

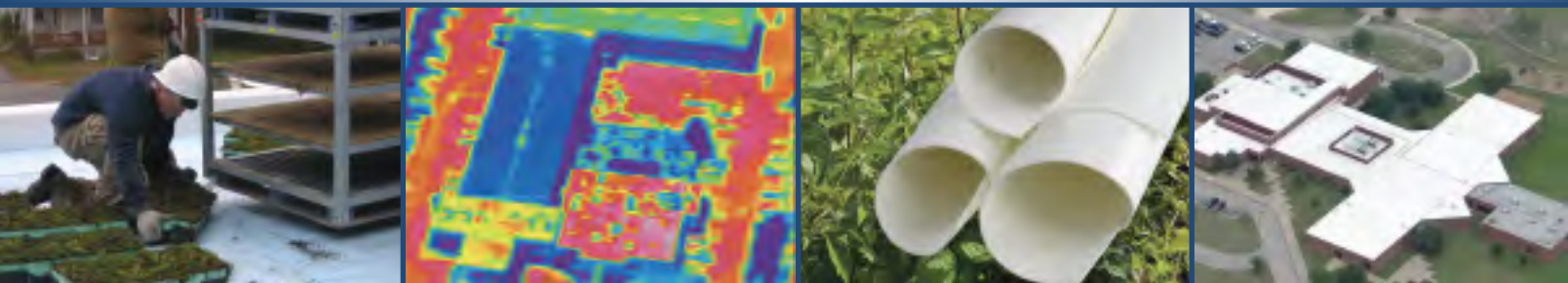


**PROTECT
YOUR ROOF.**

**PRESERVE
YOUR
ENVIRONMENT.**

**WHITE
GREEN**

**The White Duro-Last® Cool Zone®
Roofing System Is The Best Green
Choice For Your Building.**





The Duro-Last® Cool Zone® Roofing System and Rooftop Sustainability

The bright white Duro-Last® Cool Zone® membrane has an established history of providing environmental benefits to commercial, institutional, and industrial buildings throughout North America.

The Cool Zone roofing system is an ENERGY STAR® labeled product, with an initial reflectivity of 87.5%, based on ENERGY STAR testing criteria. Reflectivity is the percentage of the sun's energy reflected by a surface. Another important measurement of membrane performance is emittance – the percentage of absorbed energy that a material can radiate away. The Cool Zone system's total emittance is measured at 95%. These reflectivity and emittance figures are among the highest in the industry.

The resulting energy savings and positive impact on reducing the urban heat island effect are just the beginning. Duro-Last has long been on the forefront with respect to producing environmentally-friendly roofing systems. Read on to learn how the white Cool Zone PVC membrane is the best green choice for your facility in many ways, proving Duro-Last's leadership on the sustainable buildings front.



The Cool Zone white PVC membrane delivers “greenness” on a number of levels, a testament to Duro-Last’s long-term commitment to rooftop sustainability.



