##### **DIVISION 2 – EXISTING CONDITIONS**

**02 87 13 MOLD REMEDIATION**

**(alternative: 02 51 29 SURFACE CLEANING DECONTAMINATION)**

1. Any/all of these notes for specifiers may be retained in the final project specification, or reviewed and then discarded. This is entirely at the discretion of the specifier.
2. This is a specification prepared by [MasterWorks](https://www.icpmasterworkscommunity.com/s/), the education and specification entity of [ICP (Innovative Chemical Products](https://www.icpgroup.com/)). The ICP Group specializes in manufacturing and distributing professional products for building applications and industrial coatings & adhesives. ICP manufactures products for approximately 20% of the divisions, sections and subsections of the MasterFormat system managed and utilized by AIA, CSI, CSC, SCIP and most other entities engaged in the design, construction and operation of the built environment in North America.
3. ICP may provide a COMPENDIUM model specification, such as this one, for complex functions often requiring targeted training, possible licensing, and frequently a specialist subcontractor. The intent of a compendium specification is achieving as comprehensive inclusion of project factors as possible.
4. The specifier is NOT obligated to utilize this compendium specification in entirety, but instead is encouraged to adopt/adapt/apply those provisions which are applicable to specific projects.
5. It is understood that certain project dynamics preclude the use of product or manufacturers’ names. Section 2, Basis of Design, is intended to provide the specifier with performance criteria that can be utilized to establish minimum criteria, but without identifying any specific product by name, model number or manufacturer. For those specifiers, simply omit the product and manufacturer name, and utilize those performance criteria that are most project- applicable as the minimum requirements for submittals.
6. This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by the following method in Microsoft Word: Display the FILE tab on the ribbon, click OPTIONS, then DISPLAY. Select or deselect HIDDEN TEXT. Hidden text availability, minute detail and/or deep background, may be indicated by a superscript h: h
7. Additional textual information, including information for supplementary ICP products, is also available in an End Notes area separated from and after the main body of this Section. The Specifier has the option to retain these End Notes, keep certain notes relevant to a project, or delete the End Notes altogether. The availability of an End Note is indicated by a lowercase roman numeral. Clicking on that roman numeral helps the reader jump back and forth between the main text, and the note.

QUICK REFERENCE GUIDE TO THIS SPECIFICATION PACKAGE

(included hyperlinks will bring the reader to that section of this compendium specification)

[**GENERAL REQUIREMENTS (SECTION 1)**](#GENERAL_REQUIREMENTS)

[NOTES TO USERS OF THIS DOCUMENT (SPECIFIERS)](#notes_to_users)

[QUALITY ASSURANCE](#quality_assurance)

[CONTRACTOR REQUIREMENTS](#CONTRACTOR_REQUIREMENTS)

[SUBMITTALS](#submittals)

[PRODUCT DELIVERY, STORAGE AND HANDLING](#PRODUCT_DELIVERY)

[SITE CONDITIONS](#SITE_CONDITIONS)

[**MATERIALS (SECTION 2 - BASIS OF DESIGN)**](#basis_of_design) h

* [CLEAN](#MATERIALS_CLEANING_MOLD) ([CONTAMINATION](#MATERIALS_CLEANING_MOLD) & [STAIN REMOVERS](#MATERIALS_IMSR_MOLD_sTAIN_REMOVER)) h
	+ APC ADVANCED PEROXIDE CLEANER
		- HYDROBOOST
	+ ATOMIC BOTANICAL DEGREASER
	+ IMSR INSTANT MOLD STAIN REMOVER
* [KILL (FUNGICIDE-EPA/PH-CANADA REGISTERED DISINFECTANTS & SANITIZERS)](#MATERIALS_KILL_MOLD) h
	+ [READY-TO-USE DISINFECTANT/SANITIZER/DEODORIZER, BOTANICAL](#MATERIALS_KILL_RTU_BOTANICAL)
		- BENEFECT DECON 30
	+ [READY-TO-USE DISINFECTANT/SANITIZER/DEODORIZER, CONVENTIONAL](#MATERIALS_KILL_RTU_CONVENTIONAL)
		- SHOCKWAVE RTU
	+ [READY-TO-USE DISINFECTANT/DEGREASER-EMULSIFIER, DEODORIZER, CONVENTIONAL](#MATERIALS_DISINF_DEGREASER)
		- IAQ 2500
	+ [CONCENTRATE DISINFECTANT/SANITIZER/DEODORIZER, CONVENTIONAL](#MATERIALS_KILL_CONCENTRATE_CONVENTIONAL)
		- SHOCKWAVE CONCENTRATE
* [COAT (FUNGICIDAL & MOLD-RESISTANT COATINGS FOR REMEDIATION)](#MATERIALS_MOLD_REMEDIATION_COATINGS) h
	+ [FUNGICIDAL COATING](#MATERIALS_FUNGICIDAL_COATING)
		- AFTERSHOCK
	+ [MOLD-RESISTANT COATING](#MATERIALS_MOLD_RESIST_COATING)
		- IAQ 6000 TINTABLE WHITE
		- IAQ 6100 CLEAR
		- IAQ 6000HD (HEAVY-DUTY)

[**EXECUTION (SECTION 3)**](#EXECUTION)

[HYPERGLOSSARY](#HYPERGLOSSARY)

[END NOTES (SUPPLEMENTARY INFORMATION & IMPORTANT LINKS)](#END_NOTES)

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--------------- BEGIN SECTION --------------

DIVISION 2 – EXISTING CONDITIONS

02 87 13 MOLD REMEDIATION

1.00 GENERAL REQUIREMENTS

1.01 WORK INCLUDED

A. Provide labor, equipment, and materials to complete mold remediation in accord with industry best practice three-step process: clean, kill, coat[[1]](#endnote-1). Prior to these three steps identify and eliminate the moisture intrusion causing the mold infestation; and, conduct demolition and component/contents removal of unsalvable surfaces. For the remediation of correctable surface mold conditions, use a site-specific combination of sequential steps: Cleaning methods, Surface Disinfecting / Sanitizing, and application of a Fungicidal or Mold-Resistant Coating [[video available](http://adr.sh/1sd5/bgmv/d/n)]. Surfaces to remediate may be indicated on the drawings, and/or specified herein as an eradication *where-found* performance requirement. This specification is primarily intended to govern the utilization of chemical and coating products common to professional mold remediation. This document cannot relate all methodology employed in remediation, but includes substantial contextual information. See the EndNotes, as well as the Notes to Users at 1.02.D below for limitations and guidance to improve use of this document.

1.02 RELATED SECTIONS[[2]](#endnote-2)

1. Specified elsewhere:
	1. Subsection 00 31 26.33 - Existing Mold Information
	2. Subsection 02 26 33.13 – Mold Assessment
	3. Section 02 51 29 – Surface Removal Decontamination
	4. Subsection 02 51 33.19 – Surface Removal Decontamination by Ultrasound
	5. Subsection 00 31 26.33 - Existing Mold Information
	6. Subsection 02 26 33.13 – Mold Assessment
	7. Section 02 51 29 – Surface Cleaning Decontamination
	8. Section 02 80 00 – Facility Remediation
	9. Section 02 87 00 – Biohazard Remediation
	10. Subsection 02 87 13.19 - Mold Remediation Clearance Air Sampling
	11. Section 07 10 00 – Damproofing and Waterproofing
	12. Section 09 09 00 – Finishes
	13. Section 23 05 63 - Anti-Microbial Coatings for HVAC Ducts and Equipment
2. Incorporates (in whole or in part):
	1. Section 07 19 28 Mold-Resistant Sealer
	2. Subsection 02 87 13.13 – Precautions for Mold Remediation
	3. Subsection 02 81 13.16 – Mold Remediation Preparation and Containment
	4. Subsection 02 87 13.33 – Removal and Disposal of Materials with Mold
3. Referencesh
	1. Institute for Inspection, Cleaning and Remediation Certification (IICRC)
	2. Restoration Industries Association (RIA)
	3. U.S. Environmental Protection Agency (USEPA, EPA)
	4. Health Canada (Public Health Canada, HC)
	5. Indoor Air Quality Association (IAQA)
	6. American Institute of Architects (AIA)
	7. International Sanitary Supply Association (ISSA)
	8. The HVAC Inspection, Cleaning and Restoration Association (NADCA)
	9. Construction Specifications Institute (CSI)
	10. Construction Specifications Canada (CSC)
	11. ASTM International (formerly American Society for Testing and Materials)
	12. ANSI (American National Standards Institute)

