STERILEX®
Innovative Solutions for Microbial Control

CANNABIS/HEMP SOLUTIONS OVERVIEW

Sterilex is an industry leader in providing advanced solutions to control mold, remove biofilm, enhance product quality and improve equipment efficiencies. In addition to controlling mold, mildew and algae growth, Sterilex products remove biofilm and kill other pathogens for a wide variety of applications such as waterline cleaning, extraction equipment cleaning and treatment and entryway control.

THE STERILEX DIFFERENCE

Sterilex products are indispensable tools for the cannabis industry. From growing to extraction and processing, our products control and remove mold and biofilm, leading to operational benefits such as:

+ Improved operational efficiencies/productivity
+ Enhanced quality control
+ Greater energy savings
+ Prevention of micro-failures and spoilage
+ Reduce risk of product recalls
+ Optimized sanitation programs

Questions? Call Us! 1.800.511.1659

PERQUAT® TECHNOLOGY

Sterilex PerQuat Technology was the first chemistry to receive EPA-registered anti-biofilm claims for industrial and public health use sites. PerQuat is based upon alkaline peroxide chemistry with phase transfer catalysis. This innovative proprietary technology has the unique ability to penetrate and remove biofilms and simultaneously kill organisms such as *Staphylococcus aureus*, *E. coli* and *Salmonella*, while managing mold and mildew.

EPA LIST N—APPROVED TO FIGHT COVID-19

In addition to protecting product and equipment, Sterilex products are included on EPA's List N. This list identifies all products that meet EPA's Emerging Viral Pathogen criteria for SARS-CoV-2 (COVID-19). For disinfectants to make these emerging pathogen claims, they must have demonstrated efficacy on similar or harder to kill types of pathogenic viruses.

YOUR BEST DEFENSE AGAINST BIOFILM

Biofilm is a complex matrix of bacteria, fungi and algae that stick together, embedded in a self-produced matrix of extracellular polymeric substance (EPS). The EPS is composed of long, sugary molecular strands that not only attach biofilm to a surface, but also trap nutrients, provide structural support and protect microbes from antimicrobial treatments and disinfectants. Biofilms reduce equipment efficiency by functioning as an insulator, reducing heat transfer efficiency. Additionally, biofilms build up in pipelines, creating "drag" in the lines, requiring more energy use to move product through the pipelines. Because of an established biofilm's superior resistance to traditional antimicrobial treatments and disinfectants, it can require up to 1,000 times the normal dose of a commercial sanitizer to completely remove a biofilm. This strong of dose is not only costly, but introduces additional issues, such as corrosivity concerns. Traditional biocides not only leave biofilms intact, the biofilm harbors microorganisms, often leading to higher use volumes of continuous feed biocides to control the bacterial load.

BROAD EFFICACY

Sterilex PerQuat products are effective against a broad range of organisms and pests, from foodborne pathogens like *Salmonella* and *Listeria* to spoilage organisms like mold, mildew and yeast. Sterilex liquids offer industry-leading efficacy for both biofilm removal and killing of tough, resistant pathogens encased in protective biofilm.

Controlling biofilm and mold are key to ensuring product safety.

STERILEX LIQUIDS

Sterilex's PerQuat line of liquid cleaners and disinfectants are the first line of defense for facilities looking for protection from mold and biofilm buildup in grow houses and processing facilities.

Benefits of Liquids

+ Proprietary PerQuat technology
+ Broad spectrum, EPA-registered liquid disinfectants effective against mold, mildew, spore-forming bacteria, foodborne pathogens like *E. coli*, *Listeria* and *Salmonella* and biofilm-forming bacteria
+ Inactivates a variety of viruses
+ Easy to mix and apply
+ Versatile, cost-effective applications
+ Compatible with many surfaces (see compatibility chart on last page for full list)

Liquid Applications

- Overhead air unit/structure disinfection
- Deep cleaning and disinfection of processing equipment
- Removal of biofilm and other hard-to-clean organic contaminants
- Food contact surfaces
- Environmental surfaces (walls, floors, drains)
- Fogging

STERILEX ULTRA STEP

Sterilex Ultra Step is an EPA-registered solid floor sanitizer that is designed to sanitize low-moisture processing areas. It utilizes the same proprietary PerQuat technology as our liquid systems in a single-part, moisture-activated powder.

