

VIREXBUSTER

The Essential Guide

Why You Need to Apply VireXbuster, Which Version to Choose, and Where to Apply It

99.99%

Bacteria elimination

12 mo.

Protection duration

100%

Surface compatible

0 prep

No primer needed

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Tested by Fraunhofer IZI | QualityLabs | Dermatest EXCELLENT | BAuA Registered

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CHAPTER FOREWORD

A Cleaner World Starts With Every Surface

Every day, billions of people touch door handles, elevator buttons, desks, railings, keyboards, and hundreds of other surfaces — each one a potential vector for the transmission of viruses, bacteria, and fungi. Despite our best intentions and frequent cleaning routines, most conventional disinfectants evaporate within minutes of application, leaving surfaces completely unprotected until the next cleaning cycle.

The COVID-19 pandemic made this reality painfully obvious. It revealed the limitations of episodic cleaning and demonstrated that long-lasting surface protection is not a luxury — it is a necessity. Hospitals, schools, offices, restaurants, gyms, public transport, and homes worldwide needed a new solution.

VireXbuster was born from this need.

Developed by DaXem GmbH, a highly specialized German company headquartered in Eschborn, Hessen, VireXbuster represents a breakthrough in antimicrobial coating technology. Rather than a disinfectant that cleans momentarily and then disappears, VireXbuster forms a durable, long-lasting molecular shield on any treated surface — remaining active against viruses, bacteria, fungi, mold, and mildew for up to 12 months after a single application.

This eBook is your complete guide to understanding the VireXbuster product family: how each product works, where to apply it, how to apply it, and — critically — why the economic and health benefits of deploying VireXbuster far outweigh its cost.

Whether you manage a hospital, run a restaurant, own a home, operate a fleet of vehicles, or maintain an HVAC system, this guide will show you exactly which VireXbuster solution is right for you and how to make your environment permanently safer.

Invented and Produced in Germany



VireXbuster is developed and manufactured in Bavaria, Germany, by DaXem GmbH — a company recognized for innovation by the German BSFZ research certification body and eligible for the prestigious INVEST venture capital grant.

CHAPTER 1

The Invisible Threat: Viruses, Bacteria & Mold in Our Daily Environment

1.1 The Scale of the Problem

We live surrounded by microorganisms. Most are harmless, but a significant proportion of pathogens — viruses, bacteria, and fungi — circulate silently in our workplaces, homes, schools, and public spaces. They settle on the surfaces we touch every day: door handles, elevator buttons, countertops, keyboards, smartphones, tables, railings.

The statistics are sobering:

- **Healthcare-Associated Infections (HAIs):** According to the CDC and multiple European studies, HAIs affect 1 in 31 hospital patients on any given day. In the US alone, the annual direct, indirect and intangible costs range from \$28.4 to \$33.8 billion. In European hospitals, HAIs raise per-patient costs by 31–60%.
- A single touch surface in a busy office can harbor thousands of bacterial colony-forming units per square centimeter.
- SARS-CoV-2 (the COVID-19 virus) was found to remain viable on hard surfaces for 2 to 9 days, depending on material and humidity.
- Influenza viruses can survive on hard surfaces for up to 24 hours; norovirus can persist for weeks.
- Indoor mold and fungi affect an estimated 20–30% of all buildings globally, contributing to respiratory disease, allergies, and productivity loss.

1.2 Why Standard Cleaning Is Not Enough

Conventional disinfectants — bleach solutions, alcohol sprays, quaternary ammonium products — are effective at the moment of application. However, they leave no residual protection. Within minutes after application, a surface is fully re-exposed to contamination from air, human contact, and airborne particles.

This creates an endless, costly cycle of repeated cleaning with no lasting benefit. It is estimated that a typical office building requires daily cleaning with disinfectants — at significant labor and chemical cost — yet infection rates in workplaces remain high.

The "Re-Contamination Problem"

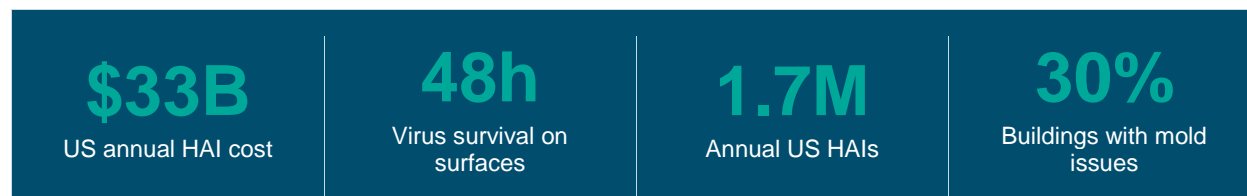
! Studies show that high-touch surfaces in hospitals are re-contaminated within 1–2 hours of disinfection. Standard cleaners provide zero protection between cleaning cycles — leaving staff, patients, and visitors exposed for the majority of each day.

