

# Shades of Sustainability

A commitment to a healthy environment



# Solar shading for sustainable buildings

## A commitment far beyond current LEED® guidelines

### Shades of sustainability

For decades, manual MechoShades® and motorized ElectroShades® have been integral elements in offices, hospitals, libraries, classrooms, museums, retail outlets, and various eco-efficient buildings.

Historically and long before current fashion, MechoShade Systems has maintained a commitment to a healthy environment by designing and producing innovative shading systems that assist buildings toward increasing energy efficiency.

Architects and designers have incorporated our products into structures that have been certified by the U.S. Green Building Council's rating system: Leadership in Energy and Environmental Design (LEED®). Projects have included hand-operated MechoShades® as well as fully automated ElectroShades® that can be computer controlled by innovative SolarTrac® software.



Dell Children's Medical Center of Central Texas, Austin, TX. LEED® Platinum.

### Energy efficiency

MechoShade Systems' products can potentially contribute toward credits for meeting and optimizing the energy performance of a building under the LEED® rating system. SolarTrac® is our proprietary WindowManagement® daylighting system that automatically adjusts the position of shades incrementally throughout a building.

#### The system automatically controls roller shades so that they:

- have the potential to deliver significant reductions in energy-peak demands over a project's lifetime.
- adjust to various positions on the window, which are appropriate to the sun's position in the sky, the microclimatic sky conditions, the direction of the solar ray, and the sun's intensity.
- maximize the daylighting while providing a view to the outside when direct solar penetration occurs.

#### The smart technology:

- minimizes solar heat gain and reduces annoying glare.
- operates in tandem with other manufacturer's electric lighting controls, which turn on, off, or are dimmed based on the amount of light that the shades allow into the space.
- saves energy by maximizing the amount of daylight in a space, thereby minimizing the need for electric light.

The SolarTrac® system was installed in The New York Times Headquarters. The participants in the project, which provided valuable insights, were:

- The New York Times Company
- Lawrence Berkeley National Laboratory
- publicly funded agencies
- MechoShade Systems, Inc.



PNC Firstside Center, PNC Financial Services Group, Pittsburgh, PA. LEED® Silver.

## Independent laboratory tests for antifungal and antimicrobial characteristics

### Indoor environmental quality

MechoShade Systems' shades have improved the indoor environmental quality of buildings by reducing the problems of solar heat gain and glare, and by maximizing daylight to create a more comfortable environment. And because our roller shades are visually transparent, occupants can benefit from views to the outside.

Our products support the sustainable design principles of indoor-air quality by including shade cloths that pass stringent indoor-air-quality guidelines. Our ThermoVeil®, EcoVeil®, and EuroVeil® Series Shade cloths have been tested and shown to be antifungal and antimicrobial. The stringent tests by independent laboratories, which the shade cloths have passed, include:

- ASTM D 5116-97
- ASTM D 6670-01
- ASTM G-21-96
- ASTM G-22-80
- The World Health Organization (WHO)
- The Blue Angel Program of the German Federal Environmental Agency (Umweltbundesamt)
- The State of Washington (SOW)
- The U.S. Occupational Safety and Health Administration (OSHA)

## First complete solar-shading system to contribute to an Innovation in Design point

### First to contribute to a LEED® point

Architects, building developers, owners, and renovators can now use MechoShade Systems' manual Mecho®/5 solar-shading system with EcoVeil® shade cloth to contribute to a LEED® Innovation in Design point. The point can help buildings achieve LEED® Green Building Certification at Silver, Gold, or Platinum levels. Mecho®/5 with our EcoVeil® shade cloth is the first complete solar-shading system to contribute to an Innovation in Design point. The environmentally friendly system qualified when the U.S. Green Building Council included Cradle to Cradle Certified™ building products in the Innovation in Design category.

MechoShade Systems' products can also assist toward achieving a credit for regionally manufactured materials and products (under the LEED® NC v2.2/MR Credit 5.1). The provision demands that a project be located within a 500-mile radius of one of our manufacturing facilities. MechoShade Systems' state-of-the-art manufacturing plants are located in Edison, New Jersey, and Phoenix, Arizona. At times, many of our aluminum extrusions can be manufactured and drop-shipped from one of several regional facilities.



**User-controlled window coverings to reduce the sun's brightness and solar heat gain**

**LEED® credits**

The LEED® NC v2.2/EQ Credit 8.1 provides points when there are views and daylight in 75% of the regularly occupied areas of a building. Permanent internal-shading devices are mentioned as a potential strategy to consider.

While daylighting is a critical element of sustainable design, uncontrolled natural daylight often leads to excessive surface brightness and contrast ratios, debilitating glare, and unwanted solar-heat gain. MechoShade Systems supports the intent of the EQ Credit 8.1 by offering a selection of user-controlled, interior-solar-shading devices that will significantly reduce undesirable levels of brightness and solar heat gain.

MechoShade Systems also supports LEED® credits by providing shading devices that include various densities of visually transparent shade cloths. The materials allow building occupants to maintain a view to the outside while shading the windows when solar penetration is at its highest.

**Partnerships with architects, designers, end users, and independent agencies to foster and unveil future solutions**

**Eco-innovation**

EcoVeil®—a non-PVC shade cloth with planet-respecting properties—is similar to our ThermoVeil® shade cloth but is constructed with a TPO (thermoplastic olefin) coating over a core of TPO fibers that is termed by MBDC as a technical nutrient, being that it can be reclaimed and reproduced as a shade cloth or other material again and again.

MBDC is the product and process design firm founded by William McDonough and Dr. Michael Braungart. They are the authors of the acclaimed book, *Cradle to Cradle: Remaking the Way We Make Things*.

**EcoVeil® shade cloth is:**

- reclaimable.
- recyclable.
- the world's first Cradle to Cradle Certified™ shade cloth.
- the material selected by *Environmental Building News* as one of the Top-10 Green Building Products.
- an element in the Cradle to Cradle Certified™ manual Mecho®/5 shading system.
- intended to be reclaimed and recycled at the end of a useful life and then to become reborn as a first-quality shade cloth.

**Past-and-present pledge**

Today, MechoShade Systems' commitment to the environment stands stronger than ever.

We continue to work hand-in-hand with architects, designers, end users, and independent agencies to design and produce sustainable, cutting-edge, high-end solar-shading solutions that satisfy present-day challenges and serve future opportunities.

**Warranty**

MechoShade Systems is also committed to resource efficiency. The manual Mecho®/5 shade system has an unparalleled life expectancy. Mecho®/5 shades with ThermoVeil®, EuroVeil®, or EuroTwill™ shade cloths carry a non-depreciating limited lifetime warranty of 25 years. The shades can be reclaimed and reused to qualify for a contribution toward credits in the current versions of LEED® NC and LEED® CI rating systems such as:

- LEED® NC v2.2/ MR Credit 1.3
- LEED® CI v2.0/ MR Credit 1.2 and 1.3, MR Credit 3.1 and 3.2

