



# CERTIFICATION INFORMATION

## LEED Potential of Arcadia Flexible Moldings: Cured Polyurethane

### INTRODUCTION:

The LEED Green Building Rating Systems reward project teams with points toward certification based on a building's environmental and energy performance. While LEED does not assign points for products, the materials and building product that a manufacturer provides have a very important role in achieving LEED certification. The following is an assessment of how Arcadia Flexible Molding products from ARNCO Performance Polymers can assist project teams with certification through the LEED for New Construction and Major Renovations v. 2.2 rating system (LEED-NC).

### SUSTAINABLE ATTRIBUTES OF ARCADIA CURED POLYURETHANE:

The Cured Polyurethane Arcadia Flexible Molding are "greener" than polyester resin based flexible molding and are much more durable than traditional wood trim molding. It can be cut with a saw, caulked, and painted with water-based paints to complement nearly any interior color scheme. The sustainable attributes of Arcadia Flexible Moldings can be distinguished from most other flexible trim molding products by the following:

**Zero-VOCs:** Arcadia Flexible Moldings are 100% solids containing Zero-VOCs (SCAQMD Rule 443.1) and provide a reduced impact on the environment compared to resin-based products such as polyester trim, which can expose building occupants to VOC emissions. Arcadia Flexible Molding products reduce VOCs for factory workers, warehouse and distributorship staff, as well as installers and contractors. **Reduced Green House Gas Emissions:** Arcadia Flexible Moldings do not contribute to green house gas omissions. By comparison, polyester is not 100% solids and it emits styrene as well as other harmful off-gassing emissions.

**Durability:** A polyurethane based building product also represents a more durable material with a high potential for salvaging during deconstruction for either new use or reuse.

**Indoor Air Quality:** The Arcadia Polyurethane Flexible Moldings replace traditional wood moldings, which support rot, pests and fungal growth. Because polyurethane flexible molding does not provide a food source for insects, there is a potential for fewer applications of pesticides with Arcadia Flexible Moldings. All of these factors can assist with improved indoor air quality.

**Regional Materials:** Arcadia has facilities in California and North Carolina. Building projects within a 500 mile radius of the following zip codes can be considered regional materials: 28732 & 92627.



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Category	Credit	Description	Award Point	LEED Requirements	Arcadia Flexible Moldings
MATERIALS AND RESOURCES (MR)	MR Credit 1.3	Building Reuse: Maintain 50% of Interior	1	The LEED rating system rewards project teams for utilizing reused building products.	Flexible Moldings as part of the casework or a cabinetry system can be included in the overall calculation for determining the percentage of reused materials in order to comply with MR Credit 1.3.
	MR Credit 2.1	Construction Waste Management: Divert 50% from Disposal	1	LEED requires 50% of non-structural elements reused in order to gain a point in this credit category with a second point available through reuse of 75% of the products. The calculation is completed either by weight or volume of the materials to be reused.	Arcadia Flexible Moldings are strong, reusable and the moldings can be redirected to another construction site for installation in another building, donated to a charity, or it can be salvaged during deconstruction and resold.
	MR Credit 2.2	Construction Waste Management Divert 75% from Disposal	1		
	MR Credit 3.1	Materials Reuse 5%	1	This LEED Credit requires salvaged, refurbished or reused materials to be selected by the project team such that the sum of the materials constitute at least 5%, based on cost, of the total value of the materials on the project. A second point is available for using 10% reused materials on the project.	The durability and strength of the Arcadia Flexible Moldings means project teams can reuse the Urethane product in projects where reclaimed building materials are a priority.
	MR Credit 3.2	Materials Reuse 10%	1		
	Credit 5.1	Regional Materials: 10% Extracted, Processed & Manufactured Regionally	1	The product ingredients must be extracted, processed and manufactured all within a 500 mile radius. The regional materials percentage is determined by the cost of the total material value. If only a fraction of a product or material is extracted/harvested/re-covered and manufactured locally, then only that percentage (by weight) can contribute to the regional value.	Arcadia produces the Flexible Molding products in Southern California (Zip Code: 28732) and in North Carolina (Zip Code: 92627). Products shipped within this region have less embodied energy than product from outside the region.
	Credit 5.2	Regional Materials: 20% Extracted, Processed & Manufactured Regionally	1		



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Indoor Environmental Quality (EQ)	EQ Credit	Construction IAQ Management Plan Before Occupancy	1	Perform an Indoor Air Quality (IAQ) Management Plan with a building flush-out, before or after occupancy; or conduct air quality testing after construction and prior to occupancy according to EPA standards. The VOC levels cannot exceed 500 micrograms per cubic meter.	The Zero-VOC emissions from the Arcadia Flexible Moldings can assist building teams with compliance with this LEED credit by reducing indoor air quality problems during the construction and renovation process for the comfort and well-being of installers and occupants.
INNOVATION IN DESIGN (ID)	ID Credit 1	Resource Reuse Program	1	The facility manager must implement a program for reintroducing surplus building products in future projects. Products to be reused include caulk and sealants, adhesives, plywood and lumber, paints and lacquers, roofing materials and fasteners. The submittals include a narrative of the program and an inventory list.	The Arcadia Flexible Moldings are durable and have similar characteristics of wood trim, the pieces left over after cutting could be enter into the inventory of a resource reuse program. Also if trim is removed during demolition it may be reused on future project.
	ID Credit 2	Post-Occupancy Survey	1	This innovation credit for determining occupant comfort over time has been accepted by the USGBC in the past. The requirement is that the building team submit a survey showing overall building user satisfaction be measured for thermal comfort, general satisfaction, layout, furnishings, air quality, lighting, acoustic quality and cleanliness. The survey is typically conducted 18 months after occupancy.	Arcadia Flexible Moldings contain Zero-VOCs and can assist building teams with compliance with this credit category because of its contribution to better indoor air quality.

While the LEED-NC credit sections described in this paper suggest how applications of Arcadia Flexible Moldings can assist project teams with earning LEED points, the LEED applicant obviously bears the ultimate responsibility for determining the product attributes that will assist them with LEED certification. The final decision regarding LEED certification relies heavily on the work and judgment of the LEED Accredited Professional (LEED AP) retained for a specific project and ultimately on the judging panel at USGBC. The architect, designer, contractor, or other member of the building team must document a building's sustainable design, construction, and performance data and make the data available to the LEED AP and the Council.



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