

# Metal Building Insulation

Helping you achieve LEED® Certifications



Owens Corning® offers a number of products to help improve thermal performance, moisture control, durability and sound quality in commercial buildings. This document applies to the LEED 2009 and LEED v4 for Building Design and Construction (BD + C), New Construction (Core and Shell, Schools, Retail, Data Centers, Warehouses and Distribution Centers, Hospitality, and Healthcare). As you pursue LEED® Certification, rely on the products and expertise of Owens Corning®.

LEED® Certification and the awarding of credits, is based on the overall project design, properly designed building systems and assemblies, and the performance of the project as a whole. Owens Corning® products can be a component of many of these systems and assemblies. All components within those systems and assemblies should be considered to assess compliance with the LEED® Rating System within a given category.

Owens Corning® Metal Building Insulation Products contribute to the categories listed below.

**Owens Corning® Metal Building Insulation:**

- Certified R® Metal Building Insulation
- Metal Building Utility Blanket

**Table 1**

Credit Category	LEED® v4 Requirement	LEED® 2009 Requirement	Owens Corning® Product Contribution
<b>Energy and Atmosphere (EA)</b>			
Minimum Energy Performance- Prerequisite 2:	Whole Building Energy Simulation Performance improvement or Prescriptive Compliance in accordance with ANSI/ ASHRAE/IESNA Standard 90.1-2010,	Whole Building Energy Simulation Performance improvement dependent on building type, baseline performance according to ANSI/ ASHRAE/IESNA Standard 90.1-2007, Appendix G	Metal Building Insulations helps reduce building energy demand while improving thermal comfort for occupants. The project team is responsible for conducting the energy analysis to determine the overall building energy efficiency.
Optimize Energy Performance	Whole Building Energy Simulation improvement beyond prerequisite or Prescriptive Compliance using ASHRAE 50% Advanced Energy Design.	Improved performance rating compared with baseline building performance rating per ANSI/ ASHRAE/IESNA Standard 90.1-2007, Appendix G	Metal Building Insulation helps reduce building energy demand while improving thermal comfort for the occupants. Dependent on U-value of construction assembly. Project team responsible for conducting energy analysis to determine the overall building energy efficiency.
<b>Materials &amp; Resources (MR)</b>			
Building Product Disclosure & Optimization- Environmental Product Declaration	Use at least 20 different permanently installed products sourced from at least five different manufacturers that have third-party certified EPD	NA	Owens Corning® Metal Building Insulations carry third party certified EPDs. See UL.com/EPD for certifications.
Raw Material Source and Extraction Reporting	Sum of postconsumer recycled content + ½ the pre-consumer recycled content, constitutes 25%, by cost, of the total value of the project. Products sourced within 100 miles of project site valued at 200% of cost.	Sum of post-consumer recycled content plus ½ the pre-consumer content by cost, of the total value of the project. Products sourced within 500 miles of project site by cost, of the total materials value	Metal Building Insulations are made in 3 U.S. plants to provide regionally available material and contain a minimum 47% post-consumer and 18% pre-consumer recycled content, 65% total. Some products have higher content, so check with 1-800-GET-PINK®.
Building Product Disclosure and Optimization Material Ingredients	Products with chemical inventory to at least 0.1% (1000 ppm); have Declare, Cradle to Cradle (at least Bronze), or Cradle to Cradle Material Health Certification (Bronze or higher) and 90% of materials assessed by weight.	NA	Owens Corning® Metal Building Insulation products have Cradle to Cradle Material Health Certification (Gold level).

