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Cleaning & Disinfecting Guidelines For Bird, Bat, and Rodent Droppings

This is a guideline for using Sporicidin® Disinfectant products in the cleaning and disinfecting of surfaces and materials contaminated with fecal matter from birds, bats and rodents. This guideline is not applicable for the remediation of dirt floors, such those found in crawlspaces or farm structures like coops and barns. Sporicidin® Disinfectant products are intended for use in this guideline for the cleaning and removal of feces, urine, and other contamination from porous and non-porous surfaces or materials, and the disinfection of hard, non-porous surfaces. To date, the EPA has approved only Formaldehyde for the disinfecting of dirt and soil. However, the health risks to workers and occupants, along with the need for extensive protective measures, negate the use of Formaldehyde for remediation purposes.

Cleanup projects of this nature are dangerous, requiring proper attire and safety equipment to prevent cleaning personnel from contracting life-threatening illnesses. **Table 1** depicts some of the diseases that workers can be exposed to via respiratory, ingestion and direct contact with contaminated materials and surfaces.

Disease	Pathogen	Classification	Infectious Hazard
Histoplasmosis	<i>Histoplasma capsulatum</i>	Fungal	Bird & bat feces
Cryptococcosis	<i>Cryptococcus neoformans</i>	Fungal	Bird feces
Psittacosis	<i>Chlamydophila psittaci</i>	Bacterial	Bird feces
Rabies	<i>Rabies virus</i>	Viral	Bat & rodent carcasses
Hantavirus pulmonary syndrome	<i>Hanta virus</i>	Viral	Rodent feces & urine
Leptospirosis	<i>Leptospira ssp.</i>	Bacterial	Rodent feces & urine
Lymphocytic Choriomeningitis	<i>Lymphocytic choriomeningitis virus</i>	Viral	Rodent feces & urine

Table 1 – Potential Health Hazards

TRAINING

Employees should be trained and experience in hazardous/infectious material cleaning, removal and disposal procedures, as well as be physically and mentally capable of working in close quarters or confined spaces, while wearing protective clothing and equipment for extended periods of time.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personnel performing clean up operations of this nature should protect themselves with the following PPE:

- Full face respirator with HEPA filter cartridge
- Tyvek suit or other protective clothing
- Rubber boots
- Rubber gloves

RECOMMENDED TOOLS

- Shovels or other scraping tools
- Tongs for picking up animal carcasses
- Misting devices, such as ULV fogger or airless sprayer
- Mops & buckets
- Trigger sprayers (for applying disinfectants)

RECOMMENDED CLEANING SUPPLIES

- Scrub brushes, sponges, pads or cloths for cleaning surfaces
- Paper towels or wipes
- Black heavy-duty leaf/trash bags
- Biohazard/Infectious materials tape

RECOMMENDED SPORICIDIN PRODUCTS

- Sporicidin[®] Disinfectant Solution (gallons or 22 oz. Bottle)
- Sporicidin[®] Disinfectant Towelettes (canister)
- Sporicidin[®] Antimicrobial Lotion Soap (for use as personnel hand wash)
- Sporicidin[®] Enzyme Mold Stain Cleaner or Enzymatic Cleaner (may be used as a cost effective cleaning detergent solution)

SITE PREPARATION & ENGINEERING CONTROLS

Proper planning and preparation is essential in order to safely and effectively remediate these type of clean up projects. Care must be taken to prevent contamination of clean up personnel and occupants, as well as prevent the spread of contamination inside and outside the structure during the clean up.

Warning Signs

Highly visible warning signs should be posted at entry ways to prevent unauthorized or unprotected personnel from entering the contaminated area.

Removal of Live Pests

Any live pests should be removed from the premises prior to starting the project. In the case of bats, it is advisable to request removal by your local animal control agency or hire a pest removal specialist. Once the pests have been vacated, steps should be immediately taken to seal up all possible points of entry that pests may have used and prevent future intrusion.

Removal of Carcasses and Nesting Materials

Pest carcasses should be removed using tongs or similar devices to minimize contamination of PPE and placed into double-bagged plastic trash bags. Vacant nests or nesting materials should be carefully removed to prevent contamination from becoming airborne and placed in double-bagged trash bags then sealed with tape. Bagged material should be clearly labeled as infectious materials and disposed of in accordance with local requirements for infectious waste.

