



4506 52nd Ave S.E.
 Calgary, Alberta T2C 4N7
 Toll Free: (800) 640-3709
 Phone: (403) 236-1333
 Fax: (403) 236-1373
 Email: Goldray@goldrayindustries.com

This document describes the ways in which decorative glass products manufactured by Goldray Industries Ltd. are consistent with the intent of the LEED Rating System. The information has been developed using general or typical information on Goldray glass products to allow our customers easier access to new construction or renovation projects through the use of decorative glass as a building material. Although individual building products do not in themselves constitute conformance to the LEED criteria, depending on the amount and type of glass used in a project, this versatile material has great potential to help achieve LEED credits.

CREDIT DESCRIPTION	INTENT	DECORATIVE GLASS CONTRIBUTION	POSSIBLE APPLICATIONS
Energy & Atmosphere – EA Credit 1: Optimize Energy Performance	Achieve increasing levels of energy performance above the baseline to reduce environmental and economic impacts associated with excessive energy use. Depending on the percentage improvement of energy performance, this credit is worth between one and ten points towards LEED certification.	<ul style="list-style-type: none"> • Reduce the requirement for electric light by utilizing natural or existing light as an alternate to electric light. • Add decoration to control the light being introduced into the space. • Use Low E or other types of solar control glass on the exterior to increase natural light, but reduce undesirable thermal effects 	Decorative Glass used as: <ul style="list-style-type: none"> • Sunshades • Operable louvers • Incorporated into insulated units with a Low E lite • Atria • Clerestories • Skylights • Glass walking bridges • Interior partition walls • Glass flooring and stairways

CREDIT DESCRIPTION	INTENT	DECORATIVE GLASS CONTRIBUTION	POSSIBLE APPLICATIONS
<p>Materials & Resources: LEED Credits MR Credit 4.1: Recycled Content: 10% (post-consumer + ½ pre-consumer), MR Credit 4.2: Recycled Content: 20% (post-consumer + ½ pre-consumer).</p>	<p>Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.</p>	<ul style="list-style-type: none"> • Although float glass manufacturers use 20% recycled materials in their manufacturing process, for the purpose of the LEED Credit, this is considered reclaimed rather than recycled material and is specifically excluded for credit. • Incorporate decorative glass into framing systems that are made with a high percentage of recycled metal • Some types of decorative glass are recyclable at the end of their useful life if not contaminated with glazing materials 	<p>Incorporate Decorative Glass into:</p> <ul style="list-style-type: none"> • Modular (moveable and deconstructable) interior wall systems • Modular flooring systems • Exterior glazing • Skylights

CREDIT DESCRIPTION	INTENT	DECORATIVE GLASS CONTRIBUTION	POSSIBLE APPLICATIONS
<p>Indoor Environmental Quality: LEED Credit EQ Credit 8.1: Daylight & Views: Daylight for 75% of spaces, EQ Credit 8.2: Daylight & Views: Daylight for 90% of spaces</p>	<p>Provide for the building occupants a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.</p>	<ul style="list-style-type: none"> • Use glass to provide the connection between indoor occupants and the outdoors with the added benefits of low maintenance products and superior sound control. • When planning acoustical separation, laminated glass outperforms many other materials. Adding a decorative component allows the product to fit the overall design of the space. • Interior sunshading via both interior and exterior glazing • Projecting natural light deeper into the building's interior to help coordinate space planning with an effective daylighting strategy • Colors, textures and patterns applied to glass allow the designer to bring the effective of nature into the building's interior increasing overall satisfaction of occupants with their work environment. 	<p>Incorporate Decorative Glass into:</p> <ul style="list-style-type: none"> • The design for indoor green spaces such as atria or skylights • Interior sunshading i.e. interior partitions, light shelves, light redirecting glazing • Glass stairways and flooring • Ceiling tiles • Glass railings and balustrades • Furniture components • Exterior glazing

CREDIT DESCRIPTION	INTENT	DECORATIVE GLASS CONTRIBUTION	POSSIBLE APPLICATIONS
<p>Innovation and Design Process: LEED Credit ID Credit 1-1.4: Innovation in Design</p>	<p>To provide design teams and projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically address by the LEED Green Building Rating System.</p>	<ul style="list-style-type: none"> • Modular building products used in flooring and wall systems can be reconfigured easily to enhance long-term flexibility. • Decorative glass outperforms other materials such as drywall or millwork in terms of durability, maintenance and longevity and has the potential to provide a higher level of energy performance. 	<p>Incorporate decorative glass into:</p> <ul style="list-style-type: none"> • Modular (moveable and deconstructable) interior wall systems • Modular flooring systems • Interior partitions • Skylights • Sunshades • Operable louvers • Insulated units with a Low E lite • Atria • Clerestories • Skylights • Glass railings and balustrades

This document is intended to provide general information only. Goldray does not make any warranty, either expressly or implied, as to the suitability or completeness of the information contained herein.

For a more in depth look at how decorative glass can be an important component of sustainable design, please see the long form of this information package.