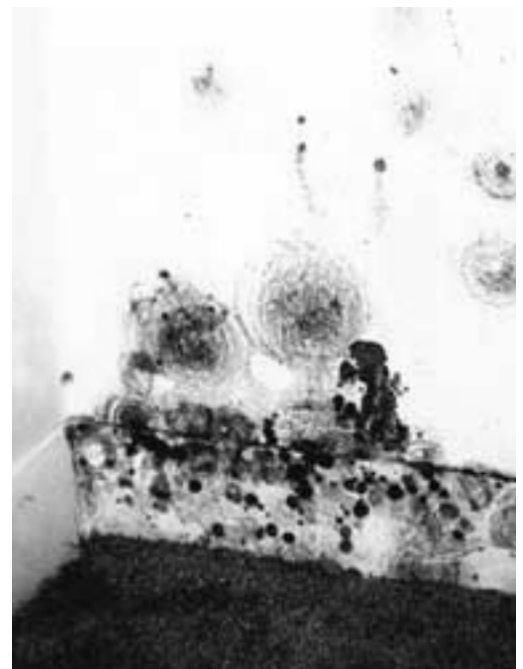
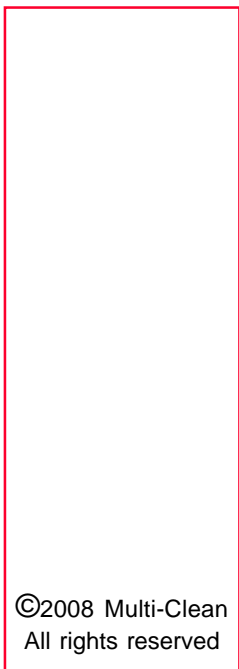


## Mold & Mildew Technical Bulletin 1407



A complete line of Multi-Clean® products and recommended maintenance procedures for addressing mold and mildew.

**Disinfectants**  
**Mildewcides**  
**Fungicides**  
**Virucides**

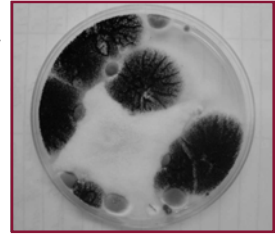


# Mold and Mildew

## What is Mold and Mildew?

**Mildew** is a living organism that grows with warmth, humidity and nutrients. Mildew can be found on many different surfaces. It is a thin, black, or sometimes white, growth produced by mold.

**Molds** live in the soil, on plants, and on dead or decaying matter. Molds are a fungus, and unlike plants, they lack chlorophyll and must survive by digesting plant materials, using plant and other organic materials for food.



Molds produce tiny spores to reproduce, just as plants produce seeds. Mold spores float through the indoor and outdoor air continually. When mold spores land on a damp spot indoors, they may begin growing and digesting whatever they are growing on in order to survive. There are molds that can grow on wood, paper, carpet, foods, etc. When excessive moisture or water accumulates indoors, mold growth will often occur, particularly if the moisture problems remain undiscovered or unaddressed. There is no practical way to eliminate all mold and mold spores in the indoor environment.

Many types of molds exist. Molds have the potential to cause health effects. Molds produce allergens that can trigger allergic reactions or even asthma attacks in people allergic to mold. Other molds are known to produce potent toxins and/or irritants. Potential health concerns are an important reason to prevent mold growth and to remediate/clean up any existing indoor mold growth.

## Where does mold grow?

Molds will often grow in damp or wet areas indoors. Common sites for indoor mold growth include bathroom tile, basement walls, areas around windows where moisture condenses, and rear leaky water fountains or sink.

## Sources of Water

Roof leaks, deferred maintenance, condensation associated with high humidity or cold spots in the building, localized flooring due to plumbing failures or heavy rains, slow leaks in plumbing fixtures and malfunction or poor design of humidification systems. Uncontrolled humidity can also be a source of moisture leading to mold growth, particularly in hot, humid climates.

## How to Control Mold Growth

Moisture control is the key to mold control. Molds need both food and water to survive; since molds can digest most things, water is the factor that limits mold growth. Cleaning up current mold without solving moisture issues will only be a temporary cure. As soon as moisture returns, so will the mold.

