

LEED[®] Canada-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 Canada-NC 2009** rating system applies to new construction and major renovations of commercial and institutional buildings, i.e., buildings regulated by Part 3 of the National Building Code. It also applies to retail, mid- and high-rise multi-unit residential buildings (MURBs), public assembly buildings, manufacturing plants, and other types of buildings.

LEED [®] Canada-NC 2009 Rating System				
Categories		Prerequisites	Credits	Points
SS	Sustainable Sites	1	8	26
WE	Water Efficiency	1	3	10
EA	Energy & Atmosphere	3	6	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	2	4
Total		8	36	110

LEED [®] Canada-NC 2009		Mirage Engineered
Categories		Potential Contribution
SS	Sustainable Sites	0 point
WE	Water Efficiency	0 point
EA	Energy & Atmosphere	0 point
MR	Materials & Resources	3 points
IEQ	Indoor Environmental Quality	2 points
ID	Innovation and Design Process	3 points
RP	Regional Priority	3 points
Total		Up to 11 points

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Mirage Engineered Floors Contribution to LEED[®] Canada-NC 2009

Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Engineered Floors Contribution
MR 5	Regional Materials	1-2	Direct	<p>Use building materials or products that have been extracted, harvested, recovered and processed within 500 miles (800 km) (2,400 km if shipped by rail or water) of the final manufacturing site.</p> <p>Demonstrate that the final manufacturing site is within 500 miles (800 km) (2,400 km if shipped by rail or water) of the project site for these products.</p> <p>If only a fraction of a product or material is extracted, harvested, recovered, processed and manufactured locally, then only that percentage (by weight) must contribute to the regional value. Minimum percentage required is 20% (1 point) or 30% (2 points).</p>	<p>Depending on Mirage's providers and the project's location, Mirage Engineered Floors could contribute if the components used satisfy the regional requirements of the credit (particularly for Eastern Canada provinces).</p> <p>Mirage's manufacturers are located in Saint-Georges, Quebec. The harvesting site of the materials needs to be confirmed for each project, according to Mirage's providers.</p>

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Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Engineered 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 Engineered Floors made of FSC certified Maple, Yellow Birch, Red Oak, White Oak, American Cherry, American Walnut and Hickory 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 Engineered Floors is between 29% and 41% for depending on the species selected.</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	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"> - Option 1: Flush out - Option 2: Air testing 	<p>Mirage encourages, through its choice of components for its products, the reduction of uncontrolled emissions outside of the project.</p> <p>According to BOA-FRANC's emission tests, Mirage Engineered Floors should contribute to the compliance with the requirements of this credit if Option 2 (Air Testing) is used because there is no added urea-formaldehyde in this product.</p>

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Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Engineered 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 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 Engineered 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 0 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 and 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 , rules in effect on January 1 2004.	All sealers and clear wood finishes used for Mirage Engineered 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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Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Engineered 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>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 Engineered 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	1	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. 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 Engineered Floors can contribute to this credit: the plywood used contains a compliant phenol-formaldehyde resin.</p> <p>Moreover, the adhesives used contain no added urea-formaldehyde.</p>

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Credits	Sustainable Strategies	Potential Points	Credit Relevance	Credits Requirements	Mirage Engineered 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 40% of Regional Material for MR 5 credit. - attaining 95% of FSC certified wood for the MR 7 credit. 	<p>Mirage Engineered Floors can contribute to achieve 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 2	Regional Priority	1-3	Direct/Indirect	<p>Up to 3 points for Regional Priority Credit 2 may be proposed for LEED Canada for New Construction and Major Renovations 2009 and Core and Shell Development 2009. The Regional Priority credit is intended to allow adding point emphasis to recognize one OR more issues that have additional regional environmental importance.</p> <p>To achieve a Regional Priority credit, the applicant must identify LEED credits which have additional regional environmental importance. A project must achieve the base credit and then propose that credit as a Regional Priority credit.</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 to the CaGBC website www.cagbc.org, under the LEED[®] tools section for the LEED[®] NC 2009 and LEED[®] CS 2009 evaluation systems.</p>
Total		11	Mirage Engineered Floors can contribute to a total of eleven (11) possible points for a LEED[®] Canada-NC 2009 project.		