

Case Study #4

ADVANCED SUSTAINABLE MICROBIAL CONTROL.

SILVADUR™ Antimicrobial Performs Extremely Well from a Sustainability Perspective.

Our Vision

Dow Microbial Control is fearlessly committed to revolutionizing how the world approaches microbial control.

- + Giving you more sustainable choices
- + Guiding you toward more sustainable technologies
- + Solving your problems at the local level
- + Delivering the right microbial control solution
 - The right technologies
 - Customized strategies
 - Optimized and sustainable

Our Purpose

- + To make sustainability an easy business decision for you, through:
 - Innovative technologies
 - Regulatory insight
 - Local expertise and custom strategies
- + To provide all the data you need to support good decisions
- + To make your processes more efficient
- + Sustainability is a business model; done correctly, you will make your processes more efficient

A Relevant Definition for Sustainable Materials**



Advanced Sustainable Microbial Control Is a Technology That:

| Does its job effectively: | Goes Away: | Does No Harm to: |
|--|---------------------------------|--------------------------------|
| Controls nuisance and harmful microorganisms | Degradable | Workers, products or processes |
| Prevents the growth of nuisance and harmful microorganisms | Non-persistent | Downstream users, consumers |
| Preserves materials and processes | Non-accumulative | The environment |
| | Collected and recycled / reused | Society |
| | Destroyed | |

**** Dow Microbial Control, the world's leading expert in microbial control technologies, has established the best in class standard for defining sustainable microbial control technologies and solutions.**

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Understanding the issue:

- + The need to preserve textiles by keeping them fresh longer by providing protection against unwanted bacteria that can lead to decay and discoloration and unpleasant odors.

Does its job effectively (control / prevent / preserve):

- + SILVADUR[™] Antimicrobial combines the efficacy of silver with an innovative polymeric delivery system.
- + During standard testing, SILVADUR has proven to be highly effective by providing durable antimicrobial protection through 50+ washing cycles.
- + SILVADUR's technology has proved highly effective in protecting fabrics from odor-causing and other nuisance microorganisms.

Superior Lifecycle Profile (recyclable / reusable / life cycle profile):

- + Due to SILVADUR's unique polymer delivery system, silver ions are rapidly incorporated onto the fabric surface. Unlike other silver antimicrobials, including micro and nano-based particle offerings, SILVADUR does not release silver particulates into environment.
- + SILVADUR can be recycled and reused during fabric processing applications due to its water solubility and its inherent stability to light. Because SILVADUR is effective at low usage rates, waste water discharge is minimized and, consequently, so is the load to the environment.
- + SILVADUR helps processing plants reduce their overall raw material purchases and can reduce their usage of energy and water.

Does no harm (environment / favorable toxicology / non-sensitizing / non-irritating):

- + SILVADUR exhibits low risk to the environment: rapid reactivity thus reducing potential risk to aquatic organisms; controlled release, reduces waste during processing.
- + SILVADUR treated articles are non-sensitizing and non-irritating dermatological profile to humans.

SILVADUR antimicrobial has been assessed and approved by The International OEKO-TEX Association as harmless to human health if it is used correctly, according to its operating instructions and product safety standards.



www.silvadur.com | www.dowmicrobialcontrol.com

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