### Mold Facts

- Potential health effects from mold exposures include allergic reactions, asthma, and other respiratory complaints.
- There is no practical way to eliminate all mold and mold spores in the indoor environment.
- If mold is a problem in your home or school, you must clean up the mold and eliminate sources of moisture.
- Fix the source of the water problem or leak to prevent mold growth.
- Reduce indoor humidity (to 30-60% ) to decrease mold growth by: venting bathrooms, dryers, and other moisture-generating sources to the outside; using air conditioners and de-humidifiers; increasing ventilation; and using exhaust fans whenever cooking, dishwashing, and cleaning.
- Clean and dry any damp or wet building materials and furnishings within 24-48 hours to prevent mold growth.
- Clean mold off hard surfaces with water and disinfectant-cleaner, and dry completely.
- Absorbent materials such as ceiling tiles, that are moldy, may need to be replaced.
- Prevent / Reduce condensation on cold surfaces (windows, piping, exterior walls, roofs, etc.) by adding insulation.
- In areas where there is a perpetual moisture problem, do not install carpeting.
- Molds can grow on virtually any substance, providing moisture is present, including wood, paper, carpet, and foods.

# Mold and Mildew Clean-Up Procedures

Cleaning up current mold or materials contaminated/damaged by mold depends on the extent of the contamination. In general, small areas of mold, such as growth under a sink caused by a leaky drain, generally can be cleaned up by janitors or homeowners with a good disinfectant/cleaner.

Larger areas of mold growth should be left to professionals. Special training and certifications are required for mold remediation crews in schools and commercial buildings. The mold can cause health concerns for people in the building as well as the mold remediation workers.

## Directions for Use (Always read product label for complete directions)

### Non-Porous Surfaces

If surfaces are visibly dirty, pre-clean first. Apply the appropriate Multi-Clean Disinfectant/Cleaner such as Ful-Trole 64 (diluted 1:64), Century Q 256 (diluted 1:256), Microcide TB (Ready-to-Use) or GTS Foaming Disinfectant Cleaner (aerosol) with a mop, sponge, cloth, or sprayer on hard, nonporous surfaces to thoroughly wet surfaces. For sprayer applications use a coarse spray device. Spray 6 - 8 inches from surface.

Rub with a brush, sponge or cloth. Treated surfaces must remain wet for 10 minutes. Wipe dry with a clean cloth, or sponge or allow to air dry. For mold and mildew control, repeat application weekly or when growth reappears.

### Sewer Back-Up and Flooding

During mitigation procedures, we recommend Ful-Trole 64 diluted at 1:64 (2 oz/gal). Remove gross filth or heavy soil along with non-salvageable materials. Saturate all affected areas with a sprayer using a coarse spray before and after cleaning and extraction.

### Carpets, carpet pads, sub floors, drywall, trim, frame lumber, tackless strip and paneling.

For water damage from a clean water source, extract excess water. Test hidden area for colorfastness. Dilute Ful-Trole 64 at 1:64 (2 oz/gal) with water allowing for the diluting effect of absorbed water within saturated materials\*. Remove gross filth or heavy soil. Apply Ful-Trole 64 with a sprayer using a coarse spray and fully saturate the affected materials. Roll, brush or agitate into materials and allow the materials to remain damp for 10 minutes. Follow with a thorough extraction. Dry rapidly and thoroughly.

\* *Dilution effect. If materials are saturated with water, double the concentration of the Disinfectant so once the materials are sprayed with water, the end use dilution will be the same as the dilution listed on the label. Example: Ful-Trole 64, recommended dilution is 2 oz/gal. For spraying on water saturated materials, use 4 oz/gal.*

### Things to consider before using Chlorine Bleach Solutions.

- Bleach, (i.e Chlorine) is a strong oxidizing agent and has the ability to kill spores.
- The bleach based disinfectant must be an EPA registered product. These products have labels that give specific directions for appropriate concentration and contact times. Bleach purchased at the grocery store generally does not have specific instructions for this type of cleaning.
- Bleach based cleaners do not have specific claims towards molds and mildew.
- Bleach based products have no residual effect like quat based disinfectants do. Once the chlorine (the active agent in bleach) has dissipated into the air, there is no residue remaining on the surfaces that could kill any spores that remained after the cleaning. All Multi-Clean disinfectants will leave a residual film on surfaces that will effectively inhibit the growth of any spores that remain and start to grow into their vegetative state.
- Bleach can damage and or discolor many types of surfaces.
- Bleach has an unpleasant smell that can cause irritation and discomfort for patients, medical staff and janitorial personnel. All Multi-Clean disinfectants have a great scent.
- Bleach solutions must be made up daily. Bleach is very unstable and the chlorine levels can be inactivated by sunlight, organic soils etc. If you can smell the chlorine in your cleaning solution, that means that the chlorine is coming out of solution and is not as effective as it should be. A fresh chlorine bleach solution will have a low odor. (The same goes for swimming pools. If you can smell lots of chlorine coming from a swimming pool, the water is dirty and contains lots of organic soils). All Multi-Clean disinfectants are stable and will not lose effectiveness over time.
- Chlorine bleach does not have any cleaning ability, especially towards oily and greasy soils. Any surface must be cleaned first, and then disinfected with a bleach solution, a two step process. All Multi-Clean Disinfectants clean and disinfect, all in one step.