D. Notes to Users of this Document (e.g., Architects, Engineers, Designers and Consulting Professionals (IEPs)):

1. The MasterWorks team (formerly the ICP Design Services Team (DST)) has prepared this compendium specification. Users of this specification are strongly encouraged to engage MasterWorks’ resources and industry expertise in customizing this specification:[[3]](#endnote-3)
	1. Web: [www.icpmasterworkscommunity.com](https://www.icpmasterworkscommunity.com/s/)
	2. Email: specifications@icpgroup.com
	3. Phone: 800-342-3755 x 2241
2. All construction projects are unique. Mold can be present in new construction, remodeling, renovation, as a consequence of disaster, and in an unlimited variation of circumstances. This specification for mold remediation is not inclusive of all requirements, methods or procedures that are appropriate or necessary on a particular mold remediation project. Ultimately, it is the responsibility of the involved parties (e.g., Installer/Applicator, Remediator/Restorer, General Contractor, Owner, Client, Enforcement Authority, Architect, Engineer or Consultant(IEP)) to verify on a case-by-case basis that applications of this specification are appropriate.
3. Involved parties in mold remediation should consider engaging qualified specialists in indoor air quality for both design and implementation of the scope of work. h Qualified professionals are important when considering health sensitivity of occupants, and/or health preconditions. One resource to identify IAQ professionals is the search interface at [www.iaqa.org](http://www.iaqa.org).[[4]](#endnote-4)
4. The focus of this specification is the utilization of chemical and coating products common to professional remediation. Successful mold remediation will encompass several other tools and practices. The fundamental principle of mold remediation is removal of mold and correction of the conditions causative of growth. Cleaners, chemicals, disinfectants, stain removers, sanitizers and coatings are useful and complimentary tools, but should not be used indiscriminately, or as a substitute for mold removal.
5. This specification is intended to be fully consistent with, at the time of this document’s use, one of the most generally accepted and peer-reviewed standards of care: IICRC S520 *Standard for Professional Mold Remediation*. Therein, a “standard of care” is defined: *“practices that are common to reasonably prudent members of the trade who are recognized in the industry as qualified and competent.”* That standard includes the following statement of principle: *“Physically removing mold contamination is the primary means of remediation. Mold contamination should be physically removed from the structure, systems, and contents .... Attempts to kill, encapsulate or inhibit mold instead of proper source removal generally are not adequate.”* This specification is best utilized in accordance, as cited here, with this fundamental principle of mold remediation. Do not use Benefect or Fiberlock brand products to encapsulate active mold growth.
6. IEP, Indoor Environmental Professional, is a term used in Mold Remediation for any expert qualified to assess mold causation, recommend a Scope of Work (SOW), oversee execution of that scope, and perform a Post-Remediation Verification (PRV) of successful completion of the work. h The IEP is defined in the IICRC S520 *Standard for Professional Mold Remediation* (See Quality Assurance), as well as provides considerations of when an IEP is highly recommended, versus when one may not be needed. ICP believes that whenever practical, and whenever occupant health is sensitive, an IEP should be employed, and that IEP should be an independent third party.
7. This specification does not apply to mold remediation of building contents.
8. This specification would require significant adjustment as a Scope Of Work for use in projects involving mold in Air Conveyance Systems (ACS), aka Heating, Ventilation, Air Conditioning & Refrigeration (HVAC&R) systems. h It is highly recommended to consult the following resources:
	1. [*Using Chemical Products in HVAC Systems*](http://adr.sh/1sd5/92oa/d/l)*: NADCA Provides Guidance*, 2015. Published by The HVAC Inspection, Cleaning and Restoration Association (NADCA)[[5]](#endnote-5).
	2. *HVAC Remediation,* Section 13 of ANSI/IICRC S520 *Standard for Professional Mold Remediation,* [2015 or current edition[[6]](#endnote-6)]
	3. The HVAC Inspection, Cleaning and Restoration Association (NADCA) standard, *Assessment, Cleaning and Restoration of HVAC Systems* (ACR 2013 or current version[[7]](#endnote-7)).
	4. Air Conditioning Contractors of America (ACCA*) Restoring the Cleanliness of HVAC Systems* (ANSI/ACCA Standard 6 QR-2015 or current version[[8]](#endnote-8)).
	5. ICP also has products and experience with mold remediation in these systems, and some of that information can be accessed [here](http://adr.sh/1sd5/6ehf/d/k).
9. Deviation: Certain projects will involve unavoidable circumstances that prevent mold remediation in full accord with the professional standard of care, and the tenets of this specification. h A separate and specific specification should be developed in consultation with all parties, including product manufacturers, when deviation from the currently practiced mold remediation standard of care is the only option for achievement of the objectives of the property owner.
10. Coordination: Coordinate with local and State health departments to ensure that current cleaning and disinfecting protocols and guidelines are followed.
11. Superiority: Where contradicted by federal, state, or local laws and regulations, any of the preceding supplant the information in this document.
	1. QUALITY ASSURANCE
12. Cited Standards are incorporated herein by reference and govern the work:
	1. ANSI/IICRC S520 *Standard for Professional Mold Remediation,* 4th Edition*,* 2015 [or current][[9]](#endnote-9)
	2. ANSI/IICRC R520 *Reference Guide for Professional Mold Remediation,*4th Edition*,* 2015[[10]](#endnote-10)
13. Single Source Responsibility: Obtain cleaners, antimicrobial disinfectant, and mold-resistant or fungicidal coatings from a single manufacturer with not less than 15 years of successful experience in manufacturing and specifying installation of the principal materials described in this specification. h Specifiers, General Contractors and Owners shall favor single-sourced submittals because it assures chemical compatibility, eases troubleshooting (for user, vendor and owner), and the marketplace provides multiple suppliers that can satisfy this requirement. When ancillary materials are dictated by the project (e.g., bonding primer), submittors shall provide secondary/supplementary materials only of type and from a source recommended by the manufacturer of the primary material(s).
14. Contractor Experience: The installer shall be a firm or individual experienced in mold remediation (including associated methodologies not in this specification (e.g., structural drying); and the cleaning and coating functions of remediation described herein) as necessary to achieve the restoration objectives indicated by the project documents and written stated aims of the employer. Contractor must furnish the following proof of experience:
	1. Letter or Certificate provided directly by Approved cleaning & antimicrobial products manufacturer(s) stating that contractor (including project dedicated supervisor(s)) has/have completed and satisfactorily demonstrated competent understanding of instructional training in general Mold Remediation, and specific use of the Approved cleaning and antimicrobial products. [[11]](#endnote-11) [[12]](#endnote-12)
15. Sampling of Material:
	1. When directed by Architect/Engineer, obtain test samples from material stored at the project site or source of supply (distributor or manufacturer).
		1. Surface Compatibility: Perform testing on inconspicuous area(s) of materialsh already installed (or representative samples offsite) to assess in advance whether the proposed cleaning &/or disinfection plan will unintentionally result in temporary change in appearance, a need for an additional procedure (e.g., wipe or rinse), and/or a permanent change in surface appearance or function.
		2. Occupant Compatibility: When sensitive occupants could smell or perceive odor and/or residues associated with cleaning and disinfecting activities, samples must be made available for occupant evaluation. h Those responsible for Quality Assurance should design an in-person advance opportunity for sensitive occupants to smell products as they will be used; as well as touch mock-up surfaces representative of surfaces post-cleaning & disinfection, and the projected use pattern of such surfaces by occupants.
		3. Note that even when sampling is conducted, the exposure to cleaning and disinfection products must be within reasonable expectationsh. Occupants, pets, staff, and anticipated visitors should be isolated from activity involving aerosolized/airborne/respirable cleaning or disinfecting liquids. Sensitive surfaces such as bird perches, pet cages, and aquariums should never be exposed to any disinfectant or cleaning product (unless pre-approved by a qualified veterinary professional). High-value and/or delicate substrates should be isolated from exposure, and handled by specialists qualified for such items.
16. Pilot Application/Mock-Up: Upon request (By Owner, Client, Enforcement Authority, Assessor, Architect or Engineer), it may be determined necessary to provide a mock-up for evaluation of surface preparation techniques, validation of performance expectations, and anticipated application workmanship. h
	1. Clean surfaces designated for verification of suitability of proposed procedures. Do not conduct pilot application on materials requiring removal due to deterioration.
	2. Disinfect (or sanitize)[[13]](#endnote-13) surfaces designated for verification of suitability of proposed procedure
	3. Apply mold-resistant or fungicidal coating designated for verification of suitability of proposed procedures.
	4. Do not proceed with remaining work until pertinent project authority (By Owner, Client, Enforcement Authority, Assessor, Architect or Engineer), approves the mock-up.

1.04 SUBMITTALS (as directed to Owner, Client, Enforcement Authority, Assessor, Architect, Engineer or Consultant) **[all submittals to be electronic (PDF or MSWord)**

1. Submit product information including technical data, labels and warranty (warranty only for mold-resistant or fungicidal coating). (reference Section2 Basis of Design, as well as end notes of this specification for system components potentially employed).
2. Submit contact information for pertinent local representative of cleaning and antimicrobial products manufacturer. Manufacturer must have representation both sufficiently local and knowledgeable that assistance is available and informative in order to resolve project and product-specific questions.
3. Submit Manufacturer’s Safety Data Sheets (SDS).
	1. Volatile Organic Compounds (VOCs): Content of VOCs shall not exceed pertinent regulations regarding VOCs. h To ensure compliance with district regulations and other rules, businesses that perform antimicrobial activities should contact the local district in each area where the cleaner, antimicrobial, and mold-resistant or fungicidal coating will be used.
4. Submit manufacturer’s certification (e.g., letter from corporate official) that the antimicrobial disinfectant proposed is both nationally authorized (EPA-registration numbers or Public Health DIN numbers should be supplied as appropriate for project location), as well as registered by the pertinent agencies/entities in the state/province where the product is to be sold &/or used. h Jurisdictions other than US and Canada are likely to have a form of antimicrobial evaluation and registration required prior to use. Documentation should be supplied as available.

Notes on Submittals: h

1. Bidders are encouraged to submit materials that meet the Basis of Design. In order to have a material accepted as Approved for the work outlined herein the alternate or substitute proposed must be received by the appropriate party (e.g., IEP or architect) for evaluation and approval no less than 21 days prior to the original published bid date. Approved alternate products will be by Addendum only. Submittals circumventing this process will not be approved and will not be acceptable for inclusion in this project.
2. Substitutions will only be considered for products manufactured by companies of primarily U.S. ownership, and when the proposed substitute product is “all or virtually” all manufactured in the United States (in accord with the Made in USA Standard of the Federal Trade Commission (FTC).

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

1. Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and product number.
2. Storage of materials:
3. Store only acceptable project materials on site.
4. Store in suitable and secured location convenient to progress of work.
5. Comply with health and fire regulations. No products listed in the Basis of Design are flammable or combustible.
6. Storage temperature shall be between 40° F (4.5 C) and 90° F (32 C), or such other ambient temperature conditions as may be specifically recommended by product manufacturer.
7. Products shall not be permitted to freeze on site, and delivery should be refused if freezing during transit is probable.
8. Avoid storage directly in hot sun exposures or excessive temperatures. h
	1. Peroxide cleaners can deteriorate in excessive heat resulting in decreased efficacy.
	2. Peroxide deterioration will generate gaseous oxygen and water vapor that can increase pressure inside container, and possibly result in container breach/rupture.
9. Keep containers tightly closed when not in use.
10. Store securely closed and upright in original container. Lids or caps can leak if containers are placed on side.
11. Keep out of reach of children.
12. Handling:
	1. Dispose of materials in accordance with requirements of local authorities having jurisdiction.
	2. Verify that products are within acceptable shelf life, and do not utilize any product that is older than the maximum shelf life stated by the manufacturer.
13. Extra Materials:
	1. Furnish extra mold resistant or fungicidal coating materials in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
	2. Furnish Owner with sufficient additional mold-resistant or fungicidal coating to address an additional one percent of overall surface area, but not less than 1 gal (3.8 l), pail (19 l),or 1 case, as appropriate and collectively agreed upon in advance of substantial completion.

1.06 [JOBSITE CONDITIONS](#SITE_CONDITIONS)

 A. Environmental requirements

1. Comply with manufacturer’s recommendations as to environmental conditions under which all chemicals and coatings can be applied.
	1. Temperature: Do not apply products at temperatures beyond limits stated in the manufacturer’s technical data sheet unless given written permission by the manufacturer. h
		1. At Application: Surfaces to be cleaned and sanitized and ambient air temperature shall be between 32° F and 110° F.
		2. At Application: Surfaces to receive the mold-resistant or fungicidal coating and ambient air temperature shall be between 50° F and 90° F.
2. Surface/Substrate Moisture:
	1. Moisture in excess associated with the germination and amplification of microbial activity is to be corrected prior to any remediation work, although this specification may be employed in areas where moisture is a constant at above normal levels, and therefore regular specialty cleaning is necessary for microbial control. h
	2. Consult manufacturer regarding whether topical dampness (latent moisture tangible by touch) after wet cleaning or recent precipitation is acceptable at time of application of coatings or installation of replacement insulation or wallboard, or if a completely dry (absence of above-normal topical and subsurface moisture) surface is required. Applicators are expected to account for slow-drying surface elements (such as shaded areas, hairline cracks, nail holes). [[14]](#endnote-14)
3. Humidity: There are no minimum humidity requirements although the applicator must be cognizant that low humidity will accelerate drying, When drying is encouraged by low humidity, high temperature, and/or rapid air movement, the applicator may need to compensate with repeated applications during the specified dwell time to ensure that the disinfectant wet contact time is attained.
4. [RESERVED]
5. Surface Protection/Prevention of Cross-Contamination: Cover or otherwise protect adjacent areas. Identify adjacent areas which could be cross-contaminated by remediation activity.
	1. Careful attention should be paid to any occupied areas in the vicinity of the work area.
	2. Utilize adequate engineering controls to ensure worker and occupant safety and health, and prevent cross-contamination. Engineering controls may include, but are not limited to, source containment, isolation barriers, pressure differentials, dust suppression, and high efficiency particulate air (HEPA) vacuuming and filtration.
6. Provide adequate illumination and ventilation throughout mold remediation project, including during application of cleaners, antimicrobial disinfectants/sanitizers, and fungicidal or mold resistant coatings.
	1. Air movers, negative air machines, and dehumidifiers utilized in structural drying and demolition/removal of unsalvageable surfaces may continue in operation during mold removal, surface sanitizing and coating application.
	2. Air movement and filtration equipment can continue to operate during and after the application of mold-resistant coatings. Continued use of this equipment can assist in controlling airless spray applications, help coalescence and curing of the coating film, and further structural drying. Implement power supply and equipment operation, positioning, and procedures are consistent with equipment manufacturer’s recommendations.

