoard requires less labor than drywall and installs four times faster with just one person needed for installation.

Moisture & Water Resistant

Trusscore wall and ceiling panels won't degrade or deteriorate in wet or damp environments.

Indoor Environmental Quality

The antimicrobial, mold and mildew resistance, high-light reflectivity, and low VOC compliant properties all help to create healthy spaces.

Strength & Durability

Our products are designed to withstand the toughest applications and are made to outlive the buildings they're installed in.

Cleanability

The smooth surface of Trusscore products means they clean with a simple wipe. Trusscore panels cannot be harmed by cleaners and can handle repeated pressure washing.

Our material science-based approach is pushing the boundaries to create sustainable building materials that perform. At Trusscore, we are always thinking about the environmental impact to reduce the footprint the building materials industry is leaving behind.

- Dave Caputo; CEO

Sustainable Building Design

The construction and operation of buildings generates nearly 40% of global energy-related carbon dioxide (CO_2) emissions each year. While emissions have levelled off since 2015, this number needs to be 30% lower to keep average global temperatures within 2° Celsius of pre-industrial levels by 2030.

Sustainable building design plays a crucial role in achieving this goal, as sustainable buildings are designed to be energy efficient, conserve water, enhance indoor air quality, and are built with materials that respect our natural resources. Together, these qualities can reduce the operation costs and carbon footprints of buildings.

At Trusscore, all our products are designed with the key principles of sustainable building design in mind:

1. Minimize the environmental impact of products used to construct buildings
2. Reduce the resources consumed to operate buildings
3. Build environments that are safe, comfortable, and productive

As a result, we're creating products with the lowest possible embodied carbon footprint by decarbonizing our production process to reduce CO_2 and greenhouse gas emissions across the life cycle of our products.

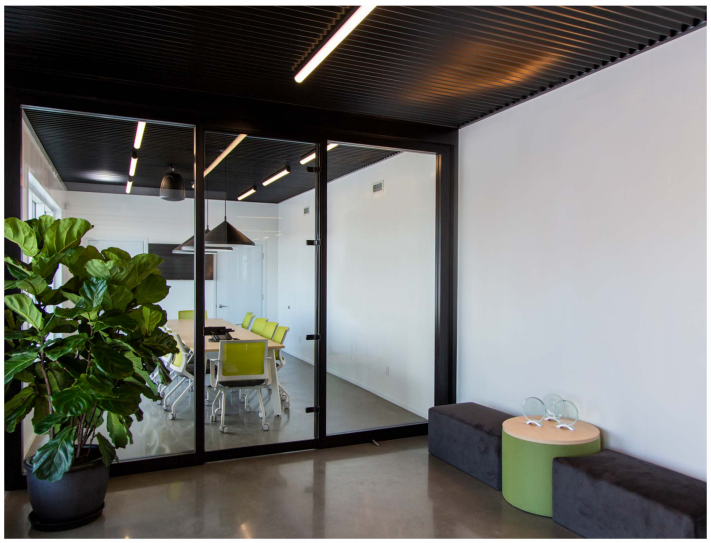
Visit trusscore.com/sustainability to learn more.

What is LEED?

Leadership in Energy and Environmental Design, formally known as LEED, is a globally recognized accreditation in the building sector which encourages green, sustainable building design.

Using the LEED v4.1 Green Building Rating System, builders can earn credits to become LEED certified in one of four levels:

Certified	Silver	Gold	Platinum
40-49 points earned	50-59 points earned	60-79 points earned	80+ points earned



A building or project earns LEED credits by meeting prerequisites that address areas like carbon, energy, water, waste, materials, indoor environmental quality, and more. Builders can earn credits across nine categories:

- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality
- Innovation in Design
- Regional Priority
- Integrative Process
- Location & Transportation

Trusscore & LEED Certification

Trusscore Wall&CeilingBoard, Trusscore SlatWall, NorLock, RibCore, and TempWall can help builders earn credits in the Materials and Resources and the Indoor Environmental Quality categories for LEED certification.

