SEFAR® AntiBac – Minimizes the colonization of micro-organisms/bacteria on filter fabrics in the areas of food, non-food and medicine

Equipping yarn / fabrics with silver

Sefar has developed a special anti-microbial fabric that does not need any coating and is nonetheless highly efficient.

The silver particles integrated in the polymer are a fixed component of the yarn.

This minimizes the breakdown of silver particles through thermal and mechanical stress.

It also achieves a good repository effect.

How silver ions (Ag⁺) in the yarn affect micro-organisms

**Silver (Ag) + water (H₂O) = release of silver ions (Ag⁺)**

- Silver ions (Ag⁺) are released on the surface of the silver.
- Silver ions are toxic for microorganisms (e.g. algae, bacteria, protozoa, spores).
- Silver ions attack the cell membrane or penetrate the cell and destroy it.

The yarn generates a permanent "protective cloak" and inhibits or prevents any microbial or bacterial regrowth.

Anti-microbial function of silver particles

**How are silver ions created?**

Silver particles oxidize on contact with moisture / water and release silver ions Ag⁺.

The positively charged, highly reactive silver ions are responsible for the anti-microbial effect.

**Areas of use for SEFAR® AntiBac fabric**

Due to the reciprocal action between silver and moisture, the main areas of use for this fabric lie in the segments food, non-food and medicine.
Positive aspects of silver additives in technical filter fabric

**General**
- Silver ions are universally effective against 650 types of bacteria
- Long-term release of positively charged silver ions
- Highly effective against various micro-organisms such as: algae, bacteria, protozoa, spores
- Bacteriostatic effect inhibits the multiplication and growth of micro-organisms
- Bactericidal effect blocks the metabolism and directly kills off micro-organisms
- General improvement of hygiene and prevention of odor formation
- Does not irritate skin or eyes, non-allergenic

**Water (potable and process water)**
- The use of additives such as chlorine, anti-algae and flocculants can be reduced or completely discontinued
- Reduces carbonate hardness (calcium and magnesium ions) and the amount of chlorine and lead in water
- Prevents the formation of a biofilm on water
- Minimizes or completely prevents odor formation
- Increases the shelf-life of water in closed circuits or storage systems

**Healthcare**
- Effective against micro-organisms resistant to antibiotics
- Prevents the formation of biofilm on wounds
- Accelerated healing process for skin diseases
- No skin reactions

Quality tested by the Hohenstein Institute

**Anti-microbial test**

**Objective**
Effectiveness of a textile additive for product protection, odor reduction or infection control.

**Test**
Evaluation of the effectiveness of additives containing silver or other biocides on bacteria, mold, yeast and/or viruses.

Methods

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