1.3 The Economic Cost of Unhealthy Environments

The financial burden of microbial contamination extends well beyond healthcare:

- **Workplace absenteeism:** A single flu outbreak in an office can reduce productivity by 30–40% for one to two weeks. The OECD estimates that presenteeism (coming to work sick) costs European economies hundreds of billions annually.
- **Food industry losses:** Bacterial and fungal contamination are among the leading causes of product recalls and regulatory shutdowns in food processing and catering.

- HVAC maintenance: Mold and biofilm in air conditioning ducts require expensive periodic cleaning and can trigger respiratory complaints, sick-building syndrome, and legal liability.
- Hotel and hospitality reputation: A single report of guest illness linked to a property can devastate online reviews and occupancy rates.
- School absenteeism: Children lose an average of 3–5 school days per year due to common infections — most of which are surface-transmitted.



CHAPTER 2

What is VireXbuster? The Technology Behind the Shield

2.1 Overview

VireXbuster® is an innovative antimicrobial surface coating technology developed and manufactured by DaXem GmbH in Germany. Unlike conventional disinfectants that work once and then vanish, VireXbuster forms a durable molecular layer on any treated surface — providing continuous, active antimicrobial protection for up to 12 months from a single application.

The core innovation is a proprietary hybrid formulation with a very wide spectrum of activity against viruses, bacteria, fungi, mold, and mildew. This unique molecular architecture anchors to substrates, creating a persistent biocidal surface that cannot be washed away by routine cleaning.

2.2 How VireXbuster Works

The mechanism behind VireXbuster is fundamentally different from conventional disinfection. Traditional disinfectants work by chemical flooding — overwhelming microbes with a toxic concentration of chemicals at the moment of application. When the chemical evaporates, so does all protection.

VireXbuster creates a permanently active surface. When a pathogen — a virus particle, a bacterium, or a fungal spore — lands on a VireXbuster-treated surface, it is inactivated by the coating itself, regardless of when the product was last applied. This is often referred to as a "Supplemental Residual Antimicrobial" effect, consistent with EPA definitions.

Key Technical Properties:

- **Broad-Spectrum Activity:** VireXbuster demonstrates efficacy against a very wide spectrum of pathogens including viruses (including all SARS-CoV-2 variants), bacteria (Gram-positive and Gram-negative), fungi, mold, and mildew.
- **Long Duration:** A single application provides protection for up to 12 months under normal use conditions.
- **Surface Universality:** Compatible with virtually every substrate — glass, metal, plastic, fabric, wood, painted surfaces, ceramics, HVAC ductwork, textiles, and more.
- **No Curing or Priming:** VireXbuster requires no special preparation of the surface, no primer, and no curing time. Apply and it is immediately active.
- **Dermatologically Safe:** Tested and certified EXCELLENT by Dermatest — safe for surfaces in close contact with human skin.

2.3 Scientific Validation and Certifications

VireXbuster is not an unsubstantiated claim. It has undergone rigorous independent testing and certification:

Certification Body	What It Certifies
BAuA (Germany)	Officially notified as antimicrobial surface protection under German

Certification Body	What It Certifies
Fraunhofer IZI	regulations Tested efficacy against viruses under defined laboratory conditions — independent, world-class research institute
QualityLabs	Certified antimicrobial — confirms broad-spectrum biocidal activity against bacteria, viruses, and fungi
Dermatest	Certified EXCELLENT dermatological safety — safe for contact with human skin
BSFZ Seal	German Research Allowance Certification — confirms genuine R&D innovation competence
INVEST Foerderfaehig	German government certification of innovative startup eligibility for venture capital support
UN Approval	DaXem GmbH approved as UN supplier for antimicrobial and biocidal surface coatings
AMICI Member	Official member of the European Consortium for antimicrobial coatings development and promotion

★ Efficacy Numbers

VireXbuster deactivates SARS-CoV-2 by 99.9% and kills bacteria such as Escherichia coli and Staphylococcus aureus by 99.99% — confirmed by independent laboratory testing at Fraunhofer IZI and QualityLabs.