Benefits of Solids

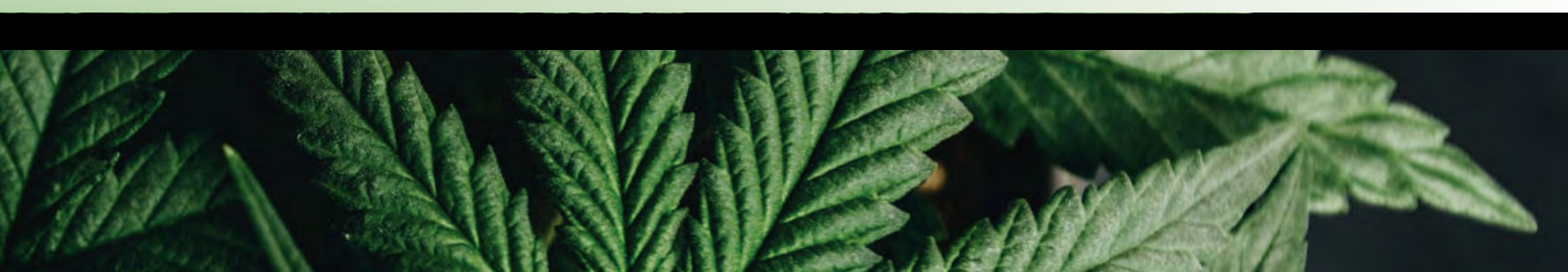
+ Proprietary PerQuat technology
+ EPA-registered solid sanitizer effective against foodborne pathogens such as *Listeria*, *E. coli* and other organisms
+ Inactivates a variety of viruses
+ Easy to use
+ Non-slip and non-flammable
+ Fine, sand-like crystals settle into cracks and niches
+ Blue color to differentiate from other ingredients

Solid Applications

- Floor sanitization in FDA and CFIA-inspected facilities
- Entryway control
- Floor mat/boot pan sanitizer
- Decrease sticky organic residue on floors
- Warehouse and loading dock interventions

LIQUID PROPERTIES	Sterilex Ultra Disinfectant Cleaner Solution 1 *EPA Reg. No. 63761-8*	Sterilex Ultra Activator Solution
Form	Liquid	Liquid
Appearance	Clear	Clear
Odor	Odorless	Odorless
Spec. Grav. (20°C)	1.00–1.03	1.15–1.20
pH	3.01–6.20	11–14
Avg. Freeze Point	–4.8°C/23.36°F	–5.3°C/22.46°F

SOLID PROPERTIES	Sterilex Ultra Step *EPA Reg. No. 63761-10*
Form	Solid
Appearance	Blue Powder
Odor	Odorless
Solubility	11% w/v
pH of 1% Solution	8–10
Flash Point	>200°F



METAL COMPATIBILITY REFERENCE

Compatibility chart for dilutions of Sterilex Ultra Disinfectant Cleaner Solution 1 and Ultra Soft Metal Activator.
Compatibility testing conducted for 10 consecutive days (14,400 minutes of use). Simulates 5.5 years of daily treatments.

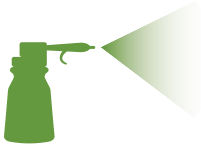
Metal	Compatibility	Plastic	Compatibility
Aluminum 1100	Compatible	HDPE	Compatible
Aluminum 5052	Compatible	LDPE	Compatible
Aluminum 3003	Compatible	Polyethylene	Compatible
Aluminum 6061	Compatible	Polypropylene	Compatible
Aluminum 7075	Semi-Compatible[1]	PVC	Compatible
304 Stainless	Compatible	Teflon	Compatible
316 Stainless	Compatible	Kalrez	Compatible
Bronze	Compatible	Delrin (Polyacetal)	Compatible
Copper	Compatible	EPDM	Compatible
Brass	Semi-Compatible[2]	BUNA-N	Compatible
Carbon Steel	Semi-Compatible[3]	PET	Compatible
Cast Iron	Non-Compatible[4]	Viton	Semi-Compatible[6]
Galvanized	Non-Compatible[5]	Polycarbonate	Non-Compatible[7]

[1]Light oxidation
[2]Some darkening of surface
[3]Minimal rusting observed, same compatibility as water
[4]Can cause rusting on clean cast iron surfaces over time
[5]Corrosion, same compatibility as water
[6]Causes material tackiness after 3 days of continuous exposure (4,320 minutes)
[7]Causes material decomposition

STANDARD STERILEX PROGRAMS


Overhead Air Units


CIP


Fogging


Floors + Floor Scrubbers


Part Soaking


Drains

Sterilex products are available from sanitation chemical providers. Please contact us for more information.

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