MOLD-RESISTANT COATINGS – MOP (Method of Procedures) prepared by Sentinel re: Finishing Off Mold

V 25199

Required for Restoration Professionals:

- Remediation Field Supervisors
- Estimators
- Project Management
- Client Service Representatives
- Leadership

Can be SHARED with:

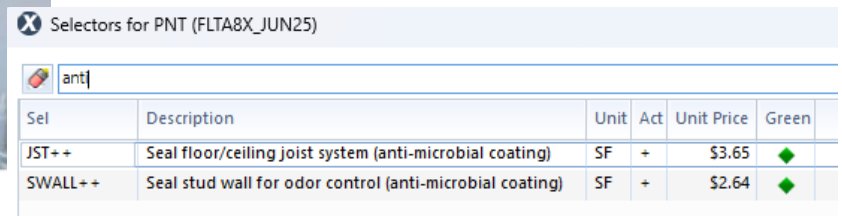
- Adjusters
- Owners
- General Contractors
- Engineers/Consultants

Mold-Resistant Coatings are critical tools in the mold remediation process. This Technical Bulletin from Sentinel provides guidance that can be used internally for education, estimating, and materials management; and, externally to communicate when a mold-resistant coating is timely, effective, and beneficial. Section 1 is a Method of Procedures (a M.O.P) suitable for inclusion in proposals, bids and a Restoration Work Plan (RWP)[i]. Section 2 provides an informative summary of the FFB (Features, Functions, Benefits) that lockdown allergens and other residual trace contamination; and provide a membrane spores may land on, but cannot grow on.

This tech bulletin focuses on the flagship 24-7 Zero Mold-Resistant Coating (MRC), but there are additional targeted solutions available. Contact us if your project may need:

- **Sentinel 24-7 ZERO High-Build**
- **Sentinel 24-7 HVAC**
- **Sentinel 24-7 Zero Waterproofing Sealant**

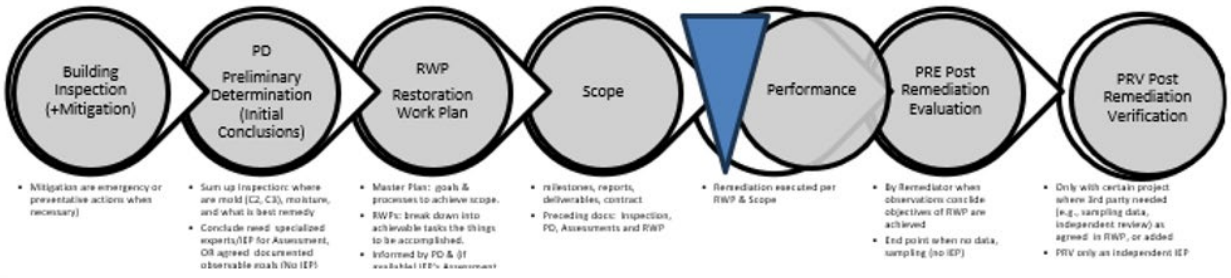
Remember codes:
PNTJST+++ or PNT S+++ (Antimicrobial Coating), and reach out for F9 recommendations



SECTION 1 – MOP (Method of Procedures) for Sentinel 24-7 Zero Mold Resistant Coatings

This is a MOP, i.e., a Method of Procedures (aka a Short Form Spec), which is intended to provide a general and abbreviated description of steps to be performed when using a mold-resistant coating in the context of mold remediation[ii]. Sentinel specifications contain guidance from many sources, but the MOP primary source is the ANSI/IICRC S520 Standard for Professional Mold Remediation, 4th edition (2024)[iii]. The S520 will be cited in this MOP in-line or End (MOP) Notes.

