

**Results from practical applications of AgXX
for decontamination of aqueous solutions**

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Abstract

AgXX is a new antimicrobial contact catalyst. It is a specially structured silver coating that is conditioned and activated by a finishing treatment. Antimicrobial action takes place at or in close contact with the AgXX surface by depolarisation of biological membranes thereby inducing lysis of microbial cells. This allows new solutions for the decontamination of aqueous systems. Functioning as a contact catalyst AgXX works especially well in newly developed reactors, cartridges and filter modules that have been applied in field testing for more than 12 months now. A major focus is the application in lubricants and cooling liquids. Results from these applications generate important new data that are reported in this article. In addition to the efficient antimicrobial action of AgXX a surprising and very effective filtration capacity for adsorption and killing of microorganisms is found. To optimize the filtration effect new special AgXX modules have been designed. Meanwhile numerous machines and tanks with lubricants or aqueous cooling liquids have been protected against microbial contamination. These applications identified many additional advantages of AgXX in comparison to biocides and conventional silver systems. AgXX exhibits a unique stability against the influence of active sulfur compounds and silver complexing agents that inactivate all conventional silver systems. So far, all biocide-resistant microorganisms are efficiently killed by AgXX. Thereby AgXX allows a fundamental change in the strategy for antimicrobial conservation of lubricants. The killing of microorganisms in connection with the cleaning of the system from biomass and other deposits results in a sustainable conservation and microbial decontamination by AgXX.