2.00 PRODUCTS

2.01 MATERIALS (Basis of Design)

1. **CLEANING FOR MOLD REMEDIATION: CONTAMINANT & STAIN LIFTING BIODERGRADABLE PEROXIDE CLEANER, READY-TO-USE**
	1. **ADVANCED PEROXIDE CLEANER (**[**APC**](http://adr.sh/58HtRM)**) [or equal]**
	2. **Product ID: 8314**h
		1. **Available:**
			1. **Case of 5 Gallons: 8314-2.5-C (Case Total – 5G; 18.9 liters)**
			2. **Case of 1 Gallons: 8314-1-C4 (Case Total - 4G; 3.78 liter per jug)**
			3. **Case of Quarts: 8314-Q-C12 (Case Total – 3G).**
	3. **Manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755)** [**www.fiberlock.com**](http://www.fiberlock.com) **[or equal]**
	4. **Document Server Links for product:** [**OVW**](http://adr.sh/1sd5/6ehb/d/i)[**TDS**](http://adr.sh/1sd5/6eid/d/i)[**SDS**](http://adr.sh/1sd5/6elj/d/i)[**LBL**](http://adr.sh/1sd5/6ent/d/m) [**VID**](https://www.youtube.com/watch?v=fqoebRwB3gM)
	5. **Key Attributes of Cleaner**h
		* 1. **Exposure: Interior/Exterior**
			2. **Active Ingredient: Hydrogen Peroxide**
			3. **Peroxide Content: 5-7.9%**
			4. **Color: Clear**
			5. **Odor: None**
			6. **Dyes/Pigments: None**
			7. **Reodorants: None**
			8. **Foaming: High Foaming**
			9. **Flash Point: Non-combustible**
			10. **pH: Neutral Range 7.5-8.5**
			11. **Maximum VOC: 0 g/l**
			12. **Biodegradable: Peroxide ingredient breaks down into water vapor and oxygen; surfactant system and other ingredients biodegrade.**
			13. **Shelf Life: 12 months maximum[[15]](#endnote-15)**
			14. **Coverage: 500-1000 sq. ft../gallon**
			15. **Miscible/Dilution: Ready-To-Use**
	6. **BOOSTER-CATALYST-ACCELERANT:** **HYDROBOOST ADDITIVE SPECIFIC TO APC (OPTIONAL[[16]](#endnote-16))**
		1. **Product ID: 8313**h
		2. **Available:** h
			1. **Case of Quarts: 8313-Q-C12 (Case Total – 12 quarts per case).**
		3. **Manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com [or equal]**
		4. **Document Server Links for product:** [**OVW**](http://adr.sh/1sd5/6ehe/d/t)[**TDS**](http://adr.sh/1sd5/6eif/d/t)[**SDS**](http://adr.sh/1sd5/6elb/d/w)[**LBL**](http://adr.sh/1sd5/6enk/d/t)[**VID**](http://adr.sh/1sd5/fd6j/d/t)
		5. **Key Attributes of Catalyst**h
			1. **Exposure: Interior/Exterior**
			2. **Active Ingredient: Sodium Metasilicate**
			3. **Color: Translucent Red**
			4. **Odor: Mild**
			5. **Foaming: High Foaming**
			6. **Active/Useful “Pot Life” of Solution (Mixed Only with APC): 15 minutes dwell. Apply within 5-10 minutes**
			7. **Mix Rate: 16 ounces per gallon (APC); One Quart bottle HydroBoost will make 2 gallons of usable product.**
			8. **Flash Point: Non-combustible**
			9. **pH: 13-14**
			10. **Surface Compatibility: Advanced Peroxide Cleaner. Do not use this product on any surface that could be damaged by a high pH alkaline cleaner. Always test substrate in an inconspicuous area to determine if the solution will adversely affect the target material. This product is not intended for use on aluminum, magnesium, zinc or other soft metal as pitting and etching can occur. Will degloss painted surfaces. Do not use on fine or finished woods as APC Booster can affect the finish of the wood. Do not use on glass. Protect floors and surrounding surfaces from contact. Promptly clean off any overspray or dripping from floors.**
2. **CLEANING FOR MOLD REMEDIATION: BOTANICAL CLEANER/DEGREASER, CONCENTRATE**
	1. **ATOMIC BOTANICAL CLEANER & DEGREASER (ATOMIC) [or equal]**
	2. **Product ID: 80475**h
		1. **Available:**
			1. **Case of 1 Gallons: (Case Total - 4G; 3.78 liter per jug)**
			2. **Five Gallon Pail (18.9 Liters)**
			3. **Fifty-Five Gallon Drum (208 Liters)**
	3. **Manufactured by BENEFECT, a brand of the ICP BUILDING SOLUTIONS GROUP; Administrative Offices: 150 Dascomb Road, Andover, MA 01810. 800-909-2813** [**www.benefect.com**](http://www.benefect.com)
	4. **Document Server Links for product:** [**OVW**](http://adr.sh/1sd5/a3rv/d/o)[**TDS**](http://adr.sh/1sd5/a8il/d/o)[**SDS**](http://adr.sh/1sd5/a3u2/d/o) **LBL** [**VID**](https://www.youtube.com/watch?v=VG4dP5YLxeU)
	5. **Key Attributes of Cleaner**h
		* 1. **Exposure: Interior/Exterior**
			2. **Active Ingredient: Plant derived surfactants and essential oils, solvent-free**
			3. **Bio-Based Content: 100%**
			4. **Color: Clear (Amber, Hazy)**
			5. **Odor: Slight Detergent**
			6. **Dyes/Pigments: None**
			7. **Reodorants: None**
			8. **Foaming: High Foaming**
			9. **Flash Point: Non-combustible**
			10. **pH: 10.9-11.0**
			11. **Maximum VOC: 0 g/l**
			12. **Biodegradable: Complete**
			13. **Shelf Life: 3 years minimum**
			14. **Coverage: 200-500 sq.ft./gallon**
			15. **Miscible/Dilution: For mold & biofilms, mix from 16 oz/gallon to using full strength.**
3. **CLEANING FOR MOLD REMEDIATION: ENGINEERED HYPOCHLORITE MOLD STAIN REMOVER, READY-TO-USE**
	1. **IMSR (INSTANT MOLD STAIN REMOVER) (**[**IMSR**](http://adr.sh/1sd5/6ehh/d/i)**) [or equal]**
	2. **Product ID: 8317**h
		1. **Available:**
			1. **Case of 1 Gallons: 8317-1-C4 (Case Total - 4G; 3.78 liter per jug)**
	3. **Manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755)** [**www.fiberlock.com**](http://www.fiberlock.com) **[or equal]**
	4. **Document Server Links for product:** [**OVW**](http://adr.sh/1sd5/6ehh/d/i)[**TDS**](http://adr.sh/1sd5/6ejo/d/i)[**SDS**](http://adr.sh/1sd5/7pa9/d/p)[**LBL**](http://adr.sh/1sd5/6en1/d/m)
	5. **Key Attributes of Cleaner**h
		* 1. **Exposure: Interior/Exterior**
			2. **Active Ingredient: Sodium Hypochlorite**
			3. **Color: Straw**
			4. **Odor: Chlorine**
			5. **Reodorants: None**
			6. **Flash Point: Non-combustible**
			7. **pH: 12-14**
			8. **Shelf Life: 6 months maximum**
			9. **Coverage: 200-500 sq.ft./gallon**
			10. **Miscible/Dilution: Ready-To-Use**
4. **DISINFECTANT-SANITIZER-DEODORIZER (KILL STEP) FOR MOLD REMEDIATION:**  **READY-TO-USE DISINFECTANT, BOTANICAL:**
	1. **DECON 30: [or equal]** h
		1. **Product ID: 20476.**
			1. **Available in one-gallon/3.79 L container**
			2. **Available in 55-gallon/208 L container**
			3. **Other production sizes include 4 Ounce spritz bottle, 5-Gallon, 275-Gallon Tote**
	2. **Document Server Links for product: OVW** [**TDS**](http://adr.sh/1sd5/a8ii/d/q)**-US** [**TDS**](http://adr.sh/1sd5/a8im/d/q)**-CAN** [**TECH BULL**](http://adr.sh/1sd5/cgxm/d/q)**ETIN** [**SDS**](http://adr.sh/1sd5/a3tw/d/q)[**LBL-**](http://adr.sh/1sd5/bgic/d/q)**US** [**LBL**](http://adr.sh/1sd5/a3ra/d/q)**-CAN** [**VID – TOP 10**](http://adr.sh/1sd5/e31p/d/q) [**VID**](http://adr.sh/1sd5/bgmv/d/n)
	3. **Manufactured by BENEFECT**
		1. **a brand of the ICP BUILDING SOLUTIONS GROUP;**
			1. **Administrative Offices: 150 Dascomb Road, Andover, MA 01810.**
			2. **Manufactured at ICP, 405 N. Oakwood Ave., Waukegan, IL 60005 USA**
			3. **800-909-2813 or 905-528-7474**
			4. [**www.benefect.com**](http://www.benefect.com)
	4. **Key Performance Attributes of Disinfectant**h
		1. **Exposure: Interior/Exterior**
		2. **Active Ingredient: Botanical Thymol present as a component of Thyme Oil.**
		3. **Active Ingredient Content: 0.05%**
		4. **Environmental/Sustainability Criteria:**
			1. **UL Ecologo 2794**
			2. **WoolSafe approved**
			3. **No synthetic fragrances, dyes, ammonia or chlorine or endocrine disruptors**
			4. **100% Bio-Based Content, no petrochemicals or petroleum derivatives**
			5. **Water-based**
		5. **Color: Clear**
		6. **Odor: Lemon & Thyme**
		7. **USEPA Registration Number: 84683-3-74771 [[17]](#endnote-17)[[18]](#endnote-18)**
		8. **Hospital-Grade Disinfectant (CDC/EPA Pandemic Requirement): Yes**
		9. **EPA Microorganism kill Claims (Range, Type): 14 claims on EPA-registered label for pathogenic organisms, including:**
			1. **Bacteria: 5**
				1. **MRSA: Yes.**
			2. **Viruses: 6**
				1. **Influenza: Yes (H1N1, H3N2)**
				2. **Rhinovirus: Yes**
				3. **Norovirus: Yes**
			3. **Fungi (Molds): 3**
		10. **COVID Pandemic:**
			1. **EPA List N for SARS-CoV-2: Yes**
				1. **Qualified on List N for Healthcare: Yes**
				2. **Qualified on List N for Institutional: Yes**
				3. **Qualified on List N for Residential: Yes**
			2. **Health Canada’s COVID-19 interim measure List: Yes**
			3. **EPA Emerging Viral Pathogens program: Yes**
		11. **Health Canada: DIN 02415046**
		12. **EPA Toxicity Category: IV (lowest available rating)**
		13. **EPA-Required Signal Word: None**
		14. **FDA: FDA GRAS (Generally Regarded As Safe) & Food Additives List**
		15. **Polarity: Non-anionic**
		16. **Soil Load (Effective in the presence of): 5% organic soil**
		17. **Foaming: Foaming with Foaming Applicator Device Only**
		18. **Flash Point: none**
		19. **pH: 4.0-5.0 (Not Corrosive)**
		20. **HAPS & Volatile Solvents: Zero**
		21. **Shelf Life: 24 months minimum (Anticipated 5 years)**
		22. **Freeze Thaw: 3+ cycles**
		23. **Contact Time:**
			1. **Most fungal, bactericidal and virucidal contact times per the USEPA registered label of >10 minutes for disinfection**