The **Materials and Resources** category focuses on minimizing the impacts of the extraction, processing, transport, maintenance, and the disposal of building materials.

Construction and Demolition Waste Management & Waste Management Planning. This credit aims to reduce the amount of construction and demolition waste disposed of in landfills and incineration facilities by recovering, reusing, and recycling materials.

Trusscore products are 100% recyclable and can be recycled through municipal facilities where accepted. In areas where PVC-based products aren't collected, customers can return any off-cuts of Trusscore products to a Trusscore manufacturing facility for recycling.

Interiors Life Cycle Impact Reduction. The Interiors Life Cycle Impact Reduction credit aims to encourage the reuse of existing building materials while reducing the amount of material being used.

While Trusscore offers custom product sizes to reduce material waste, off-cuts and excess pieces of Trusscore Wall&CeilingBoard and Trusscore SlatWall can be recycled and reground into new materials during the manufacturing process. Trusscore panels are also easy to install and to remove, which means they can be installed in different buildings to extend their life cycle.

The **Indoor Environmental Quality** category addresses environmental factors like air quality, lighting quality, and acoustics that influence the way people learn, work, and live.

Low Emitting Materials. The Low-Emitting Materials credit aims to reduce the concentrations of chemical contaminants that can damage air quality, human health, productivity, and the environment.

Trusscore Wall&CeilingBoard, RibCore, NorLock, and TempWall are all low volatile organic compound (VOC) compliant and meet the California Department of Public Health (CDPH) 01350 standard for low-emitting materials.

Interior Lighting. The Interior Lighting credit aims to promote building occupants' productivity, comfort, and well-being by providing high-quality lighting.

Trusscore Wall&CeilingBoard panels have a high light reflectivity rate of 90% — this means 90% of the light that strikes the surface of our panels will be reflected. The reflectivity of Trusscore panels helps maximize all natural and fixture lighting in a room to keep costs low and save on energy consumption.

Trusscore Products for LEED v4.1

	Trusscore Products				
LEED v4.1 Category	**Trusscore Wall&CeilingBoard**	**Trusscore SlatWall**	**NorLock by Trusscore**	**RibCore by Trusscore**	**TempWall by Trusscore**
	Materials & Resources (MR)				
Construction and Demolition Waste Management & Waste Management Planning	✓	✓	✓	✓	✓
Interiors Life Cycle Impact Reduction	✓	✓	✓	✓	✓
	Indoor Environmental Quality (EQ)				
Low-Emitting Materials	✓	✓	✓	✓	✓
Interior Lighting	✓	✓	✓	✓	✓

Manufacturing Facilities

Trusscore currently operates two manufacturing facilities in Palmerston, Ontario, and Calgary, Alberta.

At each facility, environmentally friendly practices and processes are in place to reduce the amount of embodied carbon in our products. When we say embodied carbon, we're referring to the greenhouse gas emissions associated with the entire life cycle of our products.

Our goal is to lower the carbon footprint of our products from the beginning of the product's life cycle, and that starts at our manufacturing facilities.

Here are some ways we're achieving this goal:

1. We've purchased and installed new, more efficient extruders, which reduce energy consumption and the number of extruders required for production
2. We monitor and optimize electrical consumption in each plant
3. We've installed solar panels on the roof of our facility in Palmerston, Ontario which generate 300 Kw/h of electricity; power from the panels is fed into the local grid as an offset for the electricity that Trusscore uses and improves the amount of renewable energy within the local power grid
4. We regrind excess material produced during production and incorporate it back into our manufacturing process
5. We've replaced cutting blades on the production line with hot knife technology; each hot knife saves one inch of waste material for every eight cuts
6. We minimize the raw material used to manufacture our products by operating a zero-waste facility and using recycled materials where possible

Palmerston
Ontario, Canada
50,000 sq.ft

Calgary
Alberta, Canada
188,000 sq.ft

References & Citations

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