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Consolideck® ColorHard LEED Product Information

Consolideck® ColorHard is a concentrated colorant designed for addition to Consolideck® LS. The resulting solution is a water-carried, penetrating translucent color dye for concrete and decorative concrete floors.

LEED Credit Contributing Categories: The Consolideck® floor hardening and decorative polishing system contributes to a number of LEED categories. See the attached *Consolideck LEED Guide* for additional information.

LEED EQ Credit Conformance

LEED NC 2.2 IEQ Credit 4.2 and LEED 2009 IEQ Credit 4.3: Low-Emitting Materials references South Coast Air Quality Management District (SCAQMD) Rule 1113 in effect on January 1, 2004. Consolideck ColorHard is classified as a colorant and not subject to Rule 1113. Consolideck® LS would be classified as a tint base and is compliant with Rule 1113 in the Waterproofing Concrete/Masonry category.

PROSOCO certifies that Consolideck® LS tinted with Consolideck® ColorHard has a maximum VOC content of 100 g/L when field diluted as directed in product literature and complies with Rule 1113.

Manufacturing Location

Lawrence, Kansas

Recycled Content

Consolideck® Colorhard is manufactured with no post-consumer materials content.

Date of Generation: October 19, 2009

Certification by:

Dwayne Fuhlhage, Regulatory Affairs Director



Consolideck LEED Guide

by
Paul Grahovac, LEED AP
PROSOCO, Inc.

LEED New Construction & Major Renovation 2.2 Credits with Consolideck products

Requirements are listed in **Bold**, and they are followed by corresponding Consolideck features.

1. Sustainable Sites Prerequisite 1: Construction Activity Pollution Prevention

The Consolideck lithium silicate densification products facilitate compliance with LEED-referenced EPA pollution prevention requirements, because unlike other silicate densifiers, they do not require generation of large amounts of wastewater.

2. Energy & Atmosphere Prerequisite 2: Minimum Energy Performance Required

Design the building envelope, HVAC, lighting, and other systems to maximize energy performance.

Consolideck floors reflect light, and reduce lighting requirements.

Energy from solar rays streaming in from under roof overhangs during the heating season is absorbed into the floor's thermal mass when the reflected light is trapped by windows and converted to heat energy and also through direct absorption into the floor.

3. Energy & Atmosphere Credit 1: Optimize Energy Performance

Achieve increasing levels of energy performance above the baseline in the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.

Consolideck floors reflect light, and reduce lighting requirements.

Energy from solar rays streaming in from under roof overhangs during the heating season is absorbed into the floor's thermal mass when the reflected light is trapped by windows and converted to heat energy and also through direct absorption into the floor.

4. Materials & Resources Credits 5.1 and 5.2: Regional Materials: 10%, 20% Extracted, Processed & Manufactured Regionally

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% (based on cost) of the total materials value.

This calculation requires dividing the cost of the less-than-500-mile materials by the cost of the more-than-500-mile materials to determine the less-than-500-mile percentage. Floor-covering materials coming from more than 500 miles away decrease the less-than-500-mile percentage. Consolideck floors keep such floor-covering materials out of the equation and increase the less-than-500-mile percentage.

5. Environmental Quality Credit 3.1: Construction Indoor Air Quality Management Plan: During Construction

Sequence the installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile and gypsum wallboard.

Consolideck floors avoid contamination, because unlike carpet, they are not absorptive.

6. Environmental Quality Credit 3.2: Construction IAQ Management Plan: Before Occupancy

Demonstrate that the contaminant maximum concentrations listed below are not exceeded. [Formaldehyde, particulates, VOC, 4-Phenylcyclohexene]

Consolideck floors do not contribute to these contamination levels.

7. Environmental Quality Credit 4.1: Low-Emitting Materials: Adhesives & Sealants

Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.

**Indoor Carpet Adhesives
Carpet Pad Adhesives
Wood Flooring Adhesives
Rubber Floor Adhesives
Subfloor Adhesives
Ceramic Tile Adhesives
VCT & Asphalt Adhesives**

Consolideck floors eliminate the need for all these adhesives.

8. Environmental Quality Credit 4.2: Low-Emitting Materials: Paints & Coatings

Clear wood finishes, floor coatings, stains, and shellacs applied to interior elements: Do not exceed the VOC content limits established in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.

Consolideck floor products comply with SCAQMD requirements.

9. Innovation & Design Process Credit 1–1.4: Innovation in Design

Concrete floors without floor coverings have been the subject of a Credit Ruling by the US Green Building Council. Excerpts are below. Although the credit was not awarded in the specific case, it is clear that if the environmental benefits are adequately quantified, the credit is available. Contact PROSOCO for quantification of environmental benefits.

Innovative Design Credit Ruling Request 6-16-06 (excerpts).

“Avoid floor coverings. Over 95% of the floor area will be either durable concrete or terrazzo masonry floors sealed and protected by low or non-VOC coatings. ...’naked architecture’ design approach will reduce the cost of cleaning the building and the cost of periodic refurbishing interior surfaces and finishes.”

Innovative Design Credit Ruling 7-10-06 (excerpts).

While some of the resultant impacts are commendable, the approach needs refinement. To warrant an innovation credit, quantifiable environmental benefit must be demonstrated through a comprehensive effort.

The overall design approach and the list of 9 design elements (of which only 6 are cited as being the target) represents design strategies but do not necessarily lead to quantifiable environmental benefits beyond what is already awarded in existing LEED credits. Though the cost saving strategies are applauded, they do not necessarily represent environmental achievement. The strategy of minimizing the use of construction materials may qualify for an innovation point if the reduction can be quantified and the applicant can demonstrate that an intentional, comprehensive effort was made throughout the project design to reduce construction materials.