Green

...as in environmental responsibility

...as in lower life-cycle costs

...as in underneath your vegetative roof

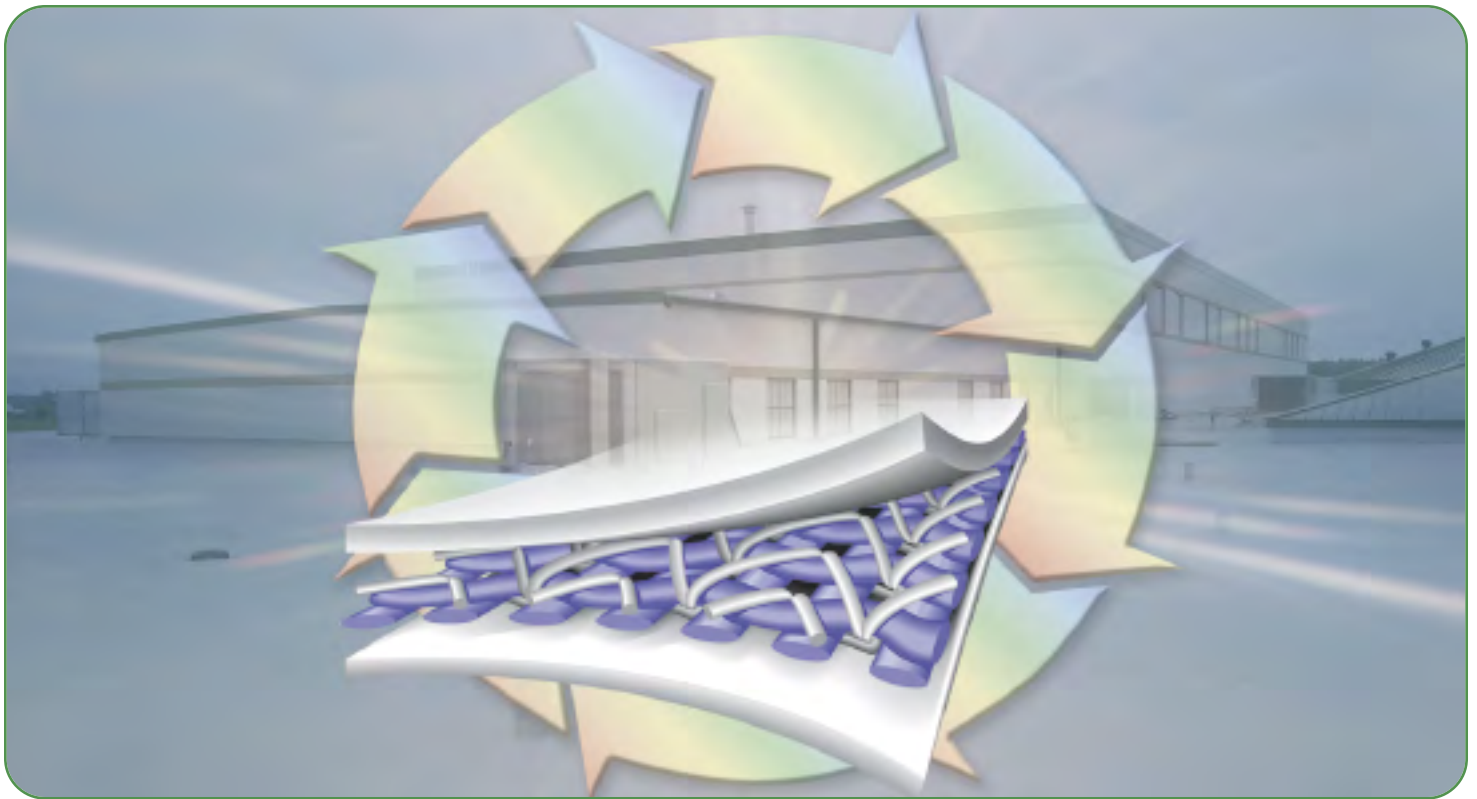




Green, as in environmental responsibility

The Duro-Last Cool Zone roofing system has an excellent environmental reputation. From lowering a building's energy consumption to helping facilities obtain LEED® credits to reducing the urban heat island effect, the Cool Zone system is a leading sustainable building product.

- Our tightly-controlled manufacturing process ensures that scrap generated during the manufacturing process is recycled back into roofing membrane or other construction materials. In fact, Duro-Last recycles scrap from numerous companies, encouraging them to join us as environmental stewards. Plus, Duro-Last has implemented a roof recycling program for PVC membranes that are at the end of their useful roofing lives. This keeps waste out of landfills and reduces the need for virgin feedstock used in a number of construction products – including new roofing membranes.
- A growing emphasis on reducing a building's carbon "footprint" is creating emerging carbon trading markets. A reduction in energy consumption provided by the Cool Zone membrane may provide economic benefits for building owners in this new arena.
- The term "sustainability" implies long-term performance, and many Duro-Last roofs have been performing effectively for more than 20 years. The Cool Zone roofing membrane is resistant to chemicals, fire, and high winds, and this proven durability means that a Cool Zone roof will last longer in harsh environments than many other systems.
- PVC, which is among the most studied building materials, is as environmentally-friendly as other building products, according to the US Green Building Council, and may be better than some materials that have been less scrutinized.
- The Cool Zone membrane is lightweight, so it can often be installed over existing roofing systems, eliminating costly and landfilling tear-offs. It also requires less fuel to transport to the job site than other, heavier materials.



Green, as in the money you save by reducing your roofing system's life-cycle costs

Energy costs continue to escalate with no end in sight, and this trend is largely responsible for driving a significant market shift toward energy-efficient roofing systems.

- Cool roofs are effective in virtually all climates. Building owners in some areas have seen a 40% reduction in energy consumption during peak times of the year after installing reflective roofing systems.
- In non-conditioned space, reflective roofing can reduce workspace heat, improving working conditions and increasing employee productivity.
- The Cool Zone membrane reflects damaging ultraviolet and infrared rays of the sun that are absorbed by other systems. Penetrating UV and IR rays can degrade the effectiveness of insulation and other building components — often leading to higher operating and maintenance costs.
- When placed on rooftops with reflective membranes, HVAC units have a smaller “degree difference” of the air they need to cool because the ambient temperature is lower than on dark-colored roof surfaces. This decreases the cooling load as well as unit wear and corresponding maintenance costs. A Cool Zone roof may also enable the use of smaller, lower-cost HVAC units.