			2. **Multiple sanitizing label claims for bacteria: as rapid as 30 seconds.**
		24. **Hard Non-Porous Surfaces (Disinfection): Yes (EPA)**
		25. **Sanitizer for Carpet: Yes (EPA)**
		26. **Used on semi-porous and porous surfaces: Yes (EPA)**
		27. **Use Sites (Structure/Building Types & Purposes): 26**
		28. **Coverage: 600-1200 sq. ft./gallon (Porous up to Hard, Non-Porous)**
		29. **Delivery Methods:**
			1. **Airless Spray: Yes**
			2. **Electrostatic Spray: Yes[[19]](#endnote-19)**
			3. **Compression Spray (Pump-Up): Yes**
			4. **Manual Trigger Spray: Yes**
			5. **Cold Mister/Fogger (ULV): Yes**
			6. **Thermal Fogger: Not recommended**
			7. **Foamer: Yes**
			8. **Manual Methods (e.g., wipe, mop, rag, immersion): Yes**
		30. **Required Post-Disinfection Steps:**
			1. **Rinse: No – not even on food contact or processing surfaces**
			2. **Wipe: No**
			3. **Air Dry: Yes**
		31. **Specialized Uses Relevant to Microbial Mitigation (per EPA Label):**
			1. **Antimicrobial Laundry Additive: No**
			2. **Personal Protective Equipment (Clean & Sanitize): Yes**
			3. **HVAC applications: Yes – Cooling Coils only**
			4. **Cordon Sanitaire (Outbreak Control): No**
			5. **Food Contact/Food Processing: Yes.**
				1. **Rinse Food Contact Surfaces: Yes – No rinse required**
		32. **Miscible/Dilution: Ready-To-Use**
			1. **Use Stability (of mixed solution): N/A**
			2. **Hard Water Tolerance: N/A**
		33. **Residual:**
			1. **Aesthetic/Tangible: Virtually none**
			2. **Ongoing Resistance Post Application: None**
5. **DISINFECTANT-SANITIZER-DEODORIZER (KILL STEP) FOR MOLD REMEDIATION: READY-TO-USE DISINFECTANT, CONVENTIONAL:**
	1. **SHOCKWAVE RTU: [or equal]**
		1. **Product ID: 8316. [or equal]** h
			1. **Available in one-gallon/3.79 L container (8316-1-C4)**
			2. **Available in five-gallon/18.79 L container (8316-5)**
			3. **Available in 55-gallon/208 L container (8316-55)**
			4. **Other production sizes include: 275-Gallon Tote**
	2. **Document Server Links for product:**
		1. [**OVW**](http://adr.sh/1sd5/7p1v/d/k)[**OVW-TOP 10**](http://adr.sh/1sd5/cgxv/d/r)
		2. [**TDS**](http://adr.sh/1sd5/6ei0/d/k)**-US [**[**ENG**](http://adr.sh/1sd5/6ei0/d/k)[**ESP**](http://adr.sh/1sd5/cej5/d/k)**]** [**TECH BULL**](http://adr.sh/1sd5/cgxr/d/q)**ETIN**
		3. [**SDS**](http://adr.sh/1sd5/6ejt/d/s) **– US [**[**ENG**](http://adr.sh/1sd5/6ejt/d/s)[**ESP**](http://adr.sh/1sd5/cbtz/d/s)**]**
		4. [**LBL-**](http://adr.sh/1sd5/6elp/d/m) **US [**[**ENG**](http://adr.sh/1sd5/6elp/d/m)[**FRA**](http://adr.sh/1sd5/cqgl/d/m)**]**
		5. [**VID – TOP 10**](http://adr.sh/1sd5/cjuf/d/r) [**VID**](http://adr.sh/1sd5/8zsb/d/r)
	3. **Manufactured by FIBERLOCK TECHNOLOGIES, INC.**
		1. **a brand of the ICP BUILDING SOLUTIONS GROUP;**
			1. **Administrative Offices: ICP, 150 Dascomb Rd., Andover, MA 01810 USA.**
			2. **Manufactured at ICP: 150 Dascomb Rd., Andover, MA 01810 USA**
			3. **800-342-3755 or 978-623-9987**
			4. [**www.fiberlock.com**](http://www.fiberlock.com)
	4. **Key Performance Attributes of Disinfectant**h
		1. **Exposure: Interior/Exterior**
		2. **Active Ingredient: Advanced Generation Quaternary Ammonium Chloride (QUAT)**
		3. **Active Ingredient Content: 0.14%**
		4. **Environmental/Sustainability Criteria:**
			1. **Allergen-free fragrance**
			2. **Phosphate Free**
			3. **Water-based**
		5. **Color: Pale Blue to Clear**
		6. **Odor: Fresh Laundry (mild-faint)**
		7. **USEPA Registration Number: 61178-2-73884  [[20]](#endnote-20)**
		8. **Hospital-Grade Disinfectant (CDC/EPA Pandemic Requirement): Yes**
		9. **EPA Microorganism kill Claims (Range, Type): 122 claims on EPA-registered label for pathogenic organisms, including:**
			1. **Bacteria: 83**
				1. **MRSA/VRSA: Yes.**
				2. **VRE: Yes**
			2. **Viruses: 31**
				1. **Influenza: Yes. All historic strains related to influenza pandemic**
			3. **Fungi (Molds): 8**
		10. **COVID Pandemic:**
			1. **EPA List N for SARS-CoV-2: Yes**
				1. **Qualified on List N for Healthcare: Yes**
				2. **Qualified on List N for Institutional: Yes**
				3. **Qualified on List N for Residential: Yes**
			2. **Health Canada’s COVID-19 interim measure List: Yes**
			3. **EPA Emerging Viral Pathogens program: Yes**
		11. **Health Canada: DIN not issued – Acceptable in Canada via Interim List for SARS-CoV-2 pandemic response**
		12. **EPA Toxicity Category: III**
		13. **EPA-Required Signal Word: CAUTION**
		14. **FDA: Not rated.**
		15. **Polarity: Cationic (Positive, Non-ionic surfactant)**
		16. **Soil Load (Effective in the presence of): 5% organic soil**
		17. **Foaming: Foaming with Foaming Applicator Device Only**
		18. **Flash Point: none**
		19. **pH: 11.7 (Not Corrosive)**
		20. **HAPS & Volatile Solvents: Zero**
		21. **Shelf Life: 24 months minimum**
		22. **Freeze Thaw: 3+ cycles**
		23. **Contact Time:**
			1. **Most fungal, bactericidal and virucidal contact times per the USEPA registered label of >10 minutes for disinfection**
		24. **Hard Non-Porous Surfaces (Disinfection): Yes (EPA)**
		25. **Deodorizer for Carpet: Yes (EPA)**
		26. **Used on semi-porous and porous surfaces: Yes (EPA)**
		27. **Use Sites (Structure/Building Types & Purposes): 22**
		28. **Coverage: 600-1200 sq. ft./gallon (Porous up to Hard, Non-Porous)**
		29. **Delivery Methods:**
			1. **Airless Spray: Yes**
			2. **Electrostatic Spray: Yes[[21]](#endnote-21)**
			3. **Compression Spray (Pump-Up): Yes**
			4. **Manual Trigger Spray: Yes**
			5. **Cold Mister/Fogger (ULV): Yes**
			6. **Thermal Fogger: Not recommended**
			7. **Foamer: Yes**
			8. **Manual Methods (e.g., wipe, mop, rag, immersion): Yes**
		30. **Required Post-Disinfection Steps:**
			1. **Rinse: No – except food contact**
				1. **Rinse is required for food contact surfaces**
			2. **Wipe: No**
			3. **Air Dry: Yes**
		31. **Specialized Uses Relevant to Microbial Mitigation (per EPA Label):**
			1. **Antimicrobial Laundry Additive: Yes (Bacteriostat)**
			2. **Personal Protective Equipment (Clean & Sanitize): Yes**
			3. **HVAC applications: No**
			4. **Cordon Sanitaire (Outbreak Control): No**
			5. **Food Contact/Food Processing: Yes.**
				1. **Rinse Food Contact Surfaces**
				2. **Do not use on utensils, glassware.**
		32. **Miscible/Dilution: Ready-To-Use**
			1. **Use Stability (of mixed solution): N/A**
			2. **Hard Water Tolerance: N/A**
		33. **Residual:**
			1. **Aesthetic/Tangible: Seldom**
				1. **Pale white residual of ordinary salt and leftover detergent from cleaning system. When noticed, usually only on high-gloss or glass (e.g. mirrors)**
				2. **When noticed, wipe away if needed. Use glass cleaner if streaks persist.**
			2. **Ongoing Resistance Post Application: None**
6. **DISINFECTANT-SANITIZER-DEODORIZER (KILL STEP) FOR MOLD REMEDIATION:** **READY-TO-USE DISINFECTANT+DEGREASER/EMULSIFIER (BIOFILMS), CONVENTIONAL:**
	1. **IAQ 2500: [or equal]**
		1. **Product ID: 8325. [or equal]** h
			1. **Available in Quart bottles (8325-Q-C12)**
			2. **Available in one-gallon/3.79 L container (8325-1-C4)**
			3. **Available in five-gallon/18.79 L container (8325-5)**
			4. **Available in 55-gallon/208 L container (8325-55)**
			5. **Other production sizes include: 275-Gallon Tote**
	2. **Document Server Links for product:**
		1. [**OVW**](http://adr.sh/1sd5/evjb/d/f)
		2. [**TDS**](http://adr.sh/1sd5/6ejk/d/f)**-US [**[**ENG**](http://adr.sh/1sd5/6ejk/d/f) **]** **TECH BULLETIN**
		3. [**SDS**](http://adr.sh/1sd5/cmc2/d/s) **– US [**[**CAN ENG**](http://adr.sh/1sd5/cmc2/d/s) **]**
		4. [**LBL-**](http://adr.sh/1sd5/f3bc/d/m) **US [**[**ENG**](http://adr.sh/1sd5/f3bc/d/m) **]**
	3. **Manufactured by FIBERLOCK TECHNOLOGIES, INC.**
		1. **a brand of the ICP BUILDING SOLUTIONS GROUP;**
			1. **Administrative Offices: ICP, 150 Dascomb Rd., Andover, MA 01810 USA.**
			2. **Manufactured at ICP: 150 Dascomb Rd., Andover, MA 01810 USA**
			3. **800-342-3755 or 978-623-9987**
			4. [**www.fiberlock.com**](http://www.fiberlock.com)
	4. **Key Performance Attributes of Disinfectant**h
		1. **Exposure: Interior/Exterior**
		2. **Active Ingredient: Dual Quaternary Ammonium Chloride (QUAT)**
		3. **Active Ingredient Content: 0.21%**
		4. **Environmental/Sustainability Criteria:**
			1. **Allergen-free fragrance**
			2. **Phosphate Free**
			3. **Water-based**
		5. **Color: Pale Blue to Clear**
		6. **Odor: Fresh Laundry (mild-faint)**
		7. **USEPA Registration Number: 1839-83-73884  [[22]](#endnote-22)**
		8. **Hospital-Grade Disinfectant (CDC/EPA Pandemic Requirement): Yes**
		9. **EPA Microorganism kill Claims (Range, Type): 22 claims on EPA-registered label for pathogenic organisms, including:**
			1. **Bacteria: 18**
				1. **Tuberculocidal: Yes 5 Minutes**
				2. **MRSA/VRSA: Yes.**
				3. **VRE: Yes**
			2. **Viruses: 19**
				1. **Influenza: Yes.**
				2. **Norovirus, Rabies Virus: Yes 30 SECONDS**
			3. **Fungi (Molds): 1**
		10. **COVID Pandemic:**