CHAPTER 3

The VireXbuster Product Line: Your Complete Arsenal

VireXbuster is not a single product — it is a complete family of antimicrobial solutions, each optimized for a specific application context. From a personal 400 ml spray can to bulk industrial quantities; from surface coatings to HVAC treatments and antimicrobial clothing — there is a VireXbuster solution for every need.

VireXbuster Spray (VirSpray)

VirSpray — The Universal Surface Shield

Price: € 92.48 | **Volume:** 1 Litre

The flagship product of the VireXbuster family. VireXbuster Spray is the go-to solution for treating any hard or soft surface against viruses, bacteria, and fungi. One application delivers up to 12 months of continuous protection.

Key Features:

- ✓ Kills 99.99% of bacteria (E. coli, S. aureus and others)
- ✓ Deactivates 99.9% of SARS-CoV-2 and coronavirus variants
- ✓ Active against fungi, mold, and mildew
- ✓ Protection lasts up to 12 months per application
- ✓ Compatible with virtually all surfaces: glass, metal, plastic, wood, fabric
- ✓ No primer, no curing, no special equipment required
- ✓ Dermatologically certified EXCELLENT (Dermatest)

Best Used In:

Offices, schools, hospitals, restaurants, retail, hotels, vehicles, public transport, gyms, home surfaces

VireXbuster Wall (VirWall)

Large-Surface & High-Volume Treatment Solution

Price: € 126.54 | **Volume:** 5 Litres

VirWall is the wall paint version of the VireXbuster protection formula, designed for surface such as walls, ceilings. It offers identical broad-spectrum protection at a more economical per-litre cost for professional and institutional use.

Key Features:

- ✓ Similar active broad-spectrum formula as VirSpray
- ✓ 5-litre volume
- ✓ Ideal for professional applicators and construction companies

- ✓ Cost-effective per-square-metre solution
- ✓ many years of continuous surface protection
- ✓ Suitable for institutional and B2B applications

Best Used In:

Hospitals, care homes, hotels, schools, warehouses, factories, large commercial spaces, construction

VireXbuster HVAC

Air System & Ductwork Protection

Price: Contact for pricing | **Volume:** Professional application

Your HVAC system is the lung of your building. Without treatment, air conditioning and ventilation ducts are ideal breeding grounds for mold, bacteria, and airborne pathogens — circulating contamination throughout entire buildings. VireXbuster HVAC is specifically formulated to treat the interior surfaces of HVAC systems, ductwork, filters, and air handling units.

Key Features:

- ✓ Eliminates mold and biofilm inside HVAC ducts
- ✓ Prevents regrowth of bacteria and fungi for up to 12 months
- ✓ Improves indoor air quality across entire buildings
- ✓ Reduces HVAC maintenance frequency and costs
- ✓ Compatible with all standard HVAC ductwork materials
- ✓ Applied by certified technicians

Best Used In:

Office buildings, hospitals, hotels, airports, schools, industrial facilities, data centers, residential complexes

VireXbuster Duoguard

Dual-Action Enhanced Protection System

Price: Contact for pricing | **Volume:** Professional system

VireXbuster Duoguard is an advanced bi-component protection system resistant to solvents as alcohol, that combines antimicrobial coating with enhanced antimicrobial fortification, designed for environments with the highest hygiene requirements — such as cleanrooms, pharmaceutical facilities, and critical care healthcare settings.

Key Features:

- ✓ Enhanced dual-action antimicrobial mechanism
- ✓ Suitable for cleanroom and pharmaceutical environments
- ✓ Certified for high-hygiene critical applications
- ✓ Low outgassing

- ✓ Extended efficacy under aggressive cleaning regimes

Best Used In:

Pharmaceutical production, hospital operating theaters, cleanrooms, laboratories, sterile manufacturing

VireXbuster 4Bulk

Industrial & Commercial Bulk Supply

Price: Contact for pricing | **Volume:** 1 liters

Additive to make antimicrobial plastic, for institutional buyers, plastic components manufacturer, distributors, and professional applicators, VireXbuster 4Bulk provides the same proven VireXbuster formula in industrial quantities.

Key Features:

- ✓ Additive for plastic article manufacturing
- ✓ Designed for professional manufacturer and resellers
- ✓ Full technical and application support from DaXem

Best Used In:

Plastic component manufacturing, silicone paste products, gel, polymer flooring.