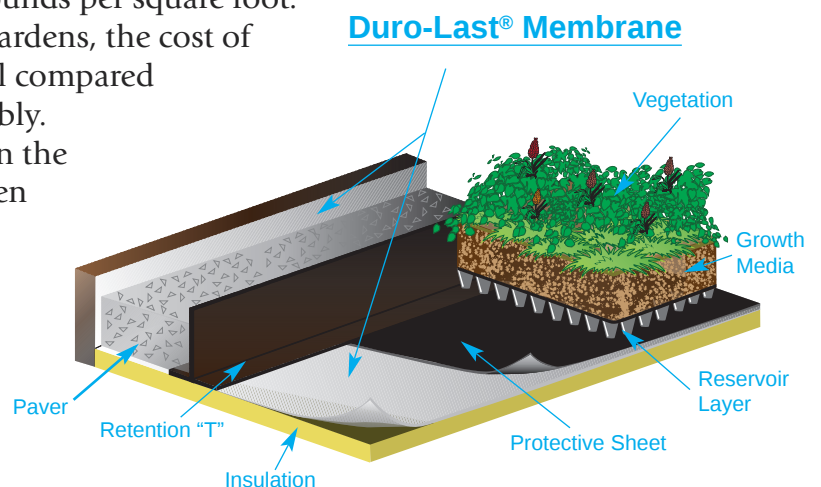




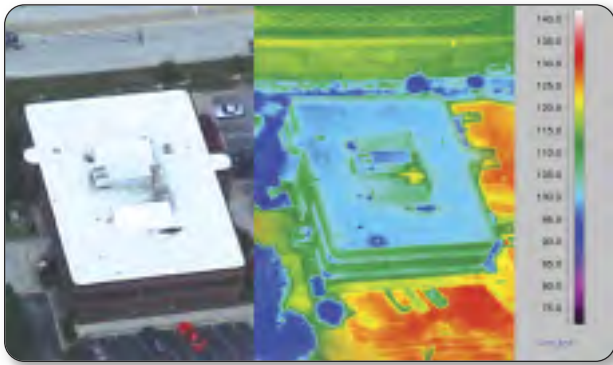
Green, as in the best system to be installed under your rooftop garden

A growing trend in the commercial, industrial, and institutional buildings market is turning “forgotten” roofs into usable space. Photovoltaic and paver systems are gaining a foothold in this area, as are vegetative roofs.

- All rooftop garden systems require a reliable waterproofing membrane beneath the growing medium and plant life.
- The Cool Zone roofing system is ideal for this application. Duro-Last’s prefabrication technology (every roof is manufactured in-house to fit building dimensions precisely, eliminating up to 85% of rooftop seaming) means less potential for future leaks – a major consideration when the membrane will be covered with a rooftop garden.
- Because the Cool Zone membrane is lightweight (less than ½ pound per square foot), it will only marginally add to the overall weight of the complete vegetative roofing system, which can weigh up to 30 pounds per square foot.
- For businesses investing in rooftop gardens, the cost of the Duro-Last component is minimal compared with that of the entire roofing assembly. Installing a new Cool Zone system on the roof deck prior to installing the garden system is a sensible investment.
- The Cool Zone roofing system is also solar ready – an easy-to-install, reliable, watertight application for a variety of photovoltaic technologies.



More Reflectivity



On hot summer days, the temperature on dark surfaces – including asphalt parking lots and roofs – can reach 180 degrees or higher, straining HVAC units and increasing energy use. The highly-reflective Duro-Last Cool Zone membrane can dramatically reduce roof surface temperatures, lowering cooling costs and keeping non-conditioned space more comfortable and productive for workers. A Cool Zone roof also helps lessen the urban heat island effect.

More Recyclability



PVC is inherently recyclable – perhaps more so than any other building material. PVC roof recycling is well-established in Europe, and growing in the United States. Duro-Last's program enables contractors to return "used" roofing systems for recycling into commercial flooring and other construction materials by Duro-Last sister company, Oscoda Plastics®, Inc. In recent years, Oscoda Plastics has annually recycled over 6,000 tons of roof membrane and post-consumer PVC scrap.