			1. **EPA List N for SARS-CoV-2: Yes 60 SECONDS AGAINST SARS-COV-2**
				1. **Qualified on List N for Healthcare: Yes**
				2. **Qualified on List N for Institutional: Yes**
				3. **Qualified on List N for Residential: Yes**
			2. **Health Canada’s COVID-19 interim measure List: Yes**
			3. **EPA Emerging Viral Pathogens program: Yes**
		11. **Health Canada: DIN not issued – Acceptable in Canada via Interim List for SARS-CoV-2 pandemic response**
		12. **EPA Toxicity Category: III**
		13. **EPA-Required Signal Word: CAUTION**
		14. **FDA: Not rated.**
		15. **Polarity: Cationic (Positive)**
		16. **Soil Load (Effective in the presence of): 5% organic soil**
		17. **Foaming: Moderate Foaming with Foaming Applicator Device Only**
		18. **Flash Point: none**
		19. **pH: 11.7 (Not Corrosive)**
		20. **VOCs: Zero**
		21. **Shelf Life: 36 months minimum**
		22. **Freeze Thaw: 3+ cycles**
		23. **Contact Time: 30 seconds to 10+ minutes**
			1. **Most fungal, bactericidal and virucidal contact times per the USEPA registered label range from as little as 30 seconds to >10 minutes for disinfection, dependent on microorganism**
		24. **Hard Non-Porous Surfaces (Disinfection): Yes (EPA)**
		25. **Deodorizer for Carpet: No**
		26. **Used on semi-porous and porous surfaces: No**
		27. **Use Sites (Structure/Building Types & Purposes): 23**
		28. **Coverage: 600-1200 sq. ft./gallon (Porous up to Hard, Non-Porous)**
		29. **Delivery Methods:**
			1. **Airless Spray: Yes**
			2. **Electrostatic Spray: Yes[[23]](#endnote-23)**
			3. **Compression Spray (Pump-Up): Yes**
			4. **Manual Trigger Spray: Yes**
			5. **Cold Mister/Fogger (ULV): Yes**
			6. **Thermal Fogger: Not recommended**
			7. **Foamer: Yes**
			8. **Manual Methods (e.g., wipe, mop, rag, immersion): Yes**
		30. **Required Post-Disinfection Steps:**
			1. **Rinse: No – except food contact**
				1. **Rinse is required for food contact surfaces**
			2. **Wipe: No**
			3. **Air Dry: Yes**
		31. **Specialized Uses Relevant to Microbial Mitigation (per EPA Label):**
			1. **Antimicrobial Laundry Additive: No**
			2. **Personal Protective Equipment (Clean & Sanitize): Yes**
			3. **HVAC applications: Yes – Coils and Drip Pans**
			4. **Food Contact/Food Processing: Yes.**
				1. **Rinse Food Contact Surfaces**
				2. **Do not use on utensils, glassware.**
		32. **Miscible/Dilution: Ready-To-Use**
			1. **Use Stability (of mixed solution): N/A**
			2. **Hard Water Tolerance: N/A**
		33. **Residual:**
			1. **Aesthetic/Tangible: Seldom in Mold Remediation; With Daily Use for SHEP (Surface Hygiene: Epidemic & Pandemic) activity will accrue non-harmful residue 2-4 weeks.**
				1. **Pale white residual of ordinary salt and leftover detergent from cleaning system. When noticed, usually only on high-gloss or glass (e.g. mirrors)**
				2. **When noticed, wipe away if needed. Use glass cleaner if streaks persist.**
			2. **Ongoing Resistance Post Application: None**
7. **DISINFECTANT-SANITIZER-DEODORIZER (KILL STEP) FOR MOLD REMEDIATION: DISINFECTANT, CONCENTRATED, CONVENTIONAL:**
	1. **SHOCKWAVE CONCENTRATE: [or equal]**
		1. **Product ID: 8310. [or equal]** h
			1. **Available in one-gallon/3.79 L container (8310-1-C4)**
			2. **Available in ten (10) ounce container (8310-10oz-C24)**
			3. **Available in five-gallon/18.79 L container (8310-5)**
			4. **Available in 55-gallon/208 L container (8310-55)**
			5. **Other production sizes include: 275-Gallon Tote**
	2. **Document Server Links for product:**
		1. [**OVW**](http://adr.sh/1sd5/7p1v/d/i)
		2. [**LBL**](http://adr.sh/1sd5/6elt/d/m)
		3. [**TECH BULLETIN**](http://adr.sh/1sd5/fa6a/d/q)
		4. [**VID**](http://adr.sh/1sd5/8zsb/d/r)
		5. [**TDS ENG**](http://adr.sh/1sd5/6ei3/d/k)
		6. [**TDS ESP**](http://adr.sh/1sd5/cej4/d/k)
		7. [**SDS ENG**](http://adr.sh/1sd5/6eju/d/s)[**SDS ESP**](http://adr.sh/1sd5/ceiv/d/s)[**SDS USE SOLUTION**](http://adr.sh/1sd5/6eke/d/s)
	3. **Manufactured by FIBERLOCK TECHNOLOGIES, INC.**
		1. **a brand of the ICP BUILDING SOLUTIONS GROUP;**
			1. **Administrative Offices: ICP, 150 Dascomb Rd., Andover, MA 01810 USA.**
			2. **Manufactured at ICP: 150 Dascomb Rd., Andover, MA 01810 USA**
			3. **800-342-3755 or 978-623-9987**
			4. [**www.fiberlock.com**](http://www.fiberlock.com)
	4. **Key Performance Attributes of Disinfectant**h
		1. **Exposure: Interior/Exterior**
		2. **Active Ingredient: Advanced Generation Dual Quaternary Ammonium Chloride (QUAT)**
		3. **Active Ingredient Content: 4.74%**
		4. **Environmental/Sustainability Criteria:**
			1. **Allergen-free fragrance**
			2. **Water-based**
		5. **Color: Pale Blue**
		6. **Odor: Fresh Laundry (mild-faint)**
		7. **USEPA Registration Number: 61178-1-73884  [[24]](#endnote-24)**
		8. **Hospital-Grade Disinfectant (CDC/EPA Pandemic Requirement): Yes**
		9. **EPA Microorganism kill Claims (Range, Type): 139 claims on EPA-registered label for pathogenic organisms, including:**
			1. **Bacteria: 90**
				1. **MRSA/VRSA/VISA: Yes.**
				2. **VRE: Yes**
			2. **Viruses: 40**
				1. **Influenza: Yes. All historic strains related to influenza pandemic**
				2. **Norovirus: Yes**
				3. **Adenovirus: Yes**
				4. **Rotavirus: Yes**
				5. **Poliovirus: Yes**
				6. **Measles Virus: Yes**
			3. **Fungi (Molds): 9**
				1. **Aspergillus Niger: Yes**
				2. **Candida albicans: Yes**
				3. **Cryptococcus neoformans: Yes[[25]](#endnote-25)**
		10. **COVID Pandemic:**
			1. **EPA List N for SARS-CoV-2: Yes**
				1. **Qualified on List N for Healthcare: Yes**
				2. **Qualified on List N for Institutional: Yes**
				3. **Qualified on List N for Residential: Yes**
			2. **Health Canada’s COVID-19 interim measure List: Yes**
			3. **EPA Emerging Viral Pathogens program: Yes**
		11. **Health Canada: DIN not issued – Acceptable in Canada via Interim List for SARS-CoV-2 pandemic response**
		12. **EPA Toxicity Category: II**
		13. **EPA-Required Signal Word: DANGER[[26]](#endnote-26)**
		14. **FDA: Not rated.**
		15. **Polarity: Cationic (Positive, Non-ionic surfactant)**
		16. **Soil Load (Effective in the presence of): 98% organic soil for multiple organism claims[[27]](#endnote-27)**
			1. **Includes accepted EPA label claim for *human coronavirus* in a 98% soil load.**
		17. **Foaming: Foaming with Foaming Applicator Device Only**
		18. **Flash Point: Combustible**
		19. **pH: 11-12 Corrosive (Mixed Solution: 9.5-10; Not Corrosive)[[28]](#endnote-28)**
		20. **HAPS: Zero**
		21. **VOCs: Very Low**
		22. **Shelf Life: 24 months minimum**
		23. **Freeze Thaw: 3+ cycles**
		24. **Contact Time:**
			1. **Most fungal, bactericidal and virucidal contact times per the USEPA registered label of > or equal 10 minutes for disinfection**
		25. **Hard Non-Porous Surfaces (Disinfection): Yes (EPA)**
		26. **Sanitizer for Carpet: Yes (EPA)**
		27. **Used on semi-porous and porous surfaces: Yes (EPA)**
		28. **Use Sites (Structure/Building Types & Purposes): 151**
			1. **Healthcare Use Sites: 30**
			2. **Food-Related Use Sites: 32**
		29. **Coverage: 600-1200 sq. ft./gallon (Porous up to Hard, Non-Porous)**
		30. **Delivery Methods:**
			1. **Airless Spray: Yes**
			2. **Electrostatic Spray: Yes[[29]](#endnote-29)**
			3. **Compression Spray (Pump-Up): Yes**
			4. **Manual Trigger Spray: Yes**
			5. **Cold Mister/Fogger (ULV): Yes**
			6. **Thermal Fogger: Not recommended**
			7. **Foamer: Yes**
			8. **Manual Methods (e.g., wipe, mop, rag, immersion): Yes**
		31. **Required Post-Disinfection Steps:**
			1. **Rinse: No – except food contact**
				1. **Rinse is required for food contact surfaces**
			2. **Wipe: No**
			3. **Air Dry: Yes**
		32. **Specialized Uses Relevant to Microbial Mitigation (per EPA Label):**
			1. **Antimicrobial Laundry Additive: Yes (Bacteriostat)**
			2. **Personal Protective Equipment (Clean & Sanitize): Yes**
			3. **HVAC applications: No**
			4. **Cordon Sanitaire (Outbreak Control): Yes (Shoe Bath, Entry/Exitway, Tire Wash)**
			5. **Food Contact/Food Processing: Yes.**
				1. **Rinse Food Contact Surfaces**
				2. **Do not use on utensils, glassware.**
		33. **Miscible/Dilution: Concentrate – Formulated for dilution**
			1. **For microbial mitigation/standard disinfection: 2 ounces per gallon (one gallon yields 64 gallons usable solution)**
			2. **For contamination by highly contaminated water and potential bloodborne pathogens: 4 ounces per gallon (one gallon yields 32 gallons usable solution)[[30]](#endnote-30)**
			3. **Use Stability (of mixed solution): 64 days**
			4. **Hard Water Tolerance: as much as 791 ppm CaCO3 water hardness**
		34. **Residual:**
			1. **Aesthetic/Tangible: Seldom**
				1. **Pale white residual of ordinary salt and leftover detergent from cleaning system. When noticed, usually only on high-gloss or glass (e.g. mirrors)**
				2. **When noticed, wipe away if needed. Use glass cleaner if streaks persist.**
			2. **Ongoing Resistance Post Application: None**

