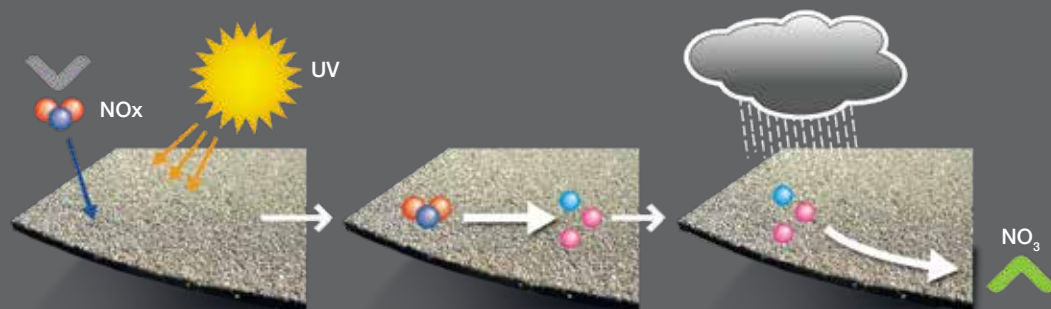


# Eco-Activ® Roof Membranes Featuring Noxite® Depolluting Granules



# With Noxite, any Siplast granule-surfaced sheet can reduce atmospheric pollution.

**The Noxite process –**  
from harmful NOx  
compounds to clean air



## Depolluting Roof Membranes

Of the countless atmospheric pollutants released daily, there is one that you can help reduce simply by choosing the right roof membrane. Nitrous oxides (NOx) are irritating gases that are harmful to health, facilitate the formation of low-level ozone, and increase the greenhouse effect. Neutralizing NOx in the air we breathe can be accelerated with Siplast Eco-Active Roof Membranes surfaced with Noxite Granules.

The pace at which NOx pollutants are increasing, primarily due to transportation and industry, exceeds the pace of natural NOx degradation. Siplast Noxite Granules increase the speed of NOx degradation significantly, transforming harmful molecules into a non-hazardous nitrate salt.

## How does Noxite technology work?

Siplast Eco-Active Roof Membranes are surfaced with roofing granules treated with Noxite.

Noxite, which is based on titanium dioxide (TiO<sub>2</sub>) in its anatase form, is a photocatalyst. A photocatalyst reacts in the presence of UV light. **When sunlight hits an Eco-Active roof, Noxite absorbs UV light and essentially behaves like a photovoltaic cell, generating electrical charges that accelerate the transformation of NOx molecules into harmless molecules.** By-products from the decomposition of NOx molecules are carried away by rainwater. These by-products have no measurable impact on the quality of run-off water.

## How do we know Noxite works?

- Siplast has achieved a UL Environment claim validation for

**Eco-Active Roof Membrane's ability to remove an estimated 417-4,143 g NOx per roofing square over 20 years.**

- A study conducted by the Department of Analytical Chemistry at Munich Technical University confirmed the catalytic effect of Noxite Roofing Granules. Other references include: CSTB Pass' Innovation Final Report: No.2009-016, for Eco-Active Waterproofing, and Characterization of Gas Polluted Phase in Contact of Materials Made by Icopal, CNRS.
- The principle of photocatalysis of titanium dioxide was first demonstrated in the 1970s. Since then, other building products manufacturers have adapted this technology for their products, including concrete and tile. Siplast is the first commercial roofing manufacturer in North America to do so.

## How long does Noxite's depolluting functionality last?

The TiO<sub>2</sub> is not sacrificial. Because the newly-created harmless molecules behave like free radicals and react immediately with another NO or new NO<sub>2</sub>, the photocatalyst is released unchanged. **So, Noxite continues to work throughout the life of the roof membrane.**

## How effective is Noxite?

**Yearly, 200 squares (20,000 square feet) of Eco-Active membrane surfaced with Noxite Granules offset the nitrogen oxide pollution (NOx) produced by more than 50 passenger light vehicles.\*** Offset rates differ by location, due to variances in prevailing atmospheric conditions and UV levels.

\* Based on studies using estimated conditions (sunlight, humidity, and NOx) for Los Angeles, and mileage of the average U.S. household vehicle (11,300 miles).

## What's the performance history of Eco-Active Membranes?

Eco-Active is the designation given to any Siplast cap sheet surfaced with Noxite granules, including time-tested Paradiene 30, Paradiene 40, Parafor 50, and Parafor 30 finish plies. The composition of the sheets is unchanged. So you can be assured of the same high performance waterproofing you have come to expect from Siplast Engineered Roof Membranes.

**All FM Approvals, Underwriters Laboratories Classifications, and regional and local approvals for Siplast cap sheets surfaced with mineral granules apply to Siplast Eco-Active sheets.**



## Siplast

14911 Quorum Drive, Suite 6000  
Dallas, Texas 75254  
O: 469.995.2200  
F: 469.995.2205

## In Canada:

201 Bewicke Ave., Suite 208  
North Vancouver, BC, Canada V7M 3M7  
1.877.233.2338

Customer Service in North America  
1.800.922.8800

[www.siplast.com](http://www.siplast.com)

