

# How to clean your leather effectively without causing damage

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And protect your customers and employees from Covid-19.

# How to clean leather safely

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Understandably, we continue to receive queries regarding the most effective way to clean leather in a way that protects people from the spread of Covid-19. Leather is inherently more hygienic and easier to maintain than most textiles due to its wipe-clean properties. However, the use of many cleaning products, such as alcohol-based wipes/solutions and disinfectants, will damage leather.

Currently we cannot test the effectiveness of cleaners killing Covid-19 on the surface of the leather however you should look for products carrying EN 1040, EN 1276 and EN 1275 certification.

This document provides our current recommendations and the research we're carrying out to identify the most effective cleaning and anti-viral solutions, for what is likely to be a long-term challenge.





# Definitions

## What does antimicrobial mean?



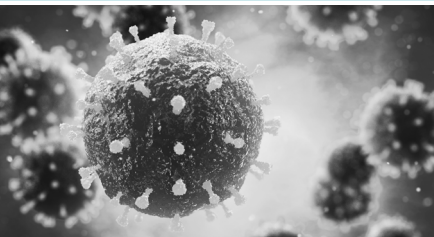
Antimicrobial is used to describe substances which demonstrate the ability to reduce the presence of microbes, such as bacteria and mould. Anything that is ‘antimicrobial’ has an effect on microbes, but the term antimicrobial is not a measure of performance.

## What’s the difference between antimicrobial and antibacterial?

Antimicrobial technology is effective against a wide spectrum of microbes: this includes bacteria, mould, fungi and even viruses. Antibacterial technology, on the other hand, is only effective against bacteria.

## What types of antimicrobial are there?

Many substances can be described as antimicrobial; such as disinfectants, antibiotics and of course antimicrobial additives.  
[www.biocote.com/what-is-an-antimicrobial](http://www.biocote.com/what-is-an-antimicrobial)

Organism	Mold	Bacteria	Virus
			
Character	Multi-cellular organism	Uni-cellular organism	Infectious agent
Size	1mm	0.001mm	0.0001mm
Reproduction	Growth and spores	Cell division and spores	Inside a host cell
Living conditions	Organic matter, moisture, neutral or acidic pH	Organic matter, moisture, neutral pH	Living host (specific)
Health issue	Indirect; spore allergy, toxic metabolites	Directly; Anthrax, toxic metabolites	Infection (Influenza, Corona, Ebola, Pocks, Aids, Herpes)
Leather issue	Wet blue, moist article	Raw hide, wet blue, chemicals	None
Cure	Fungicide	Bactericide	Disinfectant



# Our research

We're working hard to investigate the best solutions for three types of cleaning.

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1. **Non-durable cleaning** – 'Non-durable' cleaning means cleaning the surface but offering no resistance to Covid-19 subsequently settling on the leather.
2. **Semi-durable cleaning** – 'Semi-durable' cleaning means applying treatments that will offer partial resistance.
3. **Durable solutions** – Development of leather that possesses long-lasting, anti-viral properties.

This research is being carried out in accordance with stringent industry standards.



# Our methods

We have split the testing into two categories:

## Primary testing

Testing the colour fastness, soiling and abrasion properties of the leather.

## Secondary testing

Looking at other potential impacts on the properties of the leather after accelerated ageing.

This investigation is targeting how much the product is affecting the leather coating, in order to do so we have standardised the application method to allow for like-for-like comparisons.

### Primary testing

Name	Test method
Resistance to to-and-fro rubbing	BS EN ISO 11640:2012
Abrasion resistance	BS EN ISO 17076-1:2020
Soiling resistance	VDA 230 212

### Secondary testing (to assess remaining properties)

Name	Test method
Adhesion of finish	BS EN ISO 11644:2009
Stick slip, friction co-efficient	VDA 230 206
Flexibility of leather	BS EN ISO 5402-1:2017
Film thickness	DIN EN ISO 17186
Lightfastness	DIN EN ISO 105 B02
Humidity ageing	70°C, 70% RH, 7 days
Heat ageing	90°C for 7 days
Colour	L*a*b* Spectrophotometer



# Our recommended cleaning method

**We constantly review this advice as new research emerges, but this how we currently recommend cleaning your leather:**

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- Vacuum up any loose debris. This will help to remove any abrasive agents on the surface of the leather
- Dampen a microfibre cloth with a Scottish Leather Group-approved cleaning solution (see page 7) at the specified concentration
- Apply the cloth to the surface of the leather in a light circular motion, turning the cloth regularly. Use sparingly, taking care not to soak the leather, and avoid aggressive rubbing actions.
- Repeat with mild soap and water (not detergent) to remove any residue left from the cleaning agent
- Allow to dry
- Lightly polish using a clean dry cloth.