HVAC Systems

Any HVAC vents or air supply vents should be sealed to prevent further cross-contamination of the air supply system and consideration given to having the vent system professional cleaned as the final step of the remediation process.

PROCEDURES FOR CLEANING AND DISINFECTION

All surfaces and materials within the affected area should be pre-cleaned to remove gross filth and fecal matter, followed by thorough disinfection with Sporicidin[®] Disinfectant Solution, Disinfectant Spray or Disinfectant Towelettes. Porous material, such as insulation, cannot be easily cleaned and may require removal and replacement. Sporicidin[®] Disinfectant Solution can be applied to surfaces with saturated towels or sponges, as well as by misting with a mechanical device, such as a ULV fogger, airless sprayer, pressure sprayer or trigger sprayer. Fogging may be done as an adjunct to disinfecting large areas or rooms (See Sporicidin[®] EPA-approved Fogging Bulletin #301).

REMOVAL OF GROSS FECAL MATTER

To suppress and prevent fungal and bacterial spores from becoming airborne during the removal of heavy contamination, the fecal matter can be lightly misted with Sporicidin[®] Disinfectant Solution or Sporicidin[®] Enzyme Mold Cleaner using ULV foggers or airless sprayers. Once contaminants are thoroughly dampened, scoop or scrape the debris up and place into double-bagged trash bags and seal with tape. Re-dampen the fecal matter as needed until all gross filth has been removed.



CLEANING OF SURFACES & MATERIALS

Once all fecal matter has been removed, all surfaces and materials should be thoroughly disinfected by saturating with Sporicidin® Disinfectant and allowed to remain wet for at least 10 minutes, then wiped clean and air dried.

Synthetic carpets, rugs, curtains and upholstery – To clean manually, spray Sporicidin® Disinfectant onto carpet or fabric and wipe clean with cloth or sponge. For machine cleaning, apply product in accordance with machine manufacturer's guidelines. **Natural fabrics, rugs, curtains and upholstery** – Clean in accordance with manufacturer's guidelines.

Clothing, linens and other personal fabrics – Launder contaminated articles per garment label instructions.

NOTE: Laundry machines should be disinfected after washing contaminated materials by spraying the tub, agitator, splash seal and surfaces with Sporicidin® Disinfectant Solution and allowed to remain wet for 10 minutes, then wiped clean and allowed to air dry.

Tanned leather materials – Clean materials by wiping the surfaces with a cloth lightly moistened with Sporicidin® Disinfectant Solution or Sporicidin® Disinfectant Towelettes, and allow to air dry.

Suede and Nu-buck leather material – Clean according to manufacturer's guidelines.

Concrete, cinder block, wood, plywood and oriented strand board (OSB) – Apply Sporicidin® Disinfectant Solution directly to the surface and allow to remain wet for 10 minutes, followed by wiping clean and allow to air dry.

HVAC SYSTEM

HVAC internal duct surfaces and components should be cleaned in accordance with industry guidelines. External ductwork surfaces, grills, grates and registers should be cleaned and disinfected with Sporicidin®.

DISINFECTION OF EQUIPMENT, TOOLS & PERSONAL PROTECTIVE EQUIPMENT (PPE)

All tools, equipment and individual personal protective equipment used in the clean up of contaminated areas should be cleaned and disinfected using Sporicidin® prior to removal from the contaminated area. Used respirator HEPA filters should be treated as infectious materials and disposed of accordingly (see DISPOSAL OF INFECTIOUS MATERIALS section below).

DISPOSAL OF INFECTIOUS MATERIALS

Soiled cleaning materials, such as paper towels, cloths, sponges and mop heads, should be placed in double-bagged trash bags, sealed with duct tape, labeled and disposed of as infectious materials in accordance with local requirements. Sporicidin® products can be disposed of by pouring the liquid down the regular sewer drain and discarding the empty container in the regular trash. Follow local regulations.

For additional information contact our office at 1-800-474-3733 or visit our website at www.sporicidin.com.