



24-7 ZERO HVAC MOLD & MILDEW RESISTANT COATING

SENTINEL 24-7 ZERO HVAC MOLD & MILDEW RESISTANT COATING is an important tool in the toolbox for restoration contractors, specifying engineers and consultants, and for those responsible for facilities management. When correcting and maintaining indoor air quality, these professionals recognize the valuable benefits provided by a coating formulated specifically for our air handling systems, and that ordinary paint can't serve these needs. 24-7 Zero HVAC is designed to be applied where resurfacing is desired and mold-resistance is needed for surfaces within HVAC (Heating, Ventilation and Air Conditioning) systems. Versatile and multi-functional, this water-based coating can be applied to lined and unlined duct (i.e., fiberglass HVAC insulation, and primed or galvanized metal). Sentinel 24-7 ZERO HVAC is thickened, flexible, and will bridge and reinforce duct liner and duct board insulation materials. It will seal HVAC surfaces from odors caused by fire, smoke, mold & mildew. This coating is low VOC, is free of Hazardous Air Pollutants (H.A.P.s) and is low odor. Sentinel 24-7 ZERO HVAC with antimicrobial product protection is designed to inhibit the growth of stain and odor causing mold, mildew and other microorganisms on the cured coating surface. HVAC systems treated with 24-7 ZERO HVAC will have increased air flow, improved cleaning, while minimizing dirt buildup.



Material Preparation

Separation in paints and coatings is normal. Thoroughly stir and mix coating to achieve an even consistency for spraying, rolling or brushing. Product must NOT be reduced with water or solvents. **This product must not be allowed to freeze.**

Surface Preparation

Interior air ducts should be vacuumed and cleaned. All surfaces must be clean, dry and free of loose paint, mold, dust, and miscellaneous debris and particulate. User must be aware of manufacturing oils that can be present in new construction on galvanized metal (contact Sentinel for guidance on stainless steel, aluminum or other metals). Clean with Sentinel 317 for general cleaning and galvanized oil residuals (ideal for turning vanes, drip pans, fan blades, etc). Care should be taken to not tear or loosen duct liner. Rooftop (penthouse) air handlers can be coated with Sentinel 24-7 HVAC. (Contact Sentinel for specific guidance.) 24-7 ZERO HVAC can be ideal for the sheet metal housing on the outside of air handling equipment. Remove dust and otherwise clean and prime as for painting.

Primers

Cleaned and repaired lined duct, and bare metal duct with no more than speckling of corrosion, can typically be sealed without a supplemental primer (although in unlined metal, note that galvanized metal can still have hydrophobic manufacturing oils/solvents that need to be cleaned with a suitable solvent to attain adhesion). Ordinary rust can be more of a problem.

Primers Continued

Because 24-7 ZERO HVAC is often used in the context of extended and pervasive water intrusion, rusted metal can present a challenge after cleaning. Even metals considered rust proof such as galvanized or stainless steel can develop rust in a severe water or mold loss. Because HVAC projects are often difficult to access, and there are completion pressures as the air system is the last phase of remediation, there is urgency to apply one coating only. However, a professional restorer must be aware that significant rust requires a primer. Consider Sentinel DTM (Direct-to-Metal) primer which is water-based and compatible with 24-7 ZERO HVAC.

Product Application

24-7 ZERO HVAC should be applied at temperatures above 50°F and with an ideal relative humidity level below 50%. Higher RH will impact dry time. To assure proper antimicrobial protection, it is vitally important that all surfaces be completely coated with 24-7 ZERO HVAC.

For airless applications:

Spray Settings: smaller electric 0.5 GPM minimum (*Using Titan Impact 440X Sprayer (or equal) fitted with an RX-80 3600 PSI Spray Gun with a low pressure HEA TR1 517 tip.):

Recommended High-Pressure Tip Size: .017 - .023

Recommended P.S.I.: 2500 - 3000 P.S.I.

Recommended Low-Pressure Tip Size: .017 - .023

Recommended P.S.I.: 1200 - 1500 P.S.I.

*Graco Ultra series: contact for specifics

When using a roller use a 3/8" nap roller and when brushing, use strokes 90° to each other.

Dry Time

This product will be dry to the touch in 1-2 hours and may be recoated in 2 - 4 hours dependent on humidity levels.

