

LEED v4 Includes Credits for Cradle to Cradle Certified^{CM}

With the recent approval of LEED v4, Cradle to Cradle Certified products can contribute to LEED projects in new ways.

By Stacy Glass, Institute Executive in Residence for the Built Environment

Cradle to Cradle Certified is increasingly becoming a quick reference for consumers and specifiers looking for quality, sustainable products

The current (LEED 2009) and previous versions of the U.S. Green Building Council's (USGBC) LEED rating system did not specifically include credits for Cradle to Cradle Certified products. However, a Credit Interpretation Ruling in 2007 determined that projects *can* earn an Innovation in Design credit if 2.5% of the materials (by cost) in a project design are Cradle to Cradle Certified^{CM}. Better still, with the upcoming launch of the new LEED v4, Cradle to Cradle Certified^{CM} products will be written into the main LEED program, contributing to a Materials & Resources credit. LEED v4 was approved by the USGBC membership in July 2013 and will be rolled out at November's Greenbuild in Philadelphia.

Substantially reworked, the [Materials & Resources](#) section of LEED v4 is different from LEED 2009 in that it applies lifecycle thinking at the whole-building and product level. Proposed credits reward projects for reusing as much material as possible and optimizing design to use less material overall. LEED 2009 credits were based on materials' individual attributes, such as recycled content. This approach only tells part of the story; a product may have above-average performance on a single attribute but far lower than average performance on others. The LEED v4 approach paints a more complete picture of materials and products, enabling project teams to make better-informed decisions that will have greater overall benefit for the environment, human health, and resource recovery.



The main [credit](#) that addresses Cradle to Cradle in LEED v4 - New Construction is Materials & Resources Credit 4, *Building Disclosure and Optimization—Material Ingredients*. This credit, worth up to 2 points, encourages project teams to choose products whose chemical ingredients are inventoried using an accepted methodology and to select products verified to minimize the use and generation of harmful substances.

Cradle to Cradle Certified^{CM} is listed as a path to compliance in Options 1 and 2 of the credit and may be eligible for Option 3 as the credit language further develops.

Option 1, Materials Ingredient Reporting, rewards project teams for selecting **products whose chemical ingredients are inventoried** using an accepted methodology. Understanding a product's chemical composition down to the 100 ppm is a necessary first step in working toward chemical optimization. Surprisingly, many manufacturers—due to complicated supply chain issues—are not fully aware of all of the chemicals in their products. This credit will provide encouragement for manufacturers to engage in the process. Option 1 awards a point to projects with at least 20 permanently installed products that meet at least one of a list of criteria. One of these criteria is Cradle to Cradle certification. The product must be certified “Cradle to Cradle v2 Basic level or higher or Cradle to Cradle v3 Bronze level or higher” to be eligible. **All products currently certified at these levels will contribute to the credit.** This credit recognizes the rigor required to complete the Bill of Materials and chemical inventory that form the basis of the Cradle to Cradle Certified's material health assessment.

Option 2, Material Ingredient Optimization, goes beyond knowledge of ingredients and rewards project teams for selecting products verified to **minimize the use and generation of harmful substances**. This point encourages use of products whose chemical composition has been assessed and optimized. To achieve the credit, projects must include optimized products comprising at least 25% of the total cost of permanently installed products. **Cradle to Cradle v3 Silver** certified products are valued at **100% of cost**, recognizing that they contain neither Cradle to Cradle banned list chemicals nor substances considered carcinogens, mutagens, or reproductive toxins. **Cradle to Cradle v2 and v3 Gold and Platinum products are valued at 150% of cost**, recognizing that these products' chemicals have been fully optimized.

While Cradle to Cradle Certified^{CM} is a [multi-attribute assessment](#), these credits focus on the material health aspect of the program. For this reason, **LEED will accept products that have achieved the material health scores outlined above but that may have a lower overall certification level.** For example, when looking at a certification scorecard, if the Material Health score is Gold but the Renewable Energy score is Bronze, the overall product would be rated Bronze. However, based on the Material Health score, the product would be eligible to contribute to both points outlined above and would be valued at 150% of cost in Option 2.

 CRADLE TO CRADLE CERTIFIED ^{CM} PRODUCT SCORECARD					
BRONZE					
QUALITY CATEGORY	BASIC	BRONZE	SILVER	GOLD	PLATINUM
 MATERIAL HEALTH				✓	
 MATERIAL REUTILIZATION			✓		
 RENEWABLE ENERGY & CARBON MANAGEMENT		✓			
 WATER STEWARDSHIP			✓		
 SOCIAL FAIRNESS				✓	
OVERALL CERTIFICATION LEVEL		✓			

Currently, Cradle to Cradle Certifications are listed in the Institute's online product registry by their overall certification level. The Institute is redesigning its database to include product's scorecard for manufacturers that opt to post this information. The new registry, expected to launch in November 2013, will be searchable by product type, manufacturer, quality category (e.g. material health) score, overall score, and more. The registry will also share information with Pharos and GreenWizard to help project teams using those tools easily identify Certified products.

With sustainable design becoming synonymous with human health and performance, it shouldn't have to be the purview of an architect to scrutinize every ingredient of every material for consistency with sustainability goals. With a Cradle to Cradle Certified mark and scorecard, architects and specifiers can know at-a-glance that:

- A product's recyclability and safety for human and environmental health have been externally verified;
- An expert assessment of toxicity hazards of all product ingredients throughout the supply chain has been made down to 100 ppm (0.01 percent)
- A continuous improvement path has been defined for optimizing product design and manufacturing processes.

