

OVERHEAD PROGRAM

ENSURE YOUR HVAC SYSTEM ISN'T A SOURCE OF CROSS-CONTAMINATION

Airborne transfer of pathogens has been shown to be possible for both viruses and bacteria. Pieces of equipment like overhead air units, refrigeration systems, pipes and conduits can be some of the most overlooked food safety risks across all food processing industries.

In addition to being abundant sources of moisture due to condensation, they are usually located in hard to reach areas and made out of materials (like aluminum) that may corrode from the use of common plant cleaning chemicals. This combination of factors means they are the perfect incubators for biofilm and the pathogens that reside within them. These microorganisms pose both a food safety cross-contamination risk as well as a maintenance issue, rapidly degrading expensive equipment life.

Facilities can take a proactive approach to protecting their equipment, their employees and product by implementing a disinfection and biofilm control program focused on overhead air units and other refrigeration air-moving equipment. This allows for treatment of areas that could be a cross-contamination risk.

BENEFITS SUMMARY

Sterilex Ultra Disinfectant Cleaner Solution 1 and Ultra Soft Metal Activator combine to provide a chemical scrub to disinfect areas that cannot be hand scrubbed effectively. Using these products together in an overhead and refrigeration system air-moving equipment disinfection program results in the following benefits:

Improves Microbial Baseline for Overhead Air Units and Drip Pans

- o Disinfection and biofilm removal for coils, drip pans, exterior panels and other surfaces in and around the overhead air unit
- o Compatible with most common aluminum grades and many other hard surfaces (see compatibility chart for reference)

Reduces Cross-Contamination Potential

- o Removes resistant harborage sites within air handling systems
- o Treats and destroys viral pathogens on air handling surfaces (air can be a vector for transmission of some diseases)

Increases Equipment Efficiency

- o Removes insulative biofilm, increasing heat transfer efficiency
- o Reduces utility costs

Extends Equipment Life

- o Reduces potential for microbiologically influenced corrosion, keeping equipment operating longer
- o Reduces work load on necessary equipment by keeping operating efficiency high

Promotes Confidence in Your Process

- o Chemistry specifically designed for disinfection in food manufacturing environments and proven to eliminate your microbial challenges

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RECOMMENDED PROTOCOL FREQUENCY

Sterilex recommends implementing a routine overhead program as part of a larger disinfection and biofilm control program. Utilize the table below for frequency recommendations:

| Use Case | Frequency  |
|--|--|
| Shock Treatment Hot spot/high count response + first time introducing the Sterilex program | 3–5 consecutive nightly (if possible) treatments to fully remove all buildup and reset to a clean baseline |
| Maintenance Treatment Removes new biofilm buildup and controls resistant pathogens | Weekly |

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 |

¹Light oxidation

²Some darkening of surface

³Minimal rusting observed, same compatibility as water

⁴Can cause rusting on clean cast iron surfaces over time

⁵Corrosion, same compatibility as water

⁶Causes material tackiness after 3 days of continuous exposure (4,320 minutes)

⁷Causes material decomposition

OVERHEAD AIR UNIT/HVAC TREATMENT PROTOCOL

1. Thoroughly clean all accessible surfaces using a detergent as recommend by your sanitation chemical supplier. Follow with a water rinse.
2. Prepare a solution of 12.8–16.0 oz of **Sterilex Ultra Disinfectant Cleaner Solution 1** and 12.8–16.0 oz of **Ultra Soft Metal Activator** per gallon of water.
3. Foam all surfaces of the overhead unit and refrigeration ducting. This can be done from a portable foaming unit or wall mount unit. **Note: Once mixed, the Sterilex solution must be used within 8 hours.**
4. Leave foam on surface for a **minimum of 10 minutes.**
5. Rinse all surfaces thoroughly with a potable water rinse to remove any chemical residue and flush away biofilm buildup.
6. Place correct size **ProvaGrate™** block in the drip pan to provide continuous protection.