

# Milliken® UltraGuard™ Solutions

For improved barrier properties  
in polyethylene cartridges

Polyethylene cartridge enhancement with UltraGuard™ Solutions provides controlled crystallization allowing for enhanced properties.

UltraGuard™ Solutions combine color and additive technologies to form a passive barrier in polyethylene packaging. UltraGuard Solutions cut the transmission of the moisture that passes through the packaging by 30-40%.

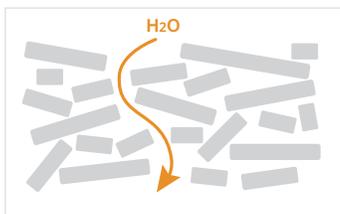
Most high-performance sealants and adhesives are silicone, polyurethane & cyanoacrylates that are moisture cured.

To prevent premature curing, which results in loss of effectiveness, it is important that the cartridges are designed with a material having good moisture barrier properties.

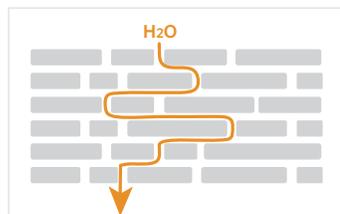
UltraGuard Solutions allow brand owners to commercialize faster drying products by avoiding the use of expensive moisture scavengers. UltraGuard also extends shelf life and may allow for downgauging for a more sustainable packaging solution.



## UltraGuard realigns the PE crystalline structure to create a torturous path



HDPE



HDPE with UltraGuard

Better product quality  
Longer shelf life  
Light weighting opportunities

Please contact your Milliken representative for any additional information.

PLEASE NOTE: As each customer's use of our product may be different, information we provide, including without limitation, recommendations, test results, samples, care/labeling/processing instructions or marketing advice, is provided in good faith but without warranty and without accepting any responsibility/liability. Each customer must test and be responsible for its own specific use, further processing, labeling, marketing, etc. All sales are exclusively subject to our standard terms of sale posted at [www.milliken.com/terms](http://www.milliken.com/terms) (all additional/different terms are rejected) unless explicitly agreed otherwise in a signed writing.

NORTH AMERICA  
Spartanburg, SC, USA  
Tel: 800-910-5592  
Fax: 864-503-2430  
[millichem@milliken.com](mailto:millichem@milliken.com)

EUROPE  
Gent, Belgium  
Tel: 32-9-265-1100  
Fax: 32-9-265-1195  
[eurochem@milliken.com](mailto:eurochem@milliken.com)

LATIN AMERICA  
Sao Paulo, Brazil  
Tel: 55-11-3043-7942  
Fax: 55-11-3043-7096  
[lachem@milliken.com](mailto:lachem@milliken.com)

LATIN AMERICA  
Mexico City, Mexico  
Tel: 52-55-3088 3600  
Fax: 52-55-9000 2643  
[lachem@milliken.com](mailto:lachem@milliken.com)

ASIA  
Singapore  
Tel: 65-6377-0770  
Fax: 65-6377-0990  
[asiachem@milliken.com](mailto:asiachem@milliken.com)

ASIA  
Shanghai  
Tel: 86-21 6145-5555  
Fax: 86-21 6145-5558  
[asiachem@milliken.com](mailto:asiachem@milliken.com)

ASIA  
Pune, India  
Tel: 91.20.6730.7501  
Fax: 91.20.6730.7514  
[asiachem@milliken.com](mailto:asiachem@milliken.com)