**D: WIPES, DISINFECTANT, BOTANICAL:**

* 1. **Benefect Botanical Disinfectant Wipes: [or equal]**
		1. **Product ID: (below).**
		2. **Pail (250 Wipes/pail) 6 x 7” (USA) Product ID: #20376**
		3. **Pail (250 Wipes/pail) 15.2 x 17.8 cm (CAD) Product ID: #50376**
	2. **Document Server Links for Product**
		1. [**LBL-US**](http://adr.sh/1sd5/bgia/d/q)[**LBL-CAN**](http://adr.sh/1sd5/a3rc/d/q)
		2. [**SDS**](http://adr.sh/1sd5/a3tz/d/q)
		3. [**TECH BULLETIN**](http://adr.sh/1sd5/fa68/d/q)
		4. [**GUIDELINES**](http://adr.sh/1sd5/a3qa/d/f) **FOR WIPE USE IN REMEDIATION**
	3. **Manufactured by BENEFECT**
		1. **a brand of the ICP BUILDING SOLUTIONS GROUP;**
			1. **Administrative Offices: 150 Dascomb Road, Andover, MA 01810**
			2. **Manufactured at ICP, 405 N. Oakwood Ave., Waukegan, IL 60005 USA**
			3. **800-909-2813**
			4. [**www.benefect.com**](http://www.benefect.com)
	4. **Key Performance Attributes of Disinfectant**h
		1. **Exposure: Interior/Exterior**
		2. **Active Ingredient: Botanical Thymol present as a component of Thyme Oil.**
		3. **Active Ingredient Content: 0.05%**
		4. **Environmental/Sustainability Criteria:**
			1. **No synthetic fragrances, dyes, ammonia or chlorine or endocrine disruptors**
			2. **100% Bio-Based Content, no petrochemicals or petroleum derivatives**
			3. **Water-based liquid**
			4. **Hospital grade wood pulp fiber**
		5. **Color: white (towel)**
		6. **Odor: Lemon & Thyme**
		7. **USEPA Registration Number: 84683-4-74771 [[31]](#endnote-31)[[32]](#endnote-32)**
		8. **Hospital-Grade Disinfectant (CDC/EPA Pandemic Requirement): Yes**
		9. **EPA Microorganism kill Claims (Range, Type): 8 claims on EPA-registered label for pathogenic organisms, including:**
			1. **Bacteria: 5**
				1. **MRSA: Yes.**
			2. **Viruses: 3**
				1. **Influenza: Yes (H1N1)**
				2. **Rhinovirus: Yes**
		10. **COVID Pandemic:**
			1. **EPA List N for SARS-CoV-2: Yes**
				1. **Qualified on List N for Healthcare: Yes**
				2. **Qualified on List N for Institutional: Yes**
				3. **Qualified on List N for Residential: Yes**
			2. **Health Canada’s COVID-19 interim measure List: Yes**
			3. **EPA Emerging Viral Pathogens program: Yes**
		11. **Health Canada: DIN 02342111**
		12. **EPA Toxicity Category: IV (lowest available rating)**
		13. **EPA-Required Signal Word: None**
		14. **Foaming: N/A**
		15. **Flash Point: N/A**
		16. **pH: 4.0-5.0 (Not Corrosive)**
		17. **HAPS & Volatile Solvents: Zero**
		18. **Freeze Thaw: N/A**
		19. **Contact Time:**
			1. **Most fungal, bactericidal and virucidal contact times per the USEPA registered label of >10 minutes for disinfection**
			2. **Multiple sanitizing label claims for bacteria: as rapid as 30 seconds.**
		20. **Hard Non-Porous Surfaces (Disinfection): Yes (EPA)**
		21. **Sanitizer for Carpet: N/A**
		22. **Used on semi-porous and porous surfaces: N/A**
		23. **Use Sites (Structure/Building Types & Purposes): 19**
		24. **Coverage: 1-2 sq. ft./wipe[[33]](#endnote-33) (Hard, Non-Porous)**
		25. **Delivery Methods:**
			1. **Manual Methods (e.g., wipe): Yes**
		26. **Required Post-Disinfection Steps:**
			1. **Rinse: No – not even on food contact or processing surfaces**
			2. **Wipe: No**
			3. **Air Dry: Yes**
		27. **Specialized Uses Relevant to Microbial Mitigation (per EPA Label):**
			1. **Antimicrobial Laundry Additive: No**
			2. **Personal Protective Equipment (Clean & Sanitize): Yes**
			3. **HVAC applications: Yes – Cooling Coils and Drip Pans only**
			4. **Food Contact/Food Processing: Yes.**
				1. **Rinse Food Contact Surfaces: No rinse required**
		28. **Miscible/Dilution: Ready-To-Use**
			1. **Use Stability (of mixed solution): N/A**
			2. **Hard Water Tolerance: N/A**
		29. **Residual:**
			1. **Aesthetic/Tangible: Virtually none**
			2. **Ongoing Resistance Post Application: None**
1. **COATING FOR MOLD REMEDIATION:** **FUNGICIDAL COATING**
	1. **AFTERSHOCK FUNGICIDAL COATING**
		1. **Product ID: 8390**h
			1. **8390-1-C4 (Case Total: 4 Gallons)**
			2. **8390-5 (Pail Total: 5 Gallons).**
		2. **Document Server Links for Product**
			1. [**LBL**](http://adr.sh/1sd5/6enq/d/m)
			2. [**TDS**](http://adr.sh/1sd5/6ejh/d/j)
			3. **[SDS](http://adr.sh/1sd5/6eli/d/u)**
		3. **Manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755)** [**www.fiberlock.com**](http://www.fiberlock.com) **[or equal]**
		4. **Key Performance Attributes of Fungicidal Coating**
			1. **Modes of Antimicrobial Activity:** h
				1. **Wet Coating Film: Active Ingredient in coating will disinfect surfaces to which wet film is applied, kills residual mold and mildew present after cleaning and sanitizing**
				2. **Dry Coating Film: Active Ingredients in cured coating deter future fungal growth on or in the dry film**
			2. **EPA-Registered: Yes**
				1. **EPA Registration Number: 73884-1**
				2. **EPA Establishment Number: 73884-MA-1[[34]](#endnote-34)**
			3. **Exposure: Interior[[35]](#endnote-35)**
			4. **Coverage Rates (Typical for Mold Remediation: 2.5-4 mils DFT. Higher surface profiles and porosity will increase product usage to achieve visual and tangible (touch) contiguous film required for optimal performance and any product warranty.)[[36]](#endnote-36)**
			5. **Dry Film Thickness (Coverage Rate):**
				1. **2.5 mils DFT (220 sq. ft./gal.)**
				2. **4 mils DFT (140 sq. ft./gal.)**
			6. **Drying Times (@ 70 - 77°F, 50% R.H.)**
				1. **To Touch: 1 hour**
				2. **To Recoat: 4 hours**
			7. **Minimum Application Temp: 50º (10ºC)**
			8. **Maximum Subsurface Moisture Content: <15% at application (Wood)**
			9. **Color: White[[37]](#endnote-37)[[38]](#endnote-38)**
			10. **Finish: Semi-Gloss**
			11. **Specular Gloss: 60° ± 5 @ 60°**
			12. **Weight Per Gallon ± .5 lbs.: 9.7 lbs./gal**
			13. **Volume Solids: 32.7% ± 2**
			14. **Weight Solids: 42% ± 2**
			15. **Viscosity @ 77°F: 95-100 KU @ 70°F**
			16. **Flash Point: Non-combustible**
			17. **Resin Type: 100% acrylic**
			18. **Performance Testing [*Standard Requirements in Brackets, Italics*]**
				1. **Water Vapor Permeance:** [**2.9 Perms**](http://adr.sh/3G3fT) ***[ASTM D 1653 (minimum 1.0 perms)* *“Water Vapor Transmission of Organic Coating Films”, Method A, Condition A (Dry Cup Method, 73°F, 50 % R.H.). ]***
				2. **Calculated VOC: <100 g/l *[Maximum:100 g/L]***
				3. **Mold-Resistance:**

[**‘0’ rating**](http://adr.sh/qzqRb) **ASTM G-21 “Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi” *[ASTM G 21 (minimum ‘0’ rating; indicates no mold growth), and/or ASTM D 3273 (minimum ‘10’ rating; indicates no mold growth)]*;**

[**‘10’ rating**](http://adr.sh/5lPcgL) **ASTM G-154 “Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials.” (not required by standard; mold resistance post 1,000 hours accelerated aging/weathering. ‘10’ rating indicates no mold growth after aging; measured using ASTM D 3273 “Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber”, and ASTM D 3274 “Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation”. )**

* + - * 1. [**Fire/Smoke Testing**](http://adr.sh/9pRdgH) ***[ASTM E 84“Standard Test Method for Surface Burning Characteristics of Building Materials”: Class “A” required – flame spread and smoke development <25 rating maximum]***

**Flame Spread: ‘0’ Class A (inorganic cement board)**

**Smoke Development: ‘0’ Class A (inorganic cement board)**

* + - 1. **Shelf Life: 36 months minimum (original sealed container)**
			2. **Limited Performance Warranty: Not less than 10 years from installation date; replacement product only.**
1. **COATING FOR MOLD REMEDIATION: MOLD-RESISTANT COATING.**
	1. **IAQ 6000 MOLD-RESISTANT COATING, TINTABLE WHITE**
		1. **Product ID: 8360**h
			1. **8360-5 (Pail Total: 5 Gallons).**
		2. **Document Server Links to Product:**
			1. [**SDS**](http://adr.sh/1sd5/6el3/d/s)
			2. [**TDS**](http://adr.sh/1sd5/fde7/d/t)
			3. [**LBL**](http://adr.sh/1sd5/fde9/d/t)
			4. **[OVW](http://adr.sh/1sd5/fde8/d/t)**
		3. **Manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755)** [**www.fiberlock.com**](http://www.fiberlock.com) **[or equal]**
		4. **Key Performance Attributes of Mold-Resistant Coating**h
			1. **Modes of Activity:**
				1. **Wet Coating Film: Locks down minor residual mold and mildew present after cleaning and sanitizing Isolates non-removable contaminants from occupants respirable air or incidental dermal contact.**
				2. **Dry Coating Film: Active Ingredients in cured coating deter future fungal growth on or in the dry film**
			2. **EPA-Registered: No (Treated Articles Exemption)[[39]](#endnote-39)**
				1. EPA does not register or regulate mold-resistant coatings. This is provided the product makes claims only to resist future growth on or in the coating film.
				2. This EPA policy was clarified in 2000, and the EPA’s PR Notice can be found at: <https://www.epa.gov/sites/production/files/2014-04/documents/pr2000-1.pdf>. See this note in the Supplementary section for more information.[[40]](#endnote-40)
			3. **Exposure: Interior[[41]](#endnote-41)**
			4. **Coverage Rates (Typical for Mold Remediation: 2.5-4 mils DFT. Higher surface profiles and porosity will increase product usage to achieve visual and tangible (touch) contiguous film required for optimal performance and any product warranty.)**
				1. **Dry Film Thickness (Coverage Rate):**

**2.5 mils DFT (220 sq. ft./gal.)**

**4 mils DFT (140 sq. ft./gal.)**

* + - * 1. **Smooth: 250-400 sq. ft./gal.**
				2. **Porous: 150-300 sq. ft./gal.**
			1. **Drying Times (@ 70 - 77°F, 50% R.H.)**
				1. **To Touch: 1 hour**
				2. **To Recoat: 4 hours**
			2. **Minimum Application Temp: 50º (10ºC)**
			3. **Maximum Subsurface Moisture Content: <15% at application (Wood)**
			4. **Color: White[[42]](#endnote-42)[[43]](#endnote-43)**
			5. **Finish: Matte**
			6. **Specular Gloss: 6° ± 1 @ 60°**
			7. **Volume Solids: 54.6% ± 2**
			8. **Weight Solids: 39.6% ± 2**
			9. **Viscosity @ 77°F: 90-95 KU @ 70°F**
			10. **Flash Point: Non-combustible**
			11. **Resin Type: 100% acrylic**
			12. **Performance Testing [*Standard Requirements in Brackets, Italics*]**
				1. **Water Vapor Permeance: 3.7 Perms *[ASTM E 96 ]***
				2. **Calculated VOC: estimated 6 g/l *[Maximum:100 g/L]***
				3. **Mold-Resistance:**

[**‘0’ rating**](http://adr.sh/qzqRb) **ASTM G-21 “Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi” *[ASTM G 21 (minimum ‘0’ rating; indicates no mold growth), and/or ASTM D 3273 (minimum ‘10’ rating; indicates no mold growth)]*;**

[**‘10’ rating**](http://adr.sh/5lPcgL) **ASTM G-154 “Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials.” (not required by standard; mold resistance post 1,000 hours accelerated aging/weathering. ‘10’ rating indicates no mold growth after aging; measured using ASTM D 3273 “Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber”, and ASTM D 3274 “Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation”. )**

* + - * 1. [**Fire/Smoke Testing**](http://adr.sh/9pRdgH) ***[ASTM E 84“Standard Test Method for Surface Burning Characteristics of Building Materials”: Class “A” required – flame spread and smoke development <25 rating maximum]***

**Flame Spread: ‘0’ Class A (inorganic cement board)**

**Smoke Development: ‘0’ Class A (inorganic cement board)**

* + - 1. **Shelf Life: 36 months minimum (original sealed container)**
			2. **Limited Performance Warranty: Not less than 10 years from installation date; replacement product only.**
	1. **IAQ 6100 MOLD-RESISTANT COATING, CLEAR**
		1. **Product ID: 8361**h
			1. **8361-5 (Pail Total: 5 Gallons).**
		2. **Document Server Links to Product:**
			1. **[SDS](http://adr.sh/1sd5/6el1/d/s)**
			2. [**TDS**](http://adr.sh/1sd5/6ein/d/j)
			3. [**LBL**](http://adr.sh/1sd5/6en7/d/m)
		3. **Manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755)** [**www.fiberlock.com**](http://www.fiberlock.com) **[or equal]**
		4. **Key Performance Attributes of Mold-Resistant Coating**
			1. **Modes of Activity:** h
				1. **Wet Coating Film: Locks down minor residual mold and mildew present after cleaning and sanitizing. Isolates non-removable contaminants from occupants respirable air or incidental dermal contact. At application, wet coating will be milky white, prior to drying clear if conditions are suitable for coalescence.**
				2. **Dry Coating Film: Active Ingredients in cured coating deter future fungal growth on or in the dry film**
			2. **EPA-Registered: No (Treated Articles Exemption)[[44]](#endnote-44)**
				1. EPA does not register or regulate mold-resistant coatings. This is provided the product makes claims only to resist future growth on or in the coating film.
				2. This EPA policy was clarified in 2000, and the EPA’s PR Notice can be found at: <https://www.epa.gov/sites/production/files/2014-04/documents/pr2000-1.pdf>. See this note in the Supplementary section for more information.[[45]](#endnote-45)
			3. **Exposure: Interior[[46]](#endnote-46)**
			4. **Coverage Rates (Typical for Mold Remediation: 2.5-4 mils DFT. Higher surface profiles and porosity will increase product usage to achieve visual and tangible (touch) contiguous film required for optimal performance and any product warranty.)**
				1. **Dry Film Thickness (Coverage Rate):**