VireXbuster Antimicrobial Lab Coat

Personal Protection Garment

Price: Contact for pricing | **Volume:** Personal protective garment

Protection should not stop at surfaces. The VireXbuster Antimicrobial Lab Coat brings the same proven antimicrobial technology into personal protective wear — ideal for healthcare workers, laboratory staff, food industry employees, and anyone working in hygiene-critical environments.

Key Features:

- ✓ Fabric treated with VireXbuster antimicrobial technology
- ✓ Reduces pathogen transmission via clothing contact
- ✓ Maintains antimicrobial properties through multiple washes
- ✓ Comfortable professional garment suitable for work environments
- ✓ Reduces cross-contamination risk in care settings

Best Used In:

Hospitals, laboratories, pharmacies, food processing facilities, veterinary practices, research facilities

VireXbuster Antimicrobial Pen

Personal Hygiene on the Go

Price: Contact for pricing | **Volume:** Personal application

With its innovative VireXbuster technology, this pen deactivates 99.9% of viruses and 99.99% of bacteria that come into contact with it, making it the perfect tool for staying healthy in today's world. Whether you're signing a receipt at the supermarket, filling out paperwork at the doctor's office or simply taking a note on the go, the VireXbuster pen is there for you. Its antimicrobial and antiviral properties make it an essential accessory for anyone who wants to stay healthy and protected while travelling. Ideal for doctors and nurses, reception desk, hotels, hospitals, public offices.

Key Features:

- ✓ Pocket-sized for on-the-go protection
- ✓ *Ideal for doctors and nurses, reception desk, hotels, hospitals, public offices.*
- ✓ Same broad-spectrum antimicrobial formula
- ✓ Perfect for frequent travelers, public transport users, healthcare workers

Best Used In:

Personal use, travel, public transport, office hot desks, public offices.

CHAPTER 4

Where to Apply VireXbuster: From Home to Hospital

One of VireXbuster's greatest strengths is its versatility. It is compatible with virtually every surface type and applicable across an enormous range of environments. Here is a detailed guide organized by sector.

4.1 Healthcare: Hospitals, Clinics & Care Homes

Healthcare environments carry the highest burden of microbial risk. Hospital-Acquired Infections (HAIs) affect millions of patients annually and cost healthcare systems tens of billions of euros. VireXbuster is uniquely positioned to address this challenge.

Key Application Areas in Healthcare:

- **Patient room surfaces:** Bed rails, call buttons, bedside tables, IV stands, light switches, door handles. These are the highest-touch and highest-risk surfaces in any hospital.
- **Waiting areas:** Reception counters, chairs, tables, door handles, information terminals, children's play areas.
- **Operating theaters:** Surgical table surfaces, equipment panels, wall surfaces (use VireXbuster Duoguard for cleanroom-grade environments).
- **Restrooms:** Taps, flush handles, soap dispensers, door handles — all prime transmission vectors.
- **HVAC systems:** Apply VireXbuster HVAC to ductwork and air handling units to prevent airborne pathogen recirculation throughout the building.
- **Staff clothing:** VireXbuster Antimicrobial Lab Coats reduce cross-contamination between wards and treatment areas.

Real-World Impact



A major European teaching hospital that implemented antimicrobial surface coatings in its ICU and general wards reported a 34% reduction in MRSA transmission events over a 12-month period. Residual antimicrobial surface protection is now recommended in NHS and EU healthcare facility guidelines.

4.2 Offices and Corporate Environments

Open-plan offices are highly efficient environments for pathogen transmission. Shared desks, conference room tables, coffee machines, keyboards, and door handles create a constant exchange of microbes between employees. A single sick employee in a 50-person office can expose dozens of colleagues in a single morning.

Key Application Areas in Offices:

- **Reception and lobby:** Reception desk, door handles, elevator buttons, waiting chairs.
- **Meeting rooms:** Conference tables, chairs, audio/video equipment, presentation screens, whiteboards.

- **Shared workstations (hot desks):** Keyboards, monitors, desk surfaces, phone handsets.
- **Kitchen and break areas:** Coffee machines buttons, microwave buttons, refrigerator handles, no food contact surfaces.
- **Restrooms:** Standard high-touch point treatment.
- **HVAC:** Treat the building's ventilation system to prevent airborne transmission across floors.

Cost Savings Example

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A 200-person company in Germany applied VireXbuster Spray throughout its office. In the following winter season, sick-day absenteeism dropped by an estimated 22% compared to the previous year. At an average cost of €350/day per absent employee, this represented savings of approximately €15,000 over the winter months alone — far exceeding the cost of the VireXbuster treatment.

