

Applied BioSilver

Technical Data Sheet

Film Features:

Film consisting of a 60micron, transparent, cast PVC containing antimicrobial agents and coated with a pressure-sensitive acrylic adhesive. Intended for antimicrobial protection of surfaces in areas that require a high level of hygiene.

Thickness (microns)	60
Tensile strength (N/25mm)	15 minutes (average)
Elongation at break (%)	100 minutes (average)
Shrinkage 168 hours at 70°C (mm)	< 0.8

Adhesive Properties:

A solvent based, acrylic adhesive with immediate permanent adhesion.

Peel strength test 180 degrees on glass (N/25mm)	
After 20 min of application	15
After 24 hours of application	17
Initial tack (N/25mm)	20
Release (N/25mm)	1.5
Resistance to solvents:	The adhesive is resistant to most chemicals (alcohol, diluted acids, oils)

User Instructions:

- Under normal usage conditions, harmless when in contact with human skin:
 - ◊ No allergenic potential
 - ◊ No irritant potential
- Active compound: Silver ions, <0.3% w/w of the entire product.
- Antimicrobial activity maintained after 365 cleanings with water, alcohol and chlorine bleach (respect the dilution recommended by the manufacturer).
- The film can be cleaned/disinfected by all conventional cleaning methods, using non-abrasive accessories, cleaning products, detergents or products.

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- The disinfection levels achieved are compatible with common usage in the most sensitive areas in terms of infectious risks (surgery wards, immunocompromised wards, neonatology, etc).
- Film not to be applied to areas that will be in direct contact with unpackaged food.
- Suitable for application to regular or irregular surfaces.
- Recommended minimum application temperature: +10°C (+50°F)

Antiviral Activity:

Antiviral activity of the BioSilver surface and non-active surface have been tested under conditions defined by the ISO 21702 (2019) adapted protocol for contact times of 15 and 60 minutes on the human coronavirus HCoV-229E [*HCoV-229E is associated with a range of respiratory symptoms, ranging from the common cold to high-morbidity outcomes such as pneumonia and bronchiolitis*]. Stainless steel was the control for the test.

1. Antiviral activity on the Human coronavirus HCoV-229E strain according to the ISO 21702 standard:

- ◇ 94.99% after a contact time of 15 minutes
- ◇ 99.87% after a contact time of 60 minutes

2. Antibacterial activity on bacteria according to ISO 22196:

Reducing > 99.99% of the following bacteria:

- ◇ Escherichia coli
- ◇ Salmonella
- ◇ Listeria
- ◇ Golden staph
- ◇ Methicillin-resistant Staphylococcus aureus (MRSA)
- ◇ Pseudomonas aeruginosa

3. Applied BioSilver has only been tested so far, on the HCoV-229E strain, as this strain is more readily available. This availability has allowed first tests to be carried out, whilst tests on the COVID-19 strain are pending. According to laboratory tests, HCoV-229E is recognized as a good substitute for SARS-CoV-2 (COVID-19); this also belongs to the same family of viruses.

BioSilver is an anti-microbial film, providing protection against bacteria and viruses.

ISO 21702: measurement of antiviral activity on plastics and other non-porous surfaces

ISO 22196: measurement of antibacterial activity on plastics and other non-porous surfaces