

# USGBC LEED<sup>®</sup> CI 2009

## What is LEED<sup>®</sup>?

Leadership in Energy and Environmental Design [LEED] is a consensus-based program developed by the U.S. Green Building Council to define and document a standard that improves environmental and economic performance of commercial buildings using established and/or advanced industry principles, practices, materials and standards. It is a voluntary performance-oriented system where points are earned for satisfying the criteria.

To earn certification, a building project must meet certain prerequisites and performance benchmarks ["credits"] within each category. Although USGBC does not certify, promote, or endorse products of individual companies, products do play a role and can help projects with point achievement.

The choice of Mirage Floors can help contribute to fulfilling the requirements of each credit.

## Mirage, a commitment to Sustainable Building

From the very beginning, Mirage's corporate values and strategies have been geared toward sustainable development, even though the term itself was still largely unknown. Mirage is worried about the planet and its riches, want to contribute to community's economic development, and is more concerned than ever with securing the best possible quality of life for fellow citizens today and tomorrow.

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**LEED for Commercial Interiors** is the green benchmark for the tenant improvement market. It is the recognized system for certifying high-performance green interiors that are healthy, productive places to work; are less costly to operate and maintain; and have a reduced environmental footprint. LEED for Commercial Interiors gives the power to make sustainable choices to tenants and designers, who do not always have control over whole building operations.

USGBC LEED® CI 2009 Rating System				
Categories		Prerequisites	Credits	Points
SS	Sustainable Sites	1	3	21
WE	Water Efficiency	0	1	11
EA	Energy & Atmosphere	3	4	37
MR	Materials & Resources	1	7	14
IEQ	Indoor Environmental Quality	2	8	17
ID	Innovation and Design Process	0	2	6
RP	Regional Priority	0	1	4
<b>Total</b>		<b>7</b>	<b>26</b>	<b>110</b>

Mirage Lock Floors Contribution to LEED® CI 2009		
Categories		Potential Contribution
SS	Sustainable Sites	0 point
WE	Water Efficiency	0 point
EA	Energy & Atmosphere	0 point
MR	Materials & Resources	<b>5 points</b>
IEQ	Indoor Environmental Quality	0 point
ID	Innovation and Design Process	<b>3 points</b>
RP	Regional Priority	<b>4 points</b>
<b>Total</b>		<b>Up to 12 points</b>

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## Mirage Lock Floors Contribution to USGBC LEED® CI 2009

Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Lock Floors Contribution
MR 4	Recycled Content	1-2	Direct	<p>Use materials, including furniture and furnishings, with recycled content such that the sum of postconsumer recycled content plus 1/2 of the preconsumer content constitutes at least <b>10% (1 point) or 20% (2 points)</b>, based on cost of the total value of the materials in the project.</p> <p>The recycled content value of a material or furnishing is determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.</p>	<p><b>Mirage Lock Floors</b> can contribute to this credit, as they contain between <b>61.56% and 63.96%</b> of <b>preconsumer recycled content</b> (the HDF used contains pre-consumer recycled wood fibres).</p> <p>This result has been calculated considering total weight of <b>Mirage's Lock</b> components that contain recycled content.</p>
MR 5	Regional Materials	1-2	Direct	<p><b>Option 1 (1 point):</b> Use a minimum of <b>20% of the combined value</b> of construction Division 12 (Furniture) materials and products that are manufactured regionally within a radius of <b>500 miles</b>.</p> <p><b>Option 2 (2 points):</b> Meet the requirements for option 1.</p> <p>Use a minimum of <b>10% of the combined value</b> of construction Division 12 (furniture) materials and products <b>extracted, harvested or recovered</b>, as well as manufactured, within 500 miles of the project.</p>	<p>Depending on <b>Mirage's</b> providers and the project's location, <b>Mirage Lock Floors</b> could contribute if the wood used satisfies the regional requirements of the credit (particularly for Eastern Canada provinces).</p> <p>Compliance percentage must be approved for a specific project. This percentage will be calculated on the overall weight of the product's components, according to the source of supply of <b>Mirage's</b> chosen suppliers.</p> <p>The harvesting site of the materials needs to be confirmed for each project, according to <b>Mirage</b> providers.</p> <p><b>Mirage's plants are located in Saint-Georges, Quebec.</b></p>

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Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Lock Floors Contribution
MR 7	Certified Wood	1	Direct	When using new wood-based products and materials, use a minimum of <b>50%</b> that are certified in accordance with <b>Forest Stewardship Council's (FSC)</b> principles and criteria. Division 12 (furniture) material value is included on the determination of the certified wood content.	<p><b>Mirage Lock Floors</b> made of <b>FSC certified Maple and Red Oak</b> wood species are complying with the requirements and contribute to this credit.</p> <p><b>FSC Certificate No: SW-COC-002199.</b></p> <p>Percentage of certified wood in the <b>Mirage Lock Floors</b> is <b>15%</b> for <b>Maple and Red Oak</b> species.</p> <p>This result is calculated on the overall weight of the product's wood components vs total weight of FSC certified wood.</p> <p>In a LEED® project, <b>Mirage</b> can give the exact percentage of FSC wood in its product</p>
IEQ 3.2	Construction IAQ Management Plan: Before Occupancy	1	Indirect	<p>Develop an IAQ management plan and implement it after all finishes have been installed and the building has been completely cleaned before occupancy.</p> <ul style="list-style-type: none"> <li>- Option A: Flush-Out</li> <li>- <b>Option B: Air Testing</b></li> </ul>	<p><b>Mirage Lock Floors</b> compliance with the requirements of this credit is uncertain if <b>Option 2</b> (Air testing) is used for projects. Finishes and adhesives are compliant with VOC limits, but the <b>HDF contains added urea-formaldehyde</b>. It is the professional's responsibility to consider this fact in a global design perspective for each project.</p>

