

CONSTRUCTING  
ENVIRONMENTALLY  
RESPONSIBLE WATERPROOF  
CONCRETE



SMART CONCRETE®



# KRYTON PRODUCTS CAN HELP BUILDINGS EARN VALUABLE LEED POINTS

**Leadership in Energy and Environmental Design (LEED)** certification measures a building's environmental performance. It is one of the most widely used project rating systems for new construction and major renovations. The program is regulated by the US Green Building Council (USGBC).

Kryton's solutions can contribute to achieving valuable LEED points for your building. Here are just a few ways Kryton can help:

## SUSTAINABLE SITES (SS)

**SS Credit Site Development: Protect or Restore Habitat** (Up to 2 points)

Intent: To conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

Kryton can help reduce site disturbance. Less excavation is required because Krystol Internal Membrane (KIM) waterproofing admixture is added directly to the concrete mix. No additional excavation to accommodate the applicators of surface-applied waterproofing membranes.

**SS Credit: Heat Island Reduction** (Up to 2 points)

Intent: To minimize effects on microclimates as well as human and wildlife habitats by reducing heat islands.

Heat island mitigation strategies include adding exterior trees and vegetation as well as green roofs. Kryton can help to waterproof green roofs and suspended slabs.

**SS Credit: Rainwater Management** (up to 3 points)

Intent: To reduce runoff volume and improve water quality by replicating the natural hydrology and water balance of the site. This will be based on historical conditions and undeveloped ecosystems in the region.

Kryton's KIM is commonly used to waterproof concrete storm water runoff cisterns. This Low Impact Development (LID) technique collects water for future use, resulting in both water conservation and reduction of water utility costs.

## MATERIALS & RESOURCES (MR)

**MR Credit: Building Life Cycle Impact Reduction** (Up to 6 points)

Intent: To encourage adaptive reuse and optimize the environmental performance of products and materials.

Kryton's products can repair concrete as part of a renovation. They increase both the durability and service life of the concrete structure.

**MR Credit: Construction and Demolition Waste Management** (Up to 2 points)

Intent: To reduce construction and demolition waste in landfills and incineration facilities by recovering, reusing and recycling materials.

KIM's pulpable paper bags can be added to the concrete plant mixer or truck unopened, eliminating all packaging waste. Concrete with KIM in it can be recycled after demolition. Concrete with surface-applied membranes cannot be recycled after demolition.

## INDOOR ENVIRONMENTAL QUALITY (EQ)

**EQ Credit: Low-Emitting Materials** (Up to 3 points)

Intent: To reduce concentrations of chemical contaminants that can damage air quality, human health, productivity, and the environment.

Kryton's KIM and Krystol T1 Concrete Waterproofing contain no volatile organic compounds (VOC) and can replace VOC emitting paints, sealers and membranes. KIM's pulpable bags can be added to the concrete plant mixer or truck unopened, eliminating all dust as compared to other dry admixtures.

**EQ Credit: Construction Indoor Air Quality Management Plan** (Up to 1 point)

Intent: To promote the well-being of construction workers and building occupants by minimizing indoor air quality problems associated with construction and renovation.

Kryton's Krystol Technology products such as KIM and Krystol T1 Concrete Waterproofing can replace VOC materials and they do not expose workers to VOCs.

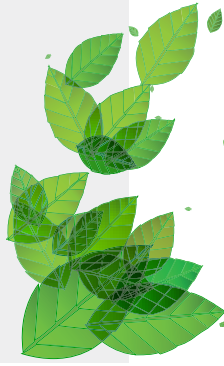
**EQ Credit: Indoor Air Quality Assessment** (Up to 2 points) Intent: To establish better indoor air quality in the building after construction and during occupancy.

Kryton's Krystol Technology products such as KIM and Krystol T1 Concrete Waterproofing are VOC-free and can help meet air quality test requirements.



## INNOVATION AND DESIGN PROCESS

Kryton waterproofing solutions such as KIM can contribute to the Innovation category credits (up to 5 points). KIM frees designers from the design constraints of using a surface-applied membrane. Thus, Kryton solutions can contribute to innovation credits as part of a broader **innovative** design approach.



*Reviewed for accuracy and validation by Edge Consultants. Specialists in LEED, Sustainability, Analysis and Technology Consulting, Edge Consultants are located in Vancouver, Canada.*



## KRYTON'S KRYSTOL CONCRETE WATERPROOFING PRODUCTS PROTECT YOUR INVESTMENT AND THE ENVIRONMENT

- Safe for use with potable water and are certified to NSF/ANSI Standard 61: Drinking Water Components – Health Effects
- Krytol products contain no VOCs
- Eliminates the need for petroleum-based surface-applied membranes which can be harmful to the environment and are non-recyclable
- Less construction waste. KIM's pulpable paper bags can be added to the concrete plant mixer or truck unopened, eliminating all packaging waste
- Concrete containing Krytol products can be recycled after demolition, unlike surface-applied membranes
- Eliminates additional excavation, labor and material resources required for surface-applied membranes
- Smart Concrete waterproofing system does not deteriorate over time, unlike surface-applied membranes