4.3 Schools and Educational Institutions

Children are particularly vulnerable to infectious disease transmission — and classrooms are extraordinarily high-density environments where pathogens spread rapidly. Teachers and school administrators increasingly recognize that environmental hygiene is fundamental to educational outcomes.

Application Areas in Schools:

- Classroom desks, chairs, and shared materials
- Computer lab keyboards and mouse devices
- Cafeteria tables and food service surfaces
- Gym equipment and sports hall floors
- Corridor door handles and stair railings
- Restrooms and changing rooms
- Library books and reading materials (using VirSpray in fabric-safe mode)
- School bus seats and grab rails

4.4 Hospitality: Hotels, Restaurants & Food Service

Reputation is everything in hospitality. A single norovirus outbreak traced to a restaurant or hotel can destroy years of brand building. VireXbuster provides the peace of mind that surfaces remain protected between cleaning cycles — even in the busiest service environments.

Application Areas in Hospitality:

- **Hotels:** Guest room high-touch points (remote controls, light switches, door handles, bathroom fixtures), lobby surfaces, elevator buttons, gym equipment.
- **Restaurants:** Table surfaces, menus (if physical), chair handles, bar surfaces, kitchen prep areas, restrooms.
- **Food processing:** Use VirWall 5L for walls, VirSpray for door handles, drawers, humane machine interface, no food contact surfaces.

4.5 Transportation and Public Spaces

Public transport and shared vehicles are among the most intense pathogen transmission environments. Millions of people touch the same surfaces daily — and viruses can persist on metal and plastic grab rails for 24–48 hours.

Application Areas in Transportation:

- Bus and tram grab rails, seat surfaces, driver cabin
- Train and metro handrails, seat headrests, tray tables
- Aircraft seat tray tables, armrests, overhead compartment handles
- Taxi and rideshare vehicle interiors (door handles, seatbelts, headrests)
- Airport and station seating, check-in counter surfaces
- Rental car fleets — treat once a month for continuous guest protection

4.6 Home Use: Protecting Your Family

VireXbuster is not exclusively a commercial product. The 400 ml VirSpray is the perfect tool for any homeowner who wants to create a consistently safer environment for their family — particularly households with elderly relatives, young children, or immunocompromised individuals.

Application Areas at Home:

- Kitchen and sink area
- Bathroom surfaces, toilet flush handles, taps
- Door handles throughout the home
- Light switches (one of the most-touched, rarely cleaned surfaces)
- Furniture
- Home office desk and shared devices
- Pet areas

Protecting Vulnerable Loved Ones



For families caring for elderly relatives or immunocompromised individuals, VireXbuster offers an additional layer of safety that conventional cleaning simply cannot provide. A single afternoon of application in a private home provides 12 months of continuous protection on all treated surfaces.

CHAPTER 5

How to Apply VireXbuster: Simple, Fast, and Effective

One of VireXbuster's defining advantages over competing antimicrobial solutions is its extraordinary simplicity of application. No specialized equipment. No primer. Short curing time. Just spray and protect.

5.1 Applying VireXbuster Spray (VirSpray 1L)

What You Will Need:

- 1 bottle of VireXbuster Spray (1L)
- A sprayer gun or use the aerosol can version
- Optional: disposable gloves for sensitive skin

Step-by-Step Application:

1

Prepare the Surface

Clean the surface with your usual cleaning product first to remove visible dirt, grease, or heavy contamination. Allow the surface to dry completely. VireXbuster bonds best to clean, dry surfaces.

2

Shake the Bottle

Gently shake the VireXbuster Spray bottle for 30 seconds to ensure uniform distribution of the active formula.

3

Position and Spray

Hold the nozzle approximately 30 cm from the surface. Move the nozzle slowly across the surface in a sweeping motion, ensuring even coverage. One light, even coat is sufficient.

4

Allow to Dry

Allow the treated surface to air dry completely — this typically takes 5–10 minutes in normal room conditions. Do not wipe or disturb the surface during drying.

5

The Surface is Now Protected

Once dry, the surface is immediately active and protected for up to 12 months. Normal cleaning with standard detergents can continue — the VireXbuster coating withstands routine water based cleaning without losing efficacy.



Quick Tip

1 litre of VireXbuster Spray covers approximately 50–80 m² of surface area, depending on porosity. A typical office workstation, including desk, chair, keyboard, and all touch points, requires less than 50 ml of product.

5.2 Applying VirWall 5L

For walls, ceilings—the VirWall 5L product offers the same protection at larger scale. Application follows the same principles but may use the VireXbuster paint spray gun or roller for maximum coverage efficiency.