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## Mirage Lock Floors Contribution to USGBC LEED® CI 2009

Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Lock Floors Contribution
IEQ 4.1	Low-Emitting Materials: Adhesives and Sealants	Not applicable	Direct	All adhesives, sealants and sealant primers used on the interior of the building (i.e., inboard side of the weatherproofing system and applied on-site) must comply with <b>South Coast Air Quality Management District (SCAQMD) Rule No. 1168</b> Volatile Organic Compound (VOC) limits. Wood flooring adhesives VOC limit is 100 g/L, since January 2005.	All adhesives used for <b>Mirage Lock Floors</b> are complying with the VOC content <b>limits of South Coast Air Quality Management District (SCAQMD) Rule No. 1168</b> (less than 100 g/L, January 2005). VOC are between <b>0 g/L and 3.7 g/L</b> . However, adhesives for <b>Mirage's</b> products are applied at the plant and not on site. They are therefore excluded from this credit's requirements. Moreover, <b>Mirage</b> is considering the same VOC limits for adhesives even if they are applied at the plant, reducing the emissions inside of project buildings, another good practice of <b>Mirage</b> .
IEQ 4.2	Low-Emitting Materials: Paints and Coatings	Not applicable	Direct	Paints and coatings used on the interior of the building (i.e., inboard side of the weatherproofing system an applied on-site) must comply with the following criteria as applicable to the project scope: Clear wood finishes, floor coatings, stains, primers, sealers and shellacs applied to interior elements must not exceed the VOC content limits established in <b>South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings</b> , effective January 1, 2004.	All sealers and clear wood finishes used for <b>Mirage Lock Floors</b> are complying with the VOC content limits of South Coast Air Quality Management District (SCAQMD) <b>Rule No. 1113</b> (275 g/L, July 2007). VOC are between <b>0.2 and 6.1 g/L</b> . However, sealers and finishes for <b>Mirage's</b> products are applied at the plant and not on site. They are therefore excluded from this credit's requirements. Moreover, <b>Mirage</b> is considering the same VOC limits for sealers and finishes even if they are applied at the plant, reducing the emissions inside of project buildings, another good practice of <b>Mirage</b> .

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Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Lock Floors Contribution
IEQ 4.3	Low-Emitting Materials: Flooring Systems	0	Direct	<p>All flooring must comply to one or the other following options:</p> <p><b>Option 1:</b> All hard surfaces flooring must meet the requirements of the <b>Floorscore</b> standard (current as of the date of this rating system, or more stringent version) as shown with testing by an independent third party.</p> <p>Concrete, wood, bamboo, and cork finishes such as sealer, stain and finish must meet the requirements of <b>South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings</b>, effective January 1, 2004.</p> <p><b>Option 2:</b> All flooring products must meet the testing of the California Department of Public Health Standard Practice for the testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.</p>	<p><b>Mirage Lock Floors don't respect</b> all the requirements of this credit, as they are not FloorScore certified and have not been tested for tryouts.</p>
IEQ 4.4	Low-Emitting Materials: Paints and Coatings	0	Direct	<p>Composite wood and agrifibre products used on the interior of the building (i.e., inboard side of the weatherproofing system and applied on-site) must contain <b>no added urea-formaldehyde resins</b>.</p> <p>Laminate adhesives used to fabricate on-site and shop-applied composite wood and agrifibre assemblies must not contain added urea-formaldehyde resins.</p>	<p><b>Mirage Lock Floors don't comply</b> with the requirements of this credit because the HDF used contains <b>added urea-formaldehyde resin</b>.</p>

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Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Lock Floors Contribution
ID 1	Innovation in Design Path 2	1-3	Direct	<p>An exemplary performance point can be awarded to projects:</p> <ul style="list-style-type: none"> <li>- attaining <b>30% of recycled content</b> for <b>MR 4</b> credit.</li> <li>- attaining <b>40% of regional material</b> for <b>MR 5</b> credit.</li> <li>- attaining <b>95% of FSC</b> certified wood for the <b>MR 7</b> credit.</li> </ul>	<p><b>Mirage Lock Floors</b> can contribute to achieving a <b>30%</b> recycled content and a <b>40%</b> regional material exemplary performance, depending on <b>Mirage's</b> providers and the projects location.</p> <p>Depending on the project's design, <b>Mirage</b> may contribute to exemplary performance strategies beyond MR 7 credit requirements, being <b>95%</b> of <b>FSC-certified wood</b> in the project.</p>
RP 1	Regional Priority	1-4	Direct/ Indirect	<p>Earn <b>1 to 4 of the 6 Regional Priority</b> credits identified by the <b>USGBC Regional councils and chapters</b> for their importance.</p>	<p>Please refer to the Advantages and Aspects to Consider section of the Regional Priority credit.</p> <p>For a list of applicable credits, please refer on the USGBC website <a href="http://www.usgbc.org">www.usgbc.org</a>.</p>
<b>TOTAL</b>		<b>12</b>	<p><b>Mirage Lock Floors can contribute to a total of twelve (12) possible points for a LEED® CI 2009 project.</b></p>		