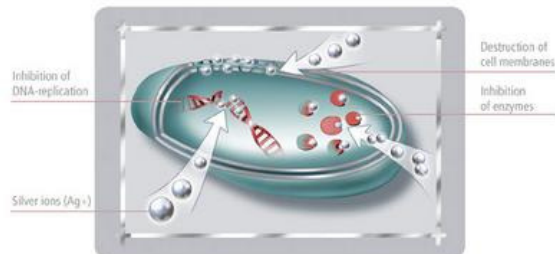


SilverGuard Ag+ silver-based antimicrobial products are being used in a wide range of applications where their high efficacy and ease of use feature very highly.

They are safe to humans and to the environment and this information sheet defines the differences between SilverGuard products and “nanosilver” materials.



### Background

The following article was published on Nov. 27, 2006:

“The U.S. Environmental Protection Agency plans to require environmental safety guarantees from makers of products containing silver nanoparticles.

The tiny particles are used in a wide range of products like shoe liners, food containers and even washing machines to kill bacteria and eliminate odors. Critics say the particles, when released into the environment, can destroy microscopic organisms including beneficial bacteria.”

### The facts

SilverGuard Ag+ silver-based antimicrobial products are NOT based on “nanosilver”.

“Nanosilver” consists of particles typically measuring 25 nm. Particles of these dimensions can easily be transferred from the articles in which they are incorporated into the environment, and therefore could be considered to pose the type of hazard mentioned in the U.S. Environmental Protection Agency article.

SilverGuard products are all based on SILVER ION TECHNOLOGY. The active ingredients have an average particle size of 2 µm. This means that they are 12,500 times as large as nanosilver particles, and become permanently incorporated in various types of inorganic carriers in the surface of treated articles.

SilverGuard products only release silver ions into aqueous systems “on demand” – i.e. in the presence of bacterial species. Any silver ions which are not taken up by bacteria cannot exist due to their high reactivity and very rapidly become complexed by other inorganic ions in the aqueous environment to form insoluble silver compounds.

Please do not hesitate to contact the SilverGuard technical team if you require any further clarification on this or any other matter relating to SilverGuard products.