Coverage

Smooth Surfaces: 100 - 200 Sq. Ft./Gal [7-4 mils DFT]
Porous Surfaces: 80 - 100 Sq. Ft./Gal [9-7 mils DFT]

Limitations

This product is not designed to be applied at surface and ambient air temperatures less than 50°F. Avoid excessive heat and corrosive chemical environments. Not designed for use on exterior siding or horizontal floor and deck areas. Do not subject to immersion service (e.g., drip pans that do not drain properly). The use of this product does not protect users or others against food-borne or disease-causing bacteria, viruses, germs or other disease-causing organisms.

Warranty

Sentinel 24-7 ZERO HVAC has a 10 year limited warranty against the visible growth of mold and mildew on the cured coating surface.

24-7 Zero HVAC White

FLAT
0-4.9

MATTE
5.0-9.9

EGGSHELL
10.0-19.9

SATIN
20.0-34.9

24-7 Zero HVAC Black

SEMI-GLOSS
35.0-69.9

GLOSS
70.0-84.9

HIGH-GLOSS
85.0-100

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FORMULA **24-7** ZERO HVAC MOLD & MILDEW RESISTANT COATING



TEST DATA/REGULATORY/COMPATIBILITY

Regarding testing for any HVAC resurfacing material/repair coating, specifier and user should read the following important criteria, as referenced in the NADCA¹ white paper *Using Chemical Products in HVAC systems: NADCA Provides Guidance*.

"Users must comply with EPA, state and local regulations. Building codes and/or engineering specifications may require that coatings have been tested to certain ASTM test methods (such as ASTM E 84 and ASTM C 411) as required by the performance protocols of the National Fire Protection Association (NFPA) 90A/90B."

Sentinel 24-7 ZERO HVAC Mold & Mildew Resistant Coating Surface Burning Characteristics (ASTM E 84):

Flame Spread Index: 10 (Class A rating)
Smoke Developed Index: 0 (Class A rating)

The **ASTM E 84** was performed by a Nationally Recognized Testing Laboratory (NRTL). This test is parallel to the **UL 723** test. The product was applied on inorganic reinforced cement board. The flame spread may vary when applied over other surfaces.

Sentinel 24-7 ZERO HVAC Mold & Mildew Resistant Coating meets **NFPA 90A** and **90B 25/50** requirements.

Sentinel 24-7 ZERO HVAC Mold & Mildew Resistant Coating has successfully passed the **ASTM D5590** test, determining the resistance of paint films and related coatings to fungal defacement and the **ASTM G21** test which is the standard practice for determining resistance of synthetic polymeric materials to fungi from a Nationally Recognized Testing Laboratory (NRTL).

Sentinel 24-7 ZERO HVAC Mold & Mildew Resistant Coating contains an EPA registered component which is the active ingredient that supports the mold & mildew resistant properties of this coating.

Sentinel 24-7 ZERO HVAC Mold & Mildew Resistant Coating meets **LEED** requirements for **IEQ Credit 4.2** low emission materials, paints and coatings.

Sentinel 24-7 ZERO HVAC Mold & Mildew Resistant Coating does not contain any ingredients that would disqualify for use in certain FDA food applications {i.e., no components trigger the 21CFR 189 list Substance Prohibited for use in Human Food Requirements.}

Sentinel 24-7 ZERO HVAC Mold & Mildew Resistant Coating is formulated to be applied over most building materials, metals, and plastics. Sentinel 24-7 ZERO HVAC has been tested for CPVC compatibility by Spears Manufacturing. Contact Spears at 800-862-1499 for compatibility information.

SPECIFICATIONS

Physical State:	Liquid
Appearance:	Opaque
Color:	White
Odor:	Characteristic
pH:	8.25 - 9.0
Flash Point:	>199.4°F
V.O.C. Content:	<5 g/L (calc.)*
Viscosity:	120 - 130 KU
% Solids by Weight:	54.79%
% Solids by Volume:	40.91%
Density:	10.9 pounds/gallon
Gloss:	Flat
Shelf Life:	24 Months
Dry Time:	Dry to Touch: 1 - 2 hrs @70 - 77°F, 50% RH Recoat: 2 - 4 hrs @70 - 77°F, 50% RH

Water Vapor

Transmission Rate: <5 perms (dry cup)

*A zero VOC coating by industry standards means the product contains fewer than 5 grams of VOCs per liter.



¹NADCA is the HVAC Inspection, Maintenance and Restoration Association (aka the National Duct Cleaners of America)