**For Additional Information, please contact Multi-Clean, ask for Technical Service or visit these websites:**

- CDC website: Information on IAQ, mold and its health effects: [www.cdc.gov/nceh/](http://www.cdc.gov/nceh/)
- EPA website: good information on mold and remediation: [www.epa.gov/iaq/molds/](http://www.epa.gov/iaq/molds/)

# Multi-Clean Disinfectants with Claims for Mold and Mildew



**Ful-Trole 64 Multi-Purpose Cleaner, Disinfectant & Deodorizer:** Hospital Grade Disinfectant when used at 2 ounces per gallon of water and a Institutional Grade Disinfectant when used at 1 1/4 ounces per gallon of water. Multi-Purpose restroom cleaner. Bactericidal, virucidal, fungicidal (including mold and mildew). Effective in 400 ppm hardness (calculated as CaCO<sub>3</sub>) in the presence of 5% Organic Serum. Lemon or Floral scents. pH: 12.0- 12.4, EPA Registration Number: 10324-80-5449.



**Fresh 100 Non-Acid Disinfectant Bowl Cleaner:** Hospital grade, ready-to-use disinfectant cleaner for restroom maintenance. Its germicidal formula and clinging action makes this exceptional for toilet bowl and urinal sanitation. It is effective against *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Salmonella choleraesuis* (the hospital trio), *Streptococcus pyogenes*, *Trichophyton interdigitale*, Influenza Type A , Herpes Simplex Type II, and HIV-1 (AIDS). Citrus/Fresh Fragrance, pH: 10.8 - 11.0, EPA Registration Number: 47371-97-5449.



**GTS Foaming Disinfectant Cleaner:** An advanced foaming aerosol cleaner/disinfectant. This high foam formula uses unique solvents and surfactants to aggressively cleans any surface without abrasives. Phenolic based, OSHA Bloodborne Pathogen Act compliant, ready-to-use aerosol, lemon scent, pH: 12.5-13.0, EPA Registration Number: 33176-6-5449.



**Microcide TB Restroom Disinfectant/Cleaner:** Microcide TB is a ready-to-use spray cleaner that disinfects as it cleans. Effective against, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Salmonella choleraesuis* (the hospital trio), *Eschericia coli*, HIV-1, Canine Parvovirus, *Trichophyton Mentagrophytes* (athletes foot fungus), *Mycobacterium tuberculosis* (BCG) and *Clostridium difficile*, vegetative form. pH: 11.5, EPA Registration Number: 1839-83-5449.



**MC-10 Sanitizer, High Potency Quaternary:** Highly effective no rinse sanitizer recommended in all phases of food processing and in food service environments. When used at 1/4 ounce per gallon (1: 512), it supplies 200 ppm active quaternary and meets the USDA performance standards for D2 type products. pH: 6-8, EPA Registration Number: 10324-63-5449.



**Century Q 256 Super Concentrated One Step Cleaner/Disinfectant:** A neutral pH, hospital grade cleaner/disinfectant. Use on high gloss finished floors, without dulling. Broad Spectrum efficacy including MRSA, VRE and AIDS (see Method Bulletin for complete list). Use at 1/2 ounce per gallon of water, floral fragrance, pH 7.5, EPA Registration Number 6836-205-5449.



**950 Bowl Cleaner:** Contains 9.5% Hydrochloric Acid that effectively attacks toilet bowl and urinal problems such as mineral scale, rust, and uric acid deposits. This thickened acid bowl cleaner clings to surfaces and allows for better cleaning and Disinfection. This hospital grade disinfectant has broad spectrum efficacy including MRSA, VRE and HIV-1 (AIDS). pH: > 1, ready-to-use, EPA Registration Number: 8155-6-5449.

**WARNING & DISCLAIMER:** Results may vary. Multi-Clean chemicals are to be used only by appropriately trained personnel. IMPROPER USE POSES RISK OF PHYSICAL INJURY OR PROPERTY DAMAGE. See appropriate Multi-Clean Method Bulletin for further warnings and information for your application. The suitability of and proper application of this product is the responsibility of the applier. The manufacturer disclaims all warranties, express and implied, including any warranties of MERCHANTABILITY AND FITNESS OF PURPOSE. The manufacturer's liability is limited to replacement of or reimbursement for any product proved defective. No person has authority to waive these disclaimers or make any representations or warranties on behalf of the manufacturer, except in writing signed by the manufacturer.

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