

USGBC LEED[®] NC 2009

What is LEED[®]?

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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The LEED for New Construction Rating System is designed to guide and distinguish high-performance commercial and institutional projects, including office buildings, high-rise residential buildings, government buildings, recreational facilities, manufacturing plants and laboratories.

USGBC LEED® NC 2009 Rating System				
Categories		Prerequisites	Credits	Points
SS	Sustainable Sites	1	3	26
WE	Water Efficiency	0	1	10
EA	Energy & Atmosphere	3	4	35
MR	Materials & Resources	1	7	14
IEQ	Indoor Environmental Quality	2	8	15
ID	Innovation and Design Process	0	2	6
RP	Regional Priority	0	1	4
Total		7	26	110

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

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Mirage Lock Floors Contribution to USGBC LEED® NC 2009

Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Lock Floors Contribution
MR 4	Recycled Content	1-2	Direct	<p>Use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 of the preconsumer content constitute at least 10% (1 point) or 20% (2 points) based on cost, of the total value of the materials in the project.</p> <p>The recycled content value of a material assembly 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>Mirage Lock Floors can contribute to this credit, as they contain between 61.56% and 63.96% of pre-consumer recycled content (the HDF used contains pre-consumer recycled wood fibres).</p> <p>This result has been calculated considering total weight of Mirage's Lock components that contain recycled content.</p>
MR 5	Regional Materials	1-2	Direct	<p>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% or 20%, based on cost, of the total materials value. If only a fraction of a product or material is extracted, harvested, or recovered and manufactured locally, then only that percentage (by weight) must contribute to the regional value. The minimum percentage regional material for each point threshold is 10% for 1 point and 20% for 2 points.</p>	<p>Depending on Mirage's providers and the project's location, Mirage Lock Floors could contribute if the components used satisfy the regional requirements of the credit (particularly for Eastern Canada provinces).</p> <p>Compliance percentage must be validated, as well as transportation mode 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 Mirage's chosen suppliers.</p> <p>Mirage's plants are located in Saint-Georges, Quebec.</p>

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Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Lock Floors Contribution
MR 7	Certified Wood	1	Direct	<p>Use a minimum of 50% (based on cost) of wood-based materials and products that are certified in accordance with the Forest Stewardship Council's (FSC) Principles and Criteria, for wood building components.</p> <p>These components include at a minimum structural framing and general dimensional framing, flooring, sub-flooring, wood doors and finishes.</p>	<p>Mirage Lock Floors made of FSC-certified Maple and Red Oak wood species are complying with the requirements and contribute to this credit.</p> <p>FSC Certificate No: SW-COC-002199</p> <p>Percentage of certified wood in the Mirage Lock Floors is 15% for Maple and Red Oak 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, Mirage can give the exact percentage of FSC wood in its product.</p>
IEQ 3.2	Construction IAQ Management Plan: Before Occupancy	0	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"> - Option 1: Flush out - Option 2: Air testing 	<p>Mirage Lock Floors compliance with the requirements of this credit is uncertain if Option 2 (Air testing) is used for projects.</p> <p>Finishes and adhesives are complying with the VOC content limits, but the HDF contains added urea-formaldehyde.</p> <p>It is the professional's responsibility to consider this fact in a global design perspective for each project.</p>

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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 South Coast Air Quality Management District (SCAQMD) Rule No. 1168 Volatile Organic Compound (VOC) limits. Wood flooring adhesives VOC limit is 100 g/L, since January 2005.	All adhesives used for Mirage Lock Floors are complying with the VOC content limits of South Coast Air Quality Management District (SCAQMD) Rule No. 1168 (less than 100 g/L, January 2005). VOC are between 0 g/L and 3.7 g/L . However, adhesives for Mirage's products are applied at the plant and not on site. They are therefore excluded from this credit's requirements. Moreover, Mirage 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 Mirage .
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, and shellacs applied to interior elements must not exceed the VOC content limits established in South Coast Management District (SCAMD) Rule 1113, Architectural Coatings , effective on January 1 2004.	All sealers and clear wood finishes used for Mirage Lock Floors are complying with the VOC content limits of South Coast Air Quality Management District (SCAQMD) Rule No. 1113 (275 g/L, July 2007). VOC are between 0.2 and 6.1 g/L . However, sealers and finishes for Mirage's products are applied at the plant and not on site. They are therefore excluded from this credit's requirements. Moreover, Mirage 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 Mirage .

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IEQ 4.3	Low-Emitting Materials: Flooring Systems	0	Direct	<p>All flooring must comply to one or the other following options:</p> <p>Option 1: All hard surface flooring covered by the FloorScore standard must be certified as compliant with the standard (current as of the date of this rating system, or more stringent version) by an independent third-party. All adhesives and sealants must comply with the Volatile organic compounds (VOC) limits of the South Coast Air Quality Management District (SCAQMD) Rule #1168.</p> <p>Option 2: All flooring products installed in the building interior must meet the testing and product requirements 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>Mirage Lock Floors do not contribute to this credit because they are not certified FloorScore and have not been tested for tryouts.</p>
IEQ 4.4	Low-Emitting Materials: Composite Wood and Agrifiber Products	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) shall contain no added urea-formaldehyde resins.</p> <p>Laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifibre assemblies must not contain added urea-formaldehyde resins.</p>	<p>Mirage Lock Floors don't comply with the requirements of this credit because the HDF used contains added urea-formaldehyde resin.</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"> - attaining 30% of recycled content for MR 4 credit. - attaining 40% of Regional Material for MR 5 credit. - attaining 95% of FSC certified wood for the MR 7 credit. 	<p>Mirage Lock Floors can contribute to achieving a 30% recycled content and a 40% regional material exemplary performance, depending on Mirage's providers and the projects location.</p> <p>Depending on the project's design, Mirage may contribute to exemplary performance strategies beyond MR 7 credit requirements, being 95% of FSC-certified wood in the project.</p>
RP 1	Regional Priority	1-4	Direct/ Indirect	<p>Earn 1 to 4 of the 6 Regional Priority credits identified by the USGBC Regional councils and chapters 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 www.usgbc.org.</p>
Total		12	<p>Mirage Lock Floors can contribute to a total of twelve (12) possible points for a LEED® NC 2009 project.</p>		