1. Description:
    a. Section Includes: All labor, materials, tools and other equipment, services and supervision required to complete remediation.
    b. Mold Remediation including application of Sentinel 24-7 ZERO mold-resistant coating
    c. Completed work will satisfy the following IN THE WORK AREA: Clean (free of dirt, dust, debris), and dry and no fungal malodor outside the norm for building type and location. Per the S520, completion can be described as:
        i. Elimination of Condition 3 (visible mold)
        ii. Cleanliness sufficient to reasonably presume elimination of Condition 2 (residual fungal fragments, spores, etc.)
        iii. Return to Condition 1 (normal fungal ecology)
    d. Information for 24-7 Zero, such as SDS, label and this Tech Bulletin should be shared with all involved to obtain consent prior to application. Consult client re: 24-7 White or Clear. Prior notice is is a best practice for all chemicals and coatings associated with remediation. Sentinel has advisory forms.
    e. It should be discussed and understood if the mold-resistant coating application should be held until after Quality Assurance (below), or if the coating may be used prior to PRE/PRV.
2. Quality Assurance. For all projects:
    a. Before work begins, the restorer and all parties will decide what objectives must be satisfied, and who will make those determinations (may or may not involve an independent 3rd party)
    b. QA/QC procedures will be in writing in the Restoration Work Plan, and will be documented during work
    c. The restorer will decide when objectives are achieved, and conduct (and document in writing) a Post-Remediation Evaluation (PRE). If previously agreed among all involved that visually completion is sufficient and criteria (per 1.C.i-iii above) are met, then application of 24-7 ZERO can take place to finish the project, and begin remaining reconstruction.
    d. If agreed previously that an independent 3rd party will provide verification, as a specialized expert, of 1.C.i-iii above, then that person will conduct a Post-Remediation Verification (PRV)
3. Typical Process of Mold-Remediation (MOP simplified, see IICRC S520 sec 7)



    a. Inspection – Conduct and document an inspection
    b. Preliminary Determination - Review inspection and other information to develop a documented conclusion re:
        i. Actual or potential mold growth
        ii. Moisture issues

iii. If restorer's professional judgment indicates an independent mold assessor, or other specialized experts may be needed
iv. Draft an RWP for consideration and agreement; compile materials for the SOW.

c. Restoration Work Plan (RWP): An outline of a set of goals and processes by which a team and/or person can accomplish those goals. RWPs break down a process into small, achievable tasks and identify the things to be accomplished.
d. Scope of Work (SOW): Important factors not in an RWP, e.g., a timeline for all deliverables; any milestones, reports and end products that are expected; and permits, estimates, etc.
e. Performance (Structural Remediation)[iv]
    i. Set-Up Work Area: Containment, Pressurization, Filtration, Security (see S520 9.2-3). Expect to maintain integrity of the containment throughout the remediation process, including post-remediation evaluation
        1. Knockdown (optional) to control particulates[v]
    ii. Subtractive Remediation: Demo/removal of unsafe elements and/or surfaces and substances too expensive or impractical to save (S520 9.3.7)
    iii. Cleaning (remediators should ensure all surfaces within the work zone are free of visible mold growth, and visible dirt, dust, and debris.)
        1. Clean from top to bottom. Control particulates but avoid overwetting. HEPA vacuum. Select cleaning methods and chemistry based on project specifics (e.g., Sentinel 300 EnviroWash Peroxide cleaner)
        2. After source removal/cleaning, the client may request an antimicrobial application (e.g., Sentinel 305 Hydrogen Peroxide Disinfectant).
            a. Do not mist or fog disinfectants, oxidizers, sanitizers, stain removers, or other compounds in an attempt to kill or destroy mold as a substitute for source removal.
            b. Identify and document discoloration and stains that do not require mold remediation. Such stains are considered cosmetic/not remediation

4. PRE (Post-Remediation Evaluation)
    a. Remediators should implement internal quality control procedures to confirm completion of the project. Ensure this close-out process, and daily QA/QC are fulfilled and thoroughly documented.
    b. The PRE should include an inspection by the Restorer, visual and otherwise such as: PRE can include olfactory and environmental evaluation and may include the use of tools and equipment such as laser particle counters, ATP meters, and moisture-sensing devices. PRE does not provide numerical confirmation of remediation.
5. Application of 24-7 ZERO Mold-Resistant Coating (MRC)[vi]
    a. Surfaces are already clean after remediation. Remove peeling paint. Discoloration (e.g. bleeding stains) is generally not an issue when not visible to occupants (e.g. cavity/stud wall). Visible areas may be treated with mold stain remover, followed by Sentinel SBP (Stain-Blocking Primer); and areas prone to rust or iron stain (steel, brick) can be primed with Sentinel DTM (Direct-to-Metal primer).
    b. Apply in 1-2 coats, using best painting practices to provide a continuous satin dry film without skipped areas or holidays, using a 90° cross-hatch for brush or roller (3/8"), or double x-hatch for airless spray (Titan 440X or equal. 2500 psi, tip orifice .015-.019, fan 3-5" (15-25 cm).
    c. Coverage is dependent on the porosity and profile of the surface. Estimate 150-300 sq. ft. / gal.