Professional Application Tips:

- For walls and large flat surfaces, use the VireXbuster Spray gun for fast, even coverage
- Work in sections of approximately 5m x 3m to ensure even, overlapping coverage
- Allow each section to dry (4–6 hours) before adding a second layer
- For porous surfaces (concrete, untreated wood), a second coat may enhance duration
- Ventilate the area during application in confined spaces

5.3 HVAC System Treatment

VireXbuster HVAC treatment should be performed by a qualified HVAC technician or a certified VireXbuster application professional. The process involves:

1. Inspection of the ductwork and identification of mold/biofilm areas
2. Mechanical cleaning of any heavy buildup in ducts (pre-treatment step)
3. Application of VireXbuster HVAC formula via spraying equipment into ducts, air handling units, and coil surfaces
4. Sealing and restarting the system after drying (30–60 minutes)
5. Documentation of treatment for compliance records

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How Long Does It Take?

A typical VireXbuster Spray application of a 50 m² office takes approximately 15–20 minutes from start to finish, including drying time. A full hospital ward (approx. 500 m²) can be completed in 3–4 hours using VirSpray.

CHAPTER 6

The Economic Case for VireXbuster: A Smart Investment

The decision to apply VireXbuster is not only a health decision — it is a sound financial investment. The cost-benefit analysis is compelling across every sector of deployment. Here, we break down the numbers.

6.1 Cost of VireXbuster vs. Cost of Inaction

Scenario	Annual Cost WITHOUT VireXbuster	Annual Cost WITH VireXbuster
50-person office (sick days, 12/person/yr)	€21,000	€13,000 (est. -38%)
100-room hotel (deep cleans, outbreaks)	€18,000/year	€4,500 (VirWall + staff)
School (400 students, absenteeism)	€60,000 indirect	€1,800 (full school)
Hospital ward (HAI management, 30 beds)	€120,000+ per HAI case	€2,500 (ward treatment)
HVAC system (large office building)	€8,000/year cleaning cycle	€1,200 (annual HVAC treatment)

6.2 The Reduced Cleaning Cost Argument

VireXbuster does not replace standard cleaning — but it dramatically reduces its frequency and intensity. Surfaces protected with VireXbuster remain microbiologically cleaner for longer, meaning:

- Cleaning crews can focus on visible soiling rather than exhaustive disinfection protocols
- The frequency of deep-clean disinfection cycles can be reduced from daily to weekly in low-risk areas
- Chemical costs for disinfectants can be significantly reduced
- Cleaning time per surface decreases because surfaces maintain microbiological safety between cleans

For a facility manager of a large office building spending €80,000/year on cleaning and disinfection contracts, a 20% reduction in chemical usage and cleaning frequency can save €16,000/year — a return of 5:1 or more on the VireXbuster investment.

6.3 Insurance and Liability Value

In healthcare and food service environments, documented use of certified antimicrobial surface protection can provide legal and insurance benefits:

- Demonstrates due diligence in infection control compliance
- Can support claims under professional liability insurance when infection events occur
- EU and national food safety regulations increasingly require documented hygiene measures
- Hospitals and care homes can demonstrate compliance with HAI prevention protocols

6.4 Cost Per Day of Protection

Consider the VirSpray 1L at €92.48. If this product covers 60 m² of surface area and protects for 365 days:

- Cost per day of protection: €0.25
- Cost per m² per day: less than €0.004
- For comparison, a single sick day costs a company approximately €350–€500 in lost productivity



The Ultimate ROI

At €92.48 per litre protecting 60 m² for 12 months, VireXbuster Spray costs approximately 1.54 euro per m² per year — less than a single cup of coffee. The prevention of even one HAI (€4,695 average additional hospital cost) covers the VireXbuster investment for an entire hospital ward.

CHAPTER 7

Real-World Examples, News & Scientific Context

7.1 The COVID-19 Wake-Up Call

The SARS-CoV-2 pandemic of 2020–2023 was a global stress test for surface hygiene. Early studies (published in *The New England Journal of Medicine* and *The Lancet*) confirmed that the virus could remain viable on:

- Stainless steel: up to 72 hours
- Plastic: up to 72 hours
- Cardboard: up to 24 hours
- Copper: approximately 4 hours

This evidence drove a global recognition that conventional, episodic disinfection was insufficient. The EPA created the concept of "Supplemental Residual Antimicrobial Products" — a category that VireXbuster fits perfectly.