**2.5 mils DFT (220 sq. ft./gal.)**

**4 mils DFT (140 sq. ft./gal.)**

**Smooth Surfaces: 350-600 sq ft / gal.**

**Porous Surfaces: 250-300 sq ft / gal.**

* + - 1. **Drying Times (@ 70 - 77°F, 50% R.H.)**
				1. **To Touch: 1 hour**
				2. **To Recoat: 4-8 hours**
			2. **Minimum Application Temp: 50º (10ºC)[[47]](#endnote-47)**
			3. **Maximum Subsurface Moisture Content: <15% at application (Wood)**
			4. **Color: Clear**
			5. **Finish: Semi Gloss**
			6. **Specular Gloss: 44° ± 3 @ 60°**
			7. **Volume Solids: 28.8% ± 2**
			8. **Weight Solids: 25.8% ± 2**
			9. **Weight per Gallon: 8.7 lbs./gal.**
			10. **Viscosity @ 77°F: 85-90 KU @ 70°F**
			11. **Flash Point: Non-combustible**
			12. **Resin Type: 100% acrylic**
			13. **Performance Testing [*Standard Requirements in Brackets, Italics*]**
				1. **Water Vapor Permeance:** [**4.6**](http://adr.sh/3G3fT) **perms *[ASTM D 1653 (minimum 1.0 perms)* *“Water Vapor Transmission of Organic Coating Films”, Method A, Condition A (Dry Cup Method, 73°F, 50 % R.H.). ]***
				2. **Calculated VOC: <100 g/l *[Maximum:100 g/L]***
				3. **Mold-Resistance:**

[**‘0’ rating**](http://adr.sh/qzqRb) **ASTM G-21 “Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi” *[ASTM G 21 (minimum ‘0’ rating; indicates no mold growth), and/or ASTM D 3273 (minimum ‘10’ rating; indicates no mold growth)]*;**

* + - * 1. [**Fire/Smoke Testing**](http://adr.sh/9pRdgH) ***[ASTM E 84“Standard Test Method for Surface Burning Characteristics of Building Materials”: Class “A” required – flame spread and smoke development <25 rating maximum]***

**Flame Spread: ‘0’ Class A (inorganic cement board)**

**Smoke Development: ‘0’ Class A (inorganic cement board)**

* + - 1. **Shelf Life: 36 months minimum (original sealed container)**
			2. **Limited Performance Warranty: Not less than 10 years from installation date; replacement product only.**
	1. **IAQ 6000 HD (HEAVY-DUTY) MOLD-RESISTANT ELASTOMERIC COATING, WHITE**
		1. **Product ID: 8362**h
			1. **8362-5 (Pail Total: 5 Gallons).**
		2. **Document Server Links to Product:**
			1. **[SDS](http://adr.sh/1sd5/6el2/d/t)**
			2. [**TDS**](http://adr.sh/1sd5/6eil/d/i)
			3. [**LBL**](http://adr.sh/1sd5/6en9/d/m)
		3. **Manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755)** [**www.fiberlock.com**](http://www.fiberlock.com) **[or equal]**
		4. **Key Performance Attributes of Mold-Resistant Coating**h
			1. **Modes of Activity:**
				1. **Wet Coating Film: Locks down minor residual mold and mildew present after cleaning and sanitizing. Isolates non-removable contaminants from occupants’ respirable air or incidental dermal contact. Formula enhancement with elastomeric facilitates single-coat “bridging” or laminar coverage on porous, “thirsty” construction materials such as OSB (oriented-strand board).**
				2. **Dry Coating Film: Active Ingredients in cured coating deter future fungal growth on or in the dry film. At a certain film thickness, coating will provide service as** [**a water vapor transmission barrier**](http://adr.sh/1sd5/6eoa/d/v)**.**
			2. **EPA-Registered: No (Treated Articles Exemption)[[48]](#endnote-48)**
				1. EPA does not register or regulate mold-resistant coatings. This is provided the product makes claims only to resist future growth on or in the coating film.
				2. This EPA policy was clarified in 2000, and the EPA’s PR Notice can be found at: <https://www.epa.gov/sites/production/files/2014-04/documents/pr2000-1.pdf>. See this note in the Supplementary section for more information.[[49]](#endnote-49)
			3. **Exposure: Interior[[50]](#endnote-50)**
			4. **Coverage Rates (Typical for Mold Remediation: 3-5 mils DFT. Higher surface profiles and porosity will increase product usage to achieve visual and tangible (touch) contiguous film required for optimal performance and any product warranty.)**
				1. **Dry Film Thickness (Coverage Rate):**

**3 mils DFT (230 sq. ft./gal.)**

**5 mils DFT (138 sq. ft./gal.)**

**Smooth Surfaces: 225-400 sq ft / gal.**

**Porous Surfaces: 110-250 sq ft / gal.**

* + - 1. **Drying Times (@ 70 - 77°F, 50% R.H.)**
				1. **To Touch: 1-2 hours**
				2. **To Recoat: 8-16 hours**
			2. **Minimum Application Temp: 50º (10ºC)[[51]](#endnote-51)**
			3. **Maximum Subsurface Moisture Content: <11% at application (Wood)**
			4. **Color: White**
			5. **Finish: Matte (near flat)**
			6. **Specular Gloss: 5° ± 5 @ 60°**
			7. **Volume Solids: 43.0% ± 2**
			8. **Weight Solids: 58.6% ± 2**
			9. **Weight per Gallon: 11.5 lbs./gal.**
			10. **Viscosity @ 77°F: 110-115 KU @ 70°F**
			11. **Flash Point: Non-combustible**
			12. **Resin Type: Acrylic-Elastomeric-Thermoplastic CoPolymer**
			13. **Performance Testing [*Standard Requirements in Brackets, Italics*]**
				1. **Water Vapor Permeance: *[ASTM D 1653 (minimum 1.0 perms)* *“Water Vapor Transmission of Organic Coating Films”, Method A, Condition A (Dry Cup Method, 73°F, 50 % R.H.). ]***

**At 250 sq. ft. / gallon, equal to 3.0 mils DFT:**

**WVT – Water Vapor Transmission Rate: 1.2 grains/ft2/hour**

**WVP – Water Vapor Permeance: 2.6 perms**

**At 70 sq. ft. / gallon, equal to 10.5 mils DFT:**

**WVT – Water Vapor Transmission Rate: 0.3 grains/ft2/hour**

**WVP – Water Vapor Permeance: 0.7 perms**

**Test Report: Available at:**  [**IAQ 6000HD ASTM D-1653 (Permeability Testing)**](http://adr.sh/1sd5/6eoa/d/v)

* + - * 1. **Calculated VOC: 91 g/l *[Maximum:100 g/L]***
				2. **Mold-Resistance:**

[**‘0’ rating**](http://adr.sh/qzqRb) **ASTM G-21 “Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi” *[ASTM G 21 (minimum ‘0’ rating; indicates no mold growth), and/or ASTM D 3273 (minimum ‘10’ rating; indicates no mold growth)]*;**

* + - * 1. [**Fire/Smoke Testing**](http://adr.sh/9pRdgH) ***[ASTM E 84“Standard Test Method for Surface Burning Characteristics of Building Materials”: Class “A” required – flame spread and smoke development <25 rating maximum]***

**Flame Spread: ‘0’ Class A (inorganic cement board)**

**Smoke Development: ‘0’ Class A (inorganic cement board)**

* + - 1. **Shelf Life: 36 months minimum (original sealed container)**
			2. **Limited Performance Warranty: Not less than 10 years from installation date; replacement product only.**

2.02 COLORS – Of coatings in the Basis of Design, only the IAQ 6000 and IAQ 6000HD may be tinted or manufactured in custom colors. . [[52]](#endnote-52) [[53]](#endnote-53) The AfterShock, as EPA-registered, may not be tinted. Tinting of USEPA-registered products is prohibited unless expressly delineated on the label. The IAQ 6000 is also available in Black as IAQ 6500.

2.03 MIXING

A. If using optional catalysts or mixtures for cleaners and/or odor counteractants, accomplish job mixing and application only when acceptable to the Architect/Engineer.

B. Mix components only in containers furnished or approved in writing by the Manufacturer.

C. Thinning or diluting of these products is not permitted, unless expressly instructed in writing in advance by the manufacturer

3. EXECUTION[[54]](#endnote-54)

* 1. EXAMINATION
1. Remediators should conduct an initial inspection before commencing work regardless of prior evaluations by other parties.
2. When preceding evaluations indicate that mold contamination exists, an assessment should be performed prior to starting remediation.
3. Unless waived by the Owner or Owner’s Agent in writing, a qualified indoor air quality professional who has no business affiliation with the remediator should be employed to assess.
4. In circumstances where an entire building is fully infested with visible, active growth mold contamination, or otherwise when the scope of work can be determined without sampling or independent assessment, engagement of a separate consultant may not be necessary.
5. Some mitigation services may be initiated before or during assessment of conditions.
6. Using appropriate moisture detection and measuring equipment, a survey of subsurface moisture content should be conducted in all substrates to be salvaged, cleaned, and coated.
	1. Information generated by a moisture survey (or moisture-mapping) should be retained in an accessible format and shared with all remediation project participants. This data may serve as a benchmark and one measurement of the success of an overall mold remediation project.
	2. If unusual moisture migration/water vapor transmission is a concern, the ASTM D 4263 *Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method* is a recommended evaluation method for this survey, to be used in conjunction with instrument assessment methods. The evaluation of whether beading moisture accumulates over time from water vapor transmission is an evaluation method applicable to a range of surfaces in addition to concrete.
	3. For projects involving below-grade remediation of concrete, CMU block or other cementitious vertical surfaces, a Mold-Resistant Waterproofing Sealant may be more suited to the project than a Fungicidal Coating/Sealant. Consult with the Owner, Owner’s Agent, and/or IEP (when present) regarding whether building history indicates history and/or present evidence of water intrusion or migration through these surfaces.[[55]](#endnote-55) [[56]](#endnote-56)
7. In some jurisdictions, the assessor for mold may be required to have a government-issued license. Similarly, the employment of an independent assessor, and production of both an assessment and a scope of remediation work is required in some jurisdictions. As of the date of this specification, licensing programs with varying requirements for assessors exist in the United States in New Hampshire, New York, Texas, Louisiana, Florida, and the District of Columbia.
	1. PREPARATION OF WORKSITE, SURFACES
8. WORKSITE PREPARATION
	1. The first responsibility of the remediator upon arrival to site of mold remediation is to ensure the safety of workers and occupants.
	2. For all projects, moisture control is imperative. For restoration and remediation, the source of the moisture intrusion must be identified and rectified, and substrates which cannot be restored should be removed.
	3. Deactivate and isolate HVAC/&R systems before commencing work. Ductwork and air conveyance systems are often also contaminated in water-damaged and/or mold infested structures. Isolation of HVAC/&R systems can reduce the likelihood of cross-contamination or recontamination from mold sources in the building ventilation systems. Isolation of previously uncontaminated ductwork is also important as cleaning within these systems can be complex and expensive. Whether to remediate air conveyance systems or structural elements first is a project by project decision, and may vary from area to area in a building. Whichever is chosen first must be protected from cross-contamination during remediation where work is done second.
	4. Coordinate commencement of work with owner so as not to cause inconvenience to the facility.
	5. Post notices in conspicuous areas multiple days in advance of beginning work on specified phase (as agreed to with Owner or Owner’s agent), noting start date, any instructions to occupants and business phone number. Utilize signage as recommended or required by local ordinance and industry standard.[[57]](#endnote-57)
9. Hazardous Materials in Structures:
	1. There are many hazardous materials which can be present in structures where restoration contractors may be asked to remediate mold. Common hazards can include, but are not limited to, asbestos, lead, mercury, and PCBs.
	2. Determination as to whether these or other potentially hazardous materials are present, may have been conducted by a consulting professional, certified industrial hygienist, or other IEP. The remediator should ask about whether such an evaluation was conducted, and what potentially hazardous materials were identified, if any. The remediation contractor should not assume that hazardous materials are not present.
	3. Lead: Even when building age suggests that lead paint is unlikely to be present, the owner or owner’s agent should be consulted to verify. Use of lead-based paint was not banned for residential use in the United States until 1978, but other uses of lead continue to present day.
	4. Asbestos: Even when building age suggests that asbestos is unlikely to be present, the owner or owner’s agent should be consulted to verify. Use of asbestos in the United States declined significantly in the United States and Canada during the 1980s, but import and uses of asbestos-containing construction products continues to present day.
	5. Abatement or disturbance of asbestos or lead typically require contracting firms, supervisors, and workers to have a state-issued license. License types and requirements vary, and the restoration firm or professional should contact the pertinent agency in the state where the site is located to ascertain minimum training and licensing requirements.
	6. Identification, assessment and remediation of PCBs and Mercury are rapidly evolving disciplines. Best practices and regulatory guidance may evolve, but as of the date of this specification, resources and information are minimal. When suspected or identified, project progress should be suspended while specialized experts are consulted.
10. General Surface Preparation Instructions for all Substrates: All surfaces to be cleaned of microbial activity and sanitized should be properly prepared in that preexisting bulk contamination should be removed: shall be clean and free from sand, clay, grease, dust, salt, or other foreign matter.
	1. All failing (loose, scaly, or flaking) paint must be removed back to a sound substrate before any microbial disinfection or is attempted. This can be a separate task or integrated into the cleaning process.
	2. If necessary, oil, grease and similar surface contamination should be removed with any manufacturer-approved degreasing surface cleaner which is free-rinsing and does not require a neutralizer[[58]](#endnote-58). Oils and grease in sufficient quantity that residues are tangible to fingertip touch can provide a hydrophobic barrier behind which microorganisms can evade cleaning and antimicrobial processes.
	3. Always test an inconspicuous area(s) for color stability and effect on finish appearance when a concern or uncertainty exists concerning the appearance of surfaces post-cleaning that will be visible to occupants after project completion. For example, cleaners and antimicrobial disinfectants/sanitizers that utilize oxidizer chemistry are prone to changing surfaces with a varying amount of bleaching-like (whitening, brightening, color fading) activity.
	4. Surfaces contaminated with mold, mildew and/or other contaminant microorganisms (e.g., biofilms) should be examined carefully for sources of excess moisture and water-damage.
		1. Active, visible mold growth is frequently an indicator of higher than normal moisture that may require correction
		2. Water-damage may have resulted in irreversible structural degradation which will require repair before other work can commence.
		3. Whenever possible the source of uncontrolled moisture should be corrected.
		4. Avoid using bleaches (sodium hypochlorite) for mold remediation activity other than stain removal after cleaning.
		5. Avoid using cleaners for mold removal that require a rinse.
		6. Avoid fogging instead of direct application of cleaners and disinfectants, such as by pump sprayer, airless sprayer, brush, mop, rag. Fogging should only be conducted as an adjunct to proper cleaning. With EPA-registered disinfectants, any fogging instructions must appear on the approved label, and be followed explicitly.
	5. Mold-stains present after cleaning, negatively affecting intended appearance of the final project, can be addressed, but as a separate scope of work.
		1. Mold stain specific stain removers formulated with hydrogen peroxide or sodium hypochlorite can be effective in removing stains[[59]](#endnote-59).
		2. Mold-Stain Removers are never to be utilized in lieu of proper use of cleaners and antimicrobial disinfectants.
	6. Surface voids and irregular surface profiles can provide microorganisms with protection against effective use of cleaners and disinfectants. Additional tools and processes may be required for difficult to access and inaccessible areas.
	7. Copper Pipe: Because each of the products in the Basis for Design section of this specification are water-based and are not highly alkaline, no adverse effects are anticipated from incidental contact with copper plumbing (such as spray/splash application on a one-time basis in the context of mold remediation). Extended contact with or immersion in alkaline liquids can pit copper, but typical remediation will not involve exposure of that intensity. The application of fungicidal and mold resistant coatings to these pipes is often not necessary because once cleaned, the CPVC does not provide a nutrient-source and substrate hospitable to future fungal growth. Incidental undesired contact between cleaners and antimicrobials with this type of plumbing can be addressed by wiping with a rag and clean water.
	8. Insulated Electrical Wire: Because each of the products in the Basis for Design section of this specification are water-based, application is not recommended where these or similar cleaners, sanitizers or coatings would be in direct contact with electric current. Generally, no problems are foreseeable with application of these or similar products to the exterior surfaces of properly installed, insulated and undamaged Romex-type wire

