What is Dirtguard® Technology and Why is it Important ?

Maintaining long-term Solar Reflectance is directly related to a products ability to remain clean when exposed to environmental contaminants over extended periods of time.

As a result of ongoing research and development into dirt pick-up resistance for exterior coatings, Astec developed a new technology now registered to Astec as **Dirtguard®** in Australia.

This performance criteria also forms part of (EPA), The Environmental Protection Agency's product qualification specifications for reflective coatings to qualify for the ENERGY STAR® label under its USA programme.

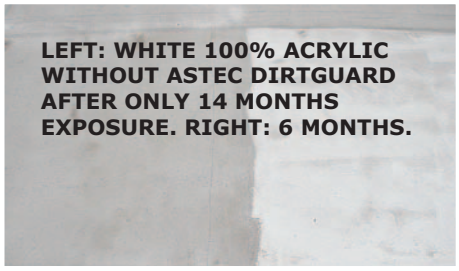
Dirtguard® technology was developed throughout a decade of R&D that was driven by products exported by Astec to Asian regions. In some Asian cities environmental contaminants can deface a coating within months of it's application.

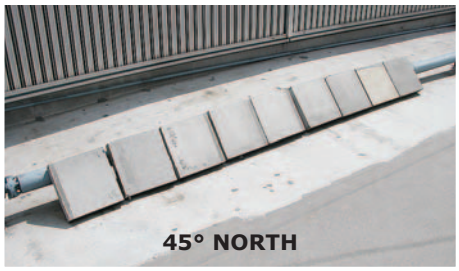
Astec now use Dirtguard® technology in all Energy Star products. The products remain cleaner far longer than conventional coatings, a necessary requirement for maximum retention of their Solar Reflectivity.

Weathering farms in Queensland Australia and Florida America are continuously used by paint companies globally for outdoor exposure testing of paints samples. These farms offer good exposure to high levels of UV and humidity. However, Astec Paints found there was no better location than the harsh environment of Tokyo Central Japan to conduct ongoing tests for dirt pick-up resistance during the development of Astec **Dirtguard®** technology.


ASTEC ROOF TOKYO JAPAN


EXPOSURE CENTRE
TOKYO CENTRAL JAPAN


LEFT: WHITE 100% ACRYLIC WITHOUT ASTEC DIRTGUARD AFTER ONLY 14 MONTHS EXPOSURE. RIGHT: 6 MONTHS.


45° NORTH

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Dirtguard®

Coatings based on Astec **Dirtguard** technology incorporate the latest in surface curing and nano particle technology. The surface of the film cross links around nano particles to provide an extremely tight surface pack ensuring dirt will not become lodged within the cured film.

Special Silicones also form part of Dirtguard technology and provide added durability and high water resistance to the cured film. The silicones used were selected through years of exterior weathering and dirt pick-up resistance trials that were conducted on exposure racks in numerous Asian cities.

The Silicone modification provides excellent block resistance to environmental contaminants and adds strong water repellency for rapid rain water run off that carries dust and contaminants from the roofing surface. These properties develop even under conditions of high humidity.

Coatings based on Astec Dirtguard Technology remain cleaner longer than conventional exterior coatings. They are easily cleaned, retain their aesthetic appeal and provide optimum maintenance of their solar reflectance in harsh environmental and industrial conditions.