



ROOFING

ECO₃

GRANULE SURFACED MEMBRANES



Improving Our Climate

3M™ Smog-reducing Granules



Inspired by the power of the trees, SOPREMA's ECO₃ granule surfaced membranes are a unique collaborative effort between 3M and SOPREMA for low slope roofing. This roofing granule is designed with a specialized photo-catalyst coating applied to the mineral that absorbs nitrogen oxide (NO_x) gases in the atmosphere that are then cleaned and washed away by rainwater. This process reduces the amount of ground level pollutants, decreasing the greenhouse effect and creating healthier communities.



BENEFITS

- Each 500 sq/ft² of ECO₃ membrane has the approximate smog fighting capacity of approximately 3 trees!
- The smog fighting ability of the granule is maintained over the life of the membrane
- ECO₃ granule surfaced membranes contribute to cleaner, healthier communities



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WHAT ARE NITROGEN OXIDES (NO_x)?

Nitrogen oxide gases are harmful and irritating gases formed by the burning of fuels. These gases are emitted by many sources including cars, trucks, power plants and other industrial production processes and then released into the air. These gases react with Volatile Organic Compounds, or VOCs, in the atmosphere and sunlight to create what is commonly known as "smog" or ozone. This ground-level ozone or smog is unhealthy for humans, animals and plants.

HOW DOES THE SMOG REDUCING GRANULE WORK?

The smog reducing granule is coated with a specialized photocatalytic coating. The photocatalyst reacts in the presence of ultraviolet light (sunlight). This photocatalytic reaction absorbs the nitrogen oxides in the atmosphere and accelerates the oxidation process. This oxidation process creates water soluble ions that are washed away by dew or rainwater.

To prove the technology for use in roofing, Lawrence Berkley National Laboratory conducted a study validating the efficacy of the photocatalytic material in reducing smog and contributing towards air purification.

HOW DOES THE SMOG REDUCING GRANULE WORK?

Every 500 sq/ft² of ECO₃ granules surfaced membrane can offset the approximate emissions generated by driving 200 miles per year. This calculation varies depending on sunlight, humidity, and abundance of NO_x in the atmosphere.

Ex: A 20,000 sq/ft² commercial roof surfaced with ECO₃ granule surface membrane has the ability to offset approximately 8,000 miles worth of car emissions yearly. That is the power of 120 trees!

If you have any questions about this product or its installation, please contact your SOPREMA representative.

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