3.03 APPLICATION: PEROXIDE CLEANERS, AND; ANTIMICROBIAL DISINFECTANTS/SANITIZERS

1. LIQUID CLEANING WITH HYDROGEN PEROXIDE SOLUTIONS: Apply Peroxide Cleaner to surfaces designated for microbial cleaning only after review and implementation, as necessary, the steps delineated in 3.02 PREPARATION of this specification.[[60]](#endnote-60)
	1. Peroxide Cleaner, including the product referenced in the Basis for Design, contains hydrogen peroxide as an active ingredient, but is not intended to be a disinfectant or sanitizer for bacteria, viruses, mold, or any other microorganism. No pesticidal, antimicrobial, or anti-fungal statements of performance are made or intended regarding killing microorganisms. The product type, the products mentioned in this specification, the related directions in this document pertain to cleaning only. For information on antimicrobial products and applications, see section 303,B of this SPECIFICATION.
	2. Peroxide Cleaners can be applied with a trigger or pump sprayer, airless spray, or mop/brush.
		1. Only add Peroxide Cleaner to application equipment that is clean and free of dirt and debris. It is important that the application sprayer/equipment be free of all contamination to prevent Peroxide Cleaner from reacting with the dirt and debris, and reducing efficacy of the solution.
		2. It is highly recommended that application equipment containers should be dedicated to the Peroxide Cleaner and not used for any other product due to the reactivity of hydrogen peroxide with organic contaminants (e.g. dirt, mold).
		3. Never return unused material to the original container that the Peroxide Cleaner came from.
		4. For decanted product that is no longer needed, dispose of it properly according to all Federal, State and Local regulations
		5. Airless sprayers should be flushed with mineral oil as soon as possible after the end of the work day to avoid a reaction that can occur with carbon steel elements of airless spray pumps. Failure to perform this flush can result in airless sprayer damage that can require pump replacement. Mineral Spirits should not be used instead of Mineral Oil when flushing spray equipment.
	3. When applying Peroxide Cleaners, saturate the contaminated surface with enough product to remain wet for at least 30 minutes.
		1. Coverage will be approximately 500 sq. ft. per gallon on porous surfaces
		2. Coverage can be up to 1,000 sq. ft. per gallon on non-porous surfaces
		3. Coverage rate for cleansers are approximate and dependent on many factors including application method and amount and density of soils and residues to be removed.
		4. Foaming sprayers, foaming applicators, foaming attachments can improve contact time on vertical and overhead surfaces. This can significantly improve performance and reduce product use/waste due to runoff.
	4. Provide Peroxide Cleaner enough time to react with contaminants on the substrate. The objective is to release embedded contaminants via the effervescent foaming action caused by the reaction from the hydrogen peroxide active ingredient with organic matter. The dwell time for foaming to develop will depend on the thickness of contamination and the porosity/profile of the substrate but is usually 5 to 10 minutes.
	5. After a layer of foam has developed, gentle and brief agitation will assist in increasing activity of the peroxide, and removing more dirt.
		1. Use a stiff bristle brush (e.g., stiff nylon) to gently agitate the cleanser foaming on the surface.
			1. For large areas, such as floors and sheathing, a push broom (corn bristle), can be used. For sheathing with numerous nail penetrations, and similar impediments to cleaning (such as attic sheathing), use bristles long enough to scrub over and between nail points.
			2. Do not scrub. Agitation should be no more than left-right, then up-down (sometimes described as north-south; east-west) passes with bristles. Scrubbing will decrease efficacy, in part by rupturing bubbles entrained in foam.
		2. As Peroxide Cleaner dwells on mold-infested wood surfaces, it will remove some staining.[[61]](#endnote-61) The initial brightening effects when using peroxide technology for stains will be typically seen within 24 hours as the surface dries. On wood, the stain mitigation and brightening can continuously improve over the course of as much as 3-5 days. [[62]](#endnote-62) Note that some stains cannot be removed via any method.
	6. Allow 20 minutes minimum dwell time for Peroxide Cleaner to work. Longer dwell times are generally desirable, especially when stain mitigation and contaminant lifting are both project objectives.
	7. Removal of Treated Contaminants: As with all cleansers, the product chemistry does not make contaminants vanish, but instead all cleansers act upon contaminants such that cleaning becomes less labor intensive and generally more effective. Peroxide cleaners, as oxidizers, can alter the pigmentation of contaminants and mitigate stains. To the eye, the contaminants may be less visually present. However, contamination remains present until manually/mechanically removed.
		1. Use any suitable method of contaminant removal. Note that the surface, contaminants, and residual cleaner/foam are still wet. Examples of cleaning methods: wipe, mop, wet HEPA vacuum.
		2. It is permissible to let surfaces treated with Peroxide Cleaner dry. Detached and lifted contaminants can then be removed (e.g., with a HEPA vacuum [a bristle accessory on vacuum nozzle will greatly improve contaminant removal efficiency].)
	8. Additional applications of Peroxide Cleaner may be necessary in order to achieve the desired results.
	9. Residues and Rinsing: As the Peroxide Cleaner reacts with organic contaminants (e.g., soil and dirt), the cleaner decomposes into oxygen and water vapor. Residual surfactants (detergents) are present in very small amounts, are not noticeable on most projects, and are biodegradable. Do not rinse structural surfaces for mold remediation projects. Mold problems are associated with abnormal moisture conditions, so the addition of moisture after drying undesirable moisture is counterintuitive.
2. USING ANTIMICROBIAL DISINFECTANTS/SANITIZERS ON RESIDUAL MOLD AFTER CLEANING:
	1. Antimicrobials General Advisory Statements:
		1. Note that EPA-registered products can only be applied in accord with the EPA-registered product label. If in any situation, there would appear to be a conflict between this specification, and instructions on the product label, the label shall be considered to supersede.
		2. These are simplified disinfection/sanitizing instructions. For specific projects, consult with Fiberlock for more guidance information.
			1. For some projects, cleaning/contaminant removal can be sufficient to achieve remediation, which for those surfaces may make antimicrobial disinfectant/sanitizer application unnecessary.
			2. If the parties involved in the remediation project have specified the use of a fungicidal or mold resistant coating, it is acceptable to proceed from 3.03A CLEANING to 3.03C COATING of this specification.
			3. Visibly clean areas (e.g., clean but adjacent to contaminated areas) may receive application of an antimicrobial disinfectant/sanitizer without the precleaning steps delineated in in both 3.02 PREPARATION, as well as 3.03A CLEANING of this specification.
		3. Disinfectant application for surfaces visibly impacted by mold growth should occur only after review and implementation, as necessary, of the steps delineated in both 3.02 PREPARATION, as well as 3.03A CLEANING of this specification.
		4. Viable fungi can continue to be present on visually clean surfaces, and unless addressed can provide the start of fungal recolonization of surfaces.
		5. Do not use EPA-Registered disinfectants or sanitizers in the ductwork of HVAC systems.[[63]](#endnote-63)
	2. Apply Disinfectant to surfaces pre-cleaned and designated for microbial disinfection.
		1. To deodorize and disinfect, apply product with a cloth, sponge, mop, pump sprayer, power washer, trigger sprayer, airless sprayer or other suitable applicator/application method until surface is thoroughly wet.
			1. Coverage will be approximately 500 sq. ft. per gallon on porous surfaces
			2. Coverage can be up to 1,000 sq. ft. per gallon on non-porous surfaces
			3. Coverage rate for cleansers are approximate and dependent on many factors including application method and amount and density of soils and residues to be removed.
			4. Fogging should only be performed as directed by the product label. If permitted by the label, fogging on a mold remediation project should be only as an adjunct to proper cleaning, generally as a supplementary practice after direct surface application.
			5. Misting applications may be acceptable, but consult with the manufacturer in advance and review IICRC S520 Standard and R520 Reference Guide for Professional Mold Remediation[[64]](#endnote-64) Misting is intended to control airborne dust and surface particulates during remediation. Misting does not replace physical removal of contaminants as delineated in section 3.03.A of this specification.
			6. Thermal fogging disinfectants with QAC chemistry is typically not recommended as temperatures in excess of 120°F may deteriorate active ingredients.
			7. Foaming sprayers, foaming applicators, foaming attachments can improve contact time on vertical and overhead surfaces. This can significantly improve performance and reduce product use/waste due to runoff.
			8. Disinfectant/Sanitizer as specified is ready-to-use. Do not dilute.[[65]](#endnote-65)
		2. Wait 10 minutes for fungicidal performance (or other dwell time if authorized label has shorter or longer contact time for fungicidal use)
			1. Reapply lightly if necessary if surfaces will not remain wet for full and continuous contact time necessary for antimicrobial performance.
			2. Disinfectant is formulated with quaternary ammonium chloride active ingredients that do not visibly