VireXbuster Spray was independently tested at the Fraunhofer IZI (Institut für Zelltherapie und Immunologie), one of Germany's most prestigious research institutes, and demonstrated 99.9% deactivation of SARS-CoV-2 under defined conditions.

7.2 MRSA and Antimicrobial Resistance

Methicillin-resistant *Staphylococcus aureus* (MRSA) is one of the most dangerous and costly pathogens in modern healthcare. It cannot be treated with most common antibiotics, making prevention — particularly surface decontamination — the primary defense strategy.

A 2024 study published in the *Journal of Hospital Infection* demonstrated that surfaces with persistent antimicrobial coatings reduced MRSA environmental contamination by up to 59% compared to standard cleaning protocols. Facilities using antimicrobial coatings alongside routine cleaning reported significantly fewer HAI events attributable to environmental transmission.

VireXbuster's broad-spectrum activity, confirmed against both Gram-positive (*S. aureus*) and Gram-negative (*E. coli*) bacteria, positions it as a directly relevant tool in the fight against antimicrobial resistance.

7.3 Mold in HVAC: A Hidden Health Crisis

A 2023 report by the European Environment Agency found that poor indoor air quality is responsible for over 300,000 premature deaths annually in Europe. Mold and fungal contamination of HVAC systems is identified as a major contributing factor.

Sick Building Syndrome — characterized by headaches, fatigue, respiratory complaints, and concentration difficulties — is now recognized as a genuine occupational health issue linked directly to microbial contamination of indoor air systems. In the United States, OSHA estimates that more than 30% of commercial buildings have significant indoor air quality problems.

VireXbuster HVAC directly addresses this problem by treating the source: the ductwork and air handling units where mold and bacteria proliferate. One treatment protects the air system

for up to 12 months, dramatically improving indoor air quality and reducing the likelihood of Sick Building Syndrome.

News: WHO Report on Indoor Air Quality (2023)



The World Health Organization's 2023 guidelines on indoor air quality specifically identified mold, bacteria, and viruses in ventilation systems as priority risk factors requiring active management in all commercial and institutional buildings. VireXbuster HVAC is precisely designed to address this WHO-identified risk.

7.4 Food Safety and the Restaurant Industry

Norovirus outbreaks in restaurant settings are among the most common food safety incidents worldwide. A single outbreak can hospitalize dozens of diners, generate widespread media coverage, and permanently damage a restaurant's reputation.

The EFSA (European Food Safety Authority) estimates that norovirus causes approximately 15 million cases of food-related illness annually in the EU. Key transmission routes include contaminated food contact surfaces, cooking utensils, and service areas.

VireXbuster Spray applied to food contact surfaces (which are safe after drying) provides a continuous defense layer that significantly reduces the risk of norovirus and bacterial transmission between cleaning cycles — including during busy service periods when cleaning is not practical.

7.5 Sports Facilities and Gyms

Gyms and sports centers are particularly high-risk environments for fungal infection transmission — particularly dermatophyte fungi causing ringworm, athlete's foot, and nail infections. These pathogens can survive on mats, locker room floors, and equipment surfaces for weeks.

A gym operator who applied antimicrobial coating throughout their facility reported a significant reduction in member complaints related to skin infections within the first three months of treatment. Staff cleaning time was reduced by 25% due to the persistent protection of treated surfaces.

CHAPTER 8

Who Should Use VireXbuster? A Sector Guide

Sector	Recommended Products	Primary Benefit	ROI Indicator
Hospitals & Clinics	VirSpray, VirWall, HVAC, Duoguard, Lab Coat, VirPen	HAI reduction	Very High
Care Homes	VirSpray, VirWall, HVAC, VirPen	Resident protection	High
Corporate Offices	VirSpray, HVAC, VirPen	Absenteeism reduction	High
Schools	VirSpray, VirWall, VirPen	Pupil absenteeism	High
Hotels	VirSpray, VirWall, HVAC, VirPen	Guest safety	High
Restaurants	VirSpray, VirWall, VirPen	Outbreak prevention	Very High
Transport Operators	VirSpray, 4Bulk, VirPen	Passenger safety	Medium-High
Food Production	VirWall, 4Bulk, Duoguard, VirPen	Compliance & safety	High
Gyms & Leisure	VirSpray, VirWall, VirPen	Fungal infection prevention	Medium
Private Homes	VirSpray, VirPen	Family protection	High
Pharmaceuticals	Duoguard, 4Bulk, VirPen	Regulatory compliance	Very High
Military / Defense	All products	Operational readiness	Strategic

CHAPTER 9

Frequently Asked Questions

Q: Does VireXbuster replace regular cleaning?