**Krytol Internal Membrane™ (KIM®)**  
WATERPROOFING ADMIXTURE



**Krytol T1® Concrete Waterproofing**  
SURFACE-APPLIED WATERPROOFING



**Krytol® Waterstop System**  
CONSTRUCTION JOINTS & DETAILS



**Krytol® Leak Repair System**  
CONCRETE REPAIR

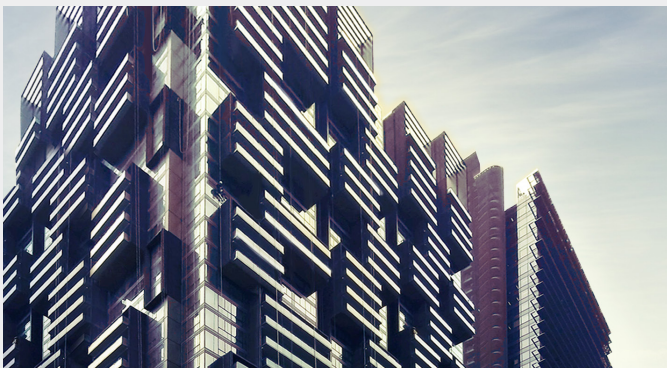


**Krytol Mortar Admixture™ (KMA)**  
WATERPROOFING ADMIXTURE



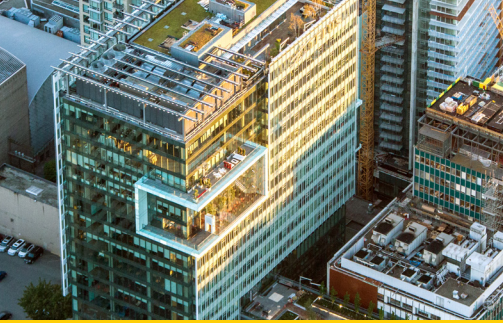
**Krytol Broadcast™**  
SURFACE-APPLIED WATERPROOFING

## PROTECTING GREEN INFRASTRUCTURE



### MARINA ONE, SINGAPORE

The high-density mixed residential and office building complex was designed with a vision of making a “Green Heart” – public green space surrounded by high-rise buildings. The office towers meet the LEED Platinum Pre-certification as a result of their environmentally smart design. Krytol Internal Membrane™ (KIM®) was a key part of that design. KIM was used to waterproof four levels of below grade parking.



TELUS Garden, Vancouver, Canada

**TELUS Garden's** Office tower has received a LEED Platinum certification and is being heralded as one of the greenest buildings in North America. The 24-floor signature office tower in Vancouver, Canada serves as the TELUS Communications National Headquarters. Kryton's Krystol Internal Membrane (KIM) was used in the shotcrete application on all six levels of below grade parking. Kryton's Waterstop System was also used for construction joints, pipe penetrations and control joints in all below grade exterior wall joints, ensuring a watertight foundation to an impeccable building.



TreePeople Center Rainwater Cistern, Los Angeles, USA

TreePeople Center for Community Forestry, is a non-profit organization that provides sustainable solutions to urban ecosystem problems. The center features a 216,000-gallon underground concrete cistern designed to achieve the US Green Building Council's Leadership in Energy and Environmental Design (LEED) Platinum Rating. Conventional waterproofing membranes deteriorate over time, so the center's owners opted to use Kryton's Krystol Internal Membrane (KIM) and the Krystol Waterstop System for joints. By eliminating costly repairs and maintenance, KIM provides worry-free waterproofing for the life of the cistern that is in line with TreePeople's environmental mandate.

In 2011 Kryton was awarded Project of the Year in the GreenSite Awards for their work on the TreePeople cistern.



CityCenter, MGM Resorts Int'l & Dubai World, Las Vegas, USA

**CityCenter** in Las Vegas is the largest privately licensed construction project in the United States. The multi-building development sits atop a shallow aquifer and the entire project is interlinked by a sophisticated underground valet tunnel. Kryton's Krystol T1® Concrete Waterproofing was chosen to waterproof the valet tunnel, elevator pits, swimming pools and all other critical below grade areas. The project aimed to achieve LEED Gold certification from the USGBC, and it succeeded. CityCenter is the first hotel, retail district or residential development in Las Vegas to attain this level of LEED.

Kryton headquarters are in Canada with 7 regional offices in China, India, Mexico, Singapore, UAE, UK and the USA. Our solutions are sold by over 50 distributors worldwide. To find a Kryton distributor nearest you, visit our website: [www.kryton.com](http://www.kryton.com)



*Kryton's Krystol Internal Membrane (KIM) has achieved the Singapore Green Label product certification*



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