# 1. Non-durable cleaning agents: approved

We are now able to release the results of our initial research into non-durable cleaning products. None of the following products show any significant deterioration in the quality of the leather they have been used upon:

Product	Active ingredient	Maximum Concentration	Status	Outlook
Soap and water	Non-ionic surfactant	2%	Testing complete	Preferred choice ✓
Bleach	Sodium hypochlorite	0.1%	Primary testing complete, secondary testing in progress	Suitable ✓
Virkon S	Potassium peroxy-monosulphate	1%	Primary testing complete, secondary testing in progress	Suitable ✓
Muirhead leather wipes	Benzalkonium chloride (quaternary ammonium)	N/A	Primary testing complete, secondary testing in progress *	Suitable ✓

\* Muirhead leather wipes are currently recommended for periodic cleaning and are currently being evaluated for more frequent usages (i.e. after each flight).

# 1. Non-durable cleaning agents: not approved

The following products have been found to have a detrimental effect to the leather:

There is evidence of discolouration and surface damage after minimal contact duration as well as a change in soiling behaviour. Even if the damage isn't immediately visible, the continual misuse of these products will lead to a reduced durability in product usage.

Product	Active ingredient	Status	Outlook
Alcohol and/or solvent based cleaners (Ethanol, IPA) Gels, wipes and sprays	Isopropyl and/or ethyl-alcohol, Methoxy propanol, butylglycol	Primary testing completed	Not recommended ✗
Dettol	Benzalkonium chloride (quaternary ammonium)	Primary testing completed	Not recommended ✗



## 2. Semi-durable products

We're also testing fogging sprays that provide a semi-durable treatment.

Fogging sprays leave a film on the surface of the leather, providing a semi-durable cleaning option. However, reports from the field suggest that surfaces covered with fogging sprays attract dirt faster. Our test plan will address this but, at this stage, we can offer the following update:

Product	Active ingredient	Maximum Concentration	Status	Outlook
Bacoban DL 1% bottle	Benzalkonium chloride	As received in product	Primary testing completed	Promising initial results but not currently recommended —
Dew	FAC (free available chlorines)	As received in product	Primary testing completed	Not recommended ×