SECTION 2: Use of Mold-Resistant Coatings

Do you have an answer for:

"What can you do to keep the mold from coming back?"

MRCs (Mold-Resistant Coatings) are indispensable to reduce mold growth post-remediation. The way MRCs work is simple, chemical and mechanical: Spores land on the paint-like dry coating, and attempt to take root, but the MRC includes chemistry inhospitable to mold colonization.

How do we know an MRC works?

For guidance on what MRC performance data should be evaluated by restorers, Chart 1 (down, at right) is provided in the IICRC S520 standard, and there are four key qualifiers that should be deliverable:

1. Fire Testing: prove negligible support of flame or generation of smoke
2. Permeability: provide data on how well the MRC allows moisture movement; avoids causing condensation
3. Air Pollutants: demonstrate very low VOCs (Volatile Organic Content)
4. Prevent Mold Growth: No Mold Growth: Even when applied to wood, and exposed to mold, a food source, and ideal conditions (temp, humidity) for 28 days.

Opportunistic Mold

Tropical or temperate, the fungus foothold can happen quickly. According to the Environmental Protection Agency (EPA), mold can start to grow on wet surfaces within 24 to 48 hours. There are several other factors: temperatures above 70°F, relative humidity (RH) of +60%, a repeating condensation cycle, airborne site dust, cellulose-rich nutritious food for mold[1]

Using tests developed by ASTM International, this grid provides basic guidance on how a remediator, and their client can evaluate the suitability of a coating, and to compare coatings available.

Attribute	Test Method	Recommended Performance
No increase in fire risk	ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials	Class "A", (no or minimal contribution to Flame Spread, Smoke Development
Surfaces can breathe (Water vapor is not trapped causing condensation)	ASTM D1653 Standard Test Methods for Water Vapor Transmission of Organic Coating Films	Breathes at a rate of at least 2 Perms (A vapor barrier is <1 Perm)
Does not exceed low VOC requirements	ASTM D6886 Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by Gas Chromatography	Less than 100/grams per Liter
Resist future mold growth on or in the coating film	ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber	G 21: "0" rating = no growth, or D3273 "0" rating = no growth

Chart 1: Suitability of Coating Chart

Remediators asked to use a coating *should* ask the product manufacturer for documentation that satisfies the performance attributes recommended in Chart 1.

SENTINEL 24-7 ZERO and all the Sentinel coatings for Mold Remediation meet or exceed the recommended requirements in the IICRC S520 Standard.

Available in

White or **Clear**

MOP NOTES

[i] This MOP is for structural remediation, and due to space limitations cannot also encompass how to use the HVAC, High-Build, and Waterproofer versions of 24-7 line of mold-resistant coatings.

[ii] For a compendium specification (i.e., comprehensive as possible) contact Sentinel. For a B+A (Bid & Applicators) specification that addresses project setup and similar, contact Sentinel.

[iii] The user is NOT obligated to utilize this specification in entirety, but instead is encouraged to adopt/adapt/apply those into project documents governing this work. No Restorer or Specifier should propose or assert that work satisfies an IICRC Standard or other standard of care/guidance document. Every project is unique, and no project will involve every issue addressed by a Standard.

[iv] Structural remediation is defined as that portion of a remediation project that deals specifically with a building's structure and typically does not address a building's contents or HVAC components.
regulations.

[v] a method of dust control (suppression and/or capture). See Definitions S520. Fog and mist are put into the air by special equipment with the intent to remain airborne for a predictable amount of time long enough to attach to or absorb solid particulates and when heavy enough, will fall to the ground (i.e., knock or pull them down to the surface below). The droplets and particulates that fall to surfaces due to knockdown are considered knockdown residue, or simply, residue. Physical cleaning of the knockdown residue is required

[vi] For complete surface preparation, review datasheet for 24-7, and 02 85 00 or 02 87 13 AIA/CSI/CSC Specifications.