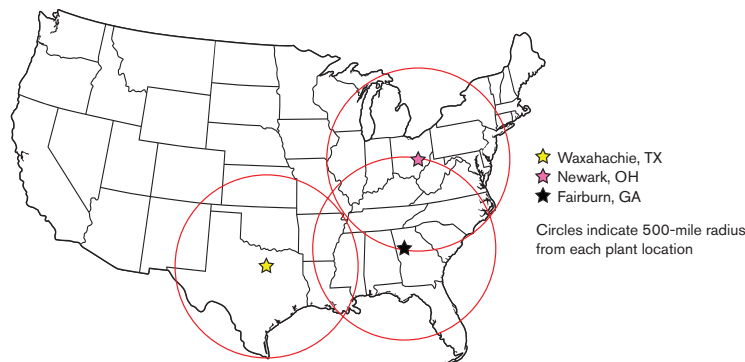
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**Table 1** (continued)

Credit Category	LEED® v4 Requirement	LEED® 2009 Requirement	Owens Corning® Product Contribution
Construction and Demolition Waste Management	Recycle and/or salvage nonhazardous construction and demolition materials. Diversion % of the total construction and demolition material; diverted materials include at least three material streams.	Use salvaged, refurbished or reused materials, which constitute at least 5% (1 point) or 10% (2 points), based on cost, of the total value of materials on the project.	Owens Corning® Metal Building Insulation products can be removed from demolition projects and reused in new construction.
<b>Indoor Environmental Quality (EQ)</b>			
Minimum Acoustic Performance Prerequisite 3:	For Classrooms < 20,000 cf materials with NRC of 0.70 or higher to be included in calculation. Or confirm rooms designed to meet reverberation time requirements as specified ANSI Standard S12.60-2010	Classrooms background noise from HVAC systems at 45 dBA or less, and reverberation times per ANSI Standard S12.60-2002, Acoustical Performance Criteria, Design Requirements and Guidelines for Schools.	Metal Building Insulation is effective in reducing noise transfer through building assemblies and improving room sound quality. Check with local sales representative for product applications
Low Emitting Materials (EQ)	Achieve 100% threshold level of compliance with emissions and content standards for Ceilings, walls, thermal, and acoustic insulation per LEED Table 2.	Meet California Department of Health Services Standard Practice for the testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda	Certified for Low Emitting Products: IAQ and GREENGUARD Gold Certified. Additional verification can be found at <a href="http://productguide.ulenvironment.com">http://productguide.ulenvironment.com</a>
Thermal Comfort (EQ)	Design heating, ventilating, and air-conditioning (HVAC) systems and the building envelope to meet the requirements of ASHRAE Standard 55-2010, Thermal Comfort Conditions for Human Occupancy with errata or a local equivalent.	Design HVAC systems and building envelope to meet the requirements of ASHRAE Standard 55-2004, Thermal Comfort Conditions for Human Occupancy. Design compliance in accordance with the Section 6.1.1	Owens Corning® Metal Building Insulation contribute to a comfortable thermal environment. See individual product data sheets for details, and check with local sales representative for product applications.
Acoustic Performance	Design classrooms and other core learning spaces to meet the sound transmission class (STC) requirements of ANSI S12.60-2010 Part 1, or a local equivalent.	ANSI Standard S12.60-2002, Acoustical Performance Criteria, Design Requirements and Guidelines for Schools for STC rating of building shell, classroom and core learning space partitions; HVAC background noise at 40 dBA;	Metal Building Insulation is effective in reducing noise transfer through building assemblies and improving room sound quality. Check with local sales representative for product applications.
Mold Prevention (EQ)	Credit requirements moved to "Thermal Comfort" credit.	Added to IEQ Credits 3.1, 7.1, and 7.2, HVAC systems/controls limit RH to 60% and IAQ program based on U.S. EPA document, Building Air Quality: A Guide for Building Owners and Facility Managers, EPA reference number 402-F-91-102, December 1991.	Metal Building Insulation products do not promote mold growth when tested in accordance with ASTM C1338 and /or UL 181. See individual product data sheets for details.

Note: No individual material enables a credit point to be taken within LEED® because each category is dependent on the aggregate of all materials and their proportionate relationship to the total dollar cost of all materials.

**Figure 1 - Owens Corning® Metal Building® Insulation Plant Locations**



To view other Owens Corning® products that help contribute to LEED® certification please visit [sustainability.owenscorning.com](http://sustainability.owenscorning.com)



OWENS CORNING INSULATING SYSTEMS, LLC  
 ONE OWENS CORNING PARKWAY  
 TOLEDO, OHIO, 43659  
 1-800-GET-PINK®  
[www.owenscorning.com](http://www.owenscorning.com)