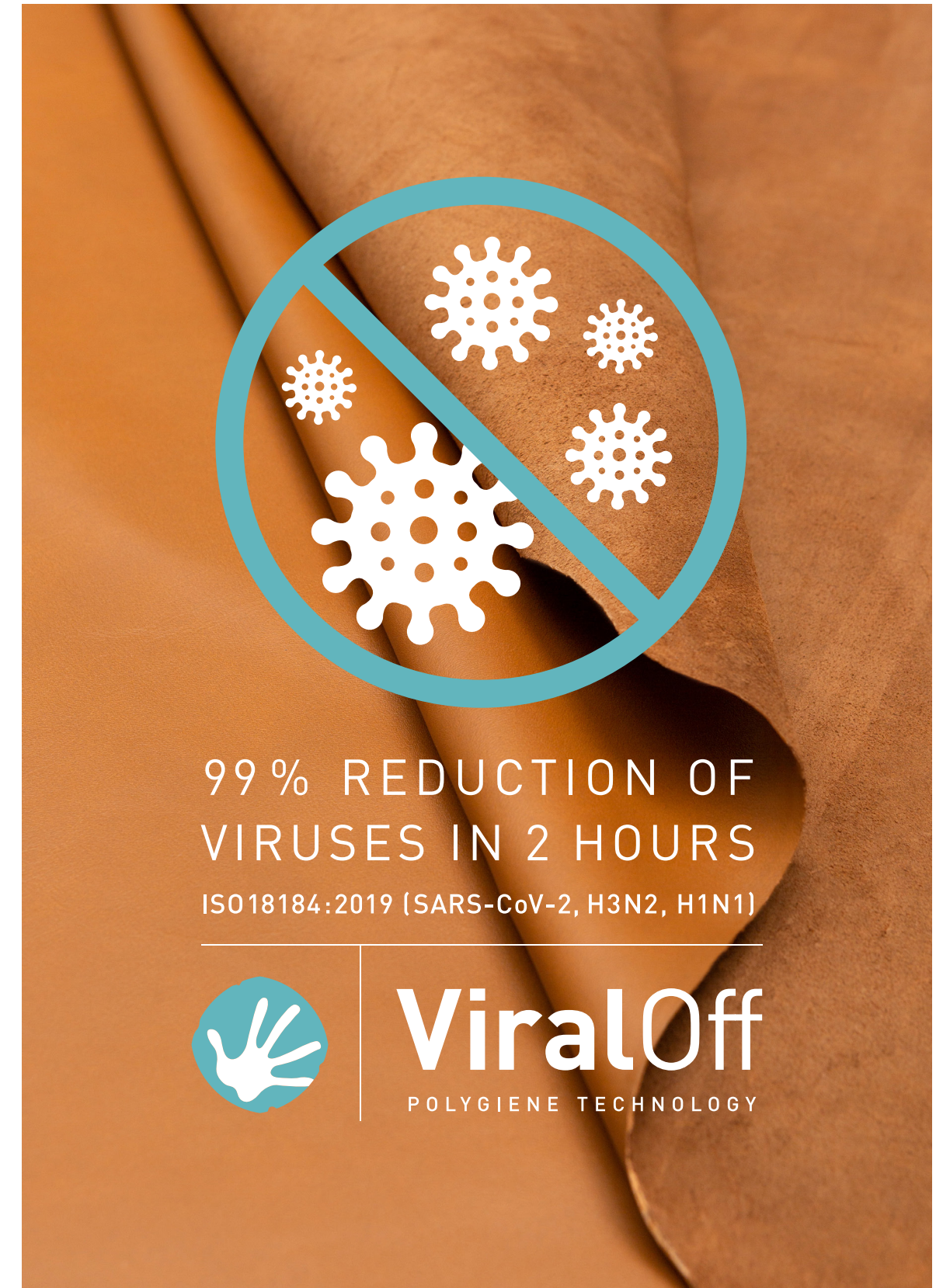
# Development and innovation: Muirhead Active Hygiene Leather

An immediate solution to the challenge of Covid-19.


Our new self-disinfecting natural leather with built in ViralOff technology eliminates 99% of bacteria and viruses\* within two hours, without compromising performance, appearance or sustainability.

Muirhead Active Hygiene Leather is available on all bespoke orders. Please contact [active.hygiene@muirhead.co.uk](mailto:active.hygiene@muirhead.co.uk) for more information.

\* SARS-CoV-2, H3N2 and H1N1 - according to ISO18184:2019. Polygiene ViralOff<sup>®</sup> does not prevent diseases but protects the treated material.



99 % REDUCTION OF  
VIRUSES IN 2 HOURS  
ISO18184:2019 (SARS-CoV-2, H3N2, H1N1)



**ViralOff**  
POLYGIENE TECHNOLOGY



# Development and innovation: improved resistance to certain aggressive cleaning agents

**At present, we strongly advise against using alcohol and solvent based cleaning products on our leather.**

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However, we recognise their widespread use and are in the development phase of developing new topcoats with significantly increased resistance to alcohol/ethanol. Again, more information will follow in further updates.





# What next?

We're committed to helping all our customers adapt to the new health and safety practices required to control the spread of Covid-19.

Please continue to get in touch if you have any queries about the cleaning and care of your leather products. And if you're unsure about a cleaning product, we can even test the product for you.

We will keep you informed on future developments.

This advice is based on our own product testing and current public-domain information regarding Covid-19. It is offered without liability.

## Future testing

### Non-durable

- Uniters Multipurpose cleaner
- UV wand

### Semi-durable

- Nanosource