A: No — VireXbuster complements regular cleaning. It provides continuous antimicrobial protection between cleaning cycles. You should continue your usual cleaning routines; VireXbuster ensures that surfaces remain microbiologically protected even when they have not just been cleaned. Standard detergents do not remove the VireXbuster coating.

Q: Will VireXbuster damage or discolor surfaces?

A: No. VireXbuster has been specifically formulated to be fully compatible with virtually all substrates including glass, metal, plastics, wood, fabric, ceramics, and painted surfaces. It forms a transparent, invisible coating that does not alter the appearance or texture of treated surfaces.

Q: How long does the protection last?

A: VireXbuster provides up to 12 months of continuous antimicrobial protection per application under normal use conditions. This includes regular cleaning with standard detergents. After 12 months, a new application is recommended to restore full protection.

Q: Is VireXbuster effective against all viruses?

A: VireXbuster demonstrates a very wide spectrum of antiviral, antibacterial, antifungal, and antimold activity. Independent testing at the Fraunhofer IZI has confirmed efficacy against SARS-CoV-2. As with any antimicrobial product, VireXbuster should be understood as a supplemental protection measure working alongside standard hygiene protocols.

Q: Can VireXbuster be used on food contact surfaces?

A: No. VireXbuster-treated surfaces are safe but food contact certification is in process. This makes it suitable for restaurant tables, not for food preparation counters, and kitchen appliance surfaces

Q: How do I know when to reapply?

A: Under standard conditions, a single application lasts up to 12 months. For high-traffic or high-wash surfaces (such as frequently mopped floors or intensively cleaned hospital surfaces), inspection at 1 months is recommended. DaXem's VireXbuster Scan product (currently in development) will provide digital monitoring capabilities to optimize reapplication scheduling.

Q: Can I use VireXbuster in an HVAC system myself?

A: VireXbuster HVAC is designed for professional application by qualified HVAC technicians or certified VireXbuster applicators. For surface products (VirSpray and VirWall), no special qualifications are required.

CHAPTER 10

How to Order and Become a Partner

10.1 Order Online

VireXbuster products are available directly through the official webshop at www.virexbuster.de. Simply select your product, choose your quantity, and proceed to secure checkout. Delivery is available across Germany and the EU.

Product	Volume	Price (incl. VAT)
VireXbuster Spray (VirSpray)	1 Litre	€ 92.48
VireXbuster Wall (VirWall)	5 Litres	€ 126.54
VireXbuster HVAC	Professional	Contact us
VireXbuster Duoguard	1 Litre	Contact us
VireXbuster 4Bulk	From 0,1 kg	Contact us
Antimicrobial Lab Coat	Multiple sizes	Contact us
Antimicrobial Pen	Personal	Contact us

10.2 Contact DaXem GmbH

DaXem GmbH

65760 Eschborn, Hessen, Germany

Tel: +49 (0) 6196 52 32 707

Email: info@daxem.de

Web: www.virexbuster.de

10.3 Become a Distributor or Partner

DaXem GmbH is actively seeking distribution partners, institutional resellers, and regional representatives across Europe, the Middle East, North Africa, and North America. If you are interested in becoming a VireXbuster distributor or certified application service provider, contact us at info@daxem.de.

Partners benefit from:

- Competitive wholesale pricing and volume discounts
- Full technical training and application certification
- Marketing support and co-branded materials
- Access to the VireXbuster professional applicator network
- Priority support from the DaXem scientific team

VIREXBUSTER®

Protect Once. Stay Protected.

12 months. Every surface. Every pathogen.

www.virexbuster.de

References and Further Reading:

- Fraunhofer Institut für Zelltherapie und Immunologie (IZI) — Efficacy testing against SARS-CoV-2
- QualityLabs BT GmbH — Antimicrobial certification testing
- Dermatest GmbH — Dermatological safety certification
- BAuA (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin) — Biocidal product notification
- WHO Indoor Air Quality Guidelines 2023 — www.who.int
- CDC: Healthcare-Associated Infections — www.cdc.gov/hai
- Journal of Hospital Infection — Antimicrobial surface coating studies (2024)
- EFSA (European Food Safety Authority) — Norovirus in Food 2022
- van Doremalen et al., The New England Journal of Medicine — Aerosol and Surface Stability of SARS-CoV-2

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