



# Hanging strap with antibacterial additive

## Application / Challenges

Hanging straps are a simple and comfortable way of helping passengers to stand safely on buses, trams, suburban and underground trains, as well as cable cars. But using hanging straps means touching them with bare hands. Many of us are concerned about using a strap after someone else has touched it.

And even before the beginning of the coronavirus pandemic, more and more passengers were trying to avoid contact with surfaces on public transport. However, not using hanging straps comes at a cost in terms of safety.

What could we do to encourage people to use them again while also taking their concerns seriously?



## Solution and materials

faigle set about finding a solution to this problem and has come up with a new antibacterial design for its hanging straps.

We created the antibacterial effect by adding silver ions that inhibit the spread of harmful bacteria. The effectiveness of the silver ions in our hanging straps has been scientifically proven: testing in accordance with ISO 22196:2011 showed that the straps reduced two common strains of bacteria by more than 99% over a 24-hour period. The addition of silver ions does not cause skin irritation either, making it ideal for use in hanging straps.

Another advantage is that the ions are present throughout the strap material and are not just applied to the surface, so they do not wear off. The ions remain effective throughout the typical service life of the hanging strap.

## Customer benefits

- ✔ Significantly inhibits spread of harmful bacteria
- ✔ Antibacterial effect throughout the typical service life – no reduction due to wear
- ✔ Additive used in both strap and handle
- ✔ No impairment of tried-and-trusted properties such as colour fastness, tensile strength and wear resistance

## Specifications

<b>Material</b>	PAS-PU 98A-H FR AB and PAS-PP GF30 FR AM
<b>Active substance</b>	Silver ions (concentration: 100 mg/kg)
<b>EU Biocidal Products Regulation 528/2012 classification</b>	Treated articles
<b>Nanomaterials-statement</b>	Contains no nanoparticles
<b>Efficacy</b>	Tested in accordance with ISO 22196:2011 Reduction of Escherichia coli by $\geq 99.76\%$ and Staphylococcus aureus by $\geq 99.93\%$ within 24 hours
<b>Skin tolerance</b>	No adverse effect on skin flora