More Safety



During the last 35 years, multiple scientific studies have confirmed that vinyl production and handling in the United States is very safe, and that finished vinyl products, including PVC membranes, pose no risk to human health. Among other environmental applications, landfill liners made from PVC help prevent contaminants from leaching into groundwater. When considering building sustainability, PVC roofing systems have a decidedly positive impact on the environment.

More Options



The growing awareness of building sustainability issues in recent years has driven an interest in rooftop garden, solar, and paver systems. The precision-fabricated Cool Zone system is the ideal roofing membrane to install first, whether these systems are mounted on or applied to the roof surface. Duro-Last has developed solutions to address these new applications, including a specification and warranty for "covered roof" assemblies.



The Duro-Last Cool Zone roofing system can help buildings obtain credits under the U.S. Green Building Council's LEED® (Leadership in Energy and Environmental Design) and LEED-EB (Existing Buildings) programs that promote sustainable building management and construction practices.

For LEED: The Duro-Last Cool Zone roofing system itself can directly achieve one point and, in combination with other design criteria, can help with obtaining as many as 22 points toward the minimum LEED certification of 40–49 points.



LEED Credit Category	Duro-Last Attribute
Sustainable Sites Credit 7.2: Heat Island Effect: Roof	Solar Reflectance Index = 110
Energy and Atmosphere Prerequisite 2: Minimum Energy Performance	Cool roofing reduces building's cooling load
Energy and Atmosphere Credit 1: Optimize Energy Performance	Cool roofing reduces building's cooling load
Materials and Resources Credits 1.1 and 1.2: Building Re-use of Walls, Floors and Roof	Roof longevity extends the life-cycle of existing structure and HVAC equipment
Materials and Resources Credits 2.1 and 2.2: Construction Waste Management	Custom prefabrication virtually eliminates job site scrap
Materials and Resources Credits 4.1 and 4.2: Recycled Content	Pre-consumer scrap is recycled into walkpads; post-consumer program recycles roofs into flooring
Materials and Resources Credits 5.1 and 5.2: Regional Materials	Strategically-located facilities are within 500 miles shipping distance to many states
Indoor Environmental Quality Credit 2: Increased Ventilation	Two-way vent system keeps negative air pressures and condensation in check
Indoor Environmental Quality Credit 7.1: Thermal Comfort	Cool roofing helps keep building cooler, making HVAC more effective

For LEED-EB: The Cool Zone roofing system itself can directly achieve one point and, in combination with other design criteria, can help with obtaining as many as five points toward the minimum LEED-EB certification of 34–42 points.



LEED-EB Credit Category	Duro-Last Attribute
Sustainable Sites Credit 7.2: Heat Island Reduction: Roof	Solar Reflectance Index = 110
Energy and Atmosphere Prerequisite 2: Minimum Energy Efficiency Performance	Cool roofing reduces building's cooling load
Energy and Atmosphere Credit 1: Optimize Energy Efficiency Performance	Cool roofing reduces building's cooling load
Materials and Resources Credit 9: Solid Waste Management: Facility Alterations and Additions	Custom prefabrication virtually eliminates job site scrap
Indoor Environmental Quality Credit 1.3: Increased Ventilation	Two-way vent system keeps negative air pressures and condensation in check



Corporate Headquarters

Michigan

525 Morley Drive
Saginaw, Michigan 48601
800-248-0280
Fax: 800-432-9331

Other Manufacturing Locations

Oregon

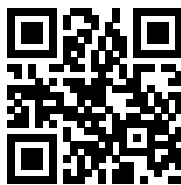
111 N. Valley Drive
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Fax: 888-501-3574

Mississippi

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800-434-3876
Fax: 866-602-4387



The Duro-Last® Cool Zone® roofing system is proudly manufactured in the United States of America.



**WHITE
GREEN**

www.duro-last.com
www.white-equals-green.com



BUSINESS REPLY MAIL

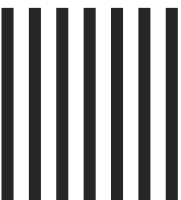
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525 MORLEY DRIVE
SAGINAW MI 48601-9974



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I WOULD LIKE MORE INFORMATION ON THE DURO-LAST® COOL ZONE® ROOFING SYSTEM.

Yes! Please:

- ☐ Send me more literature/free samples of the Cool Zone membrane.
- ☐ Protect the environment. Send me the literature electronically.
- ☐ Set up a free inspection and evaluation of my roof.
- ☐ Call me for an appointment. I have roofing projects coming up.

Contact Name

Company Name

Address

City

State

Zip

Telephone

Fax

E-mail



800-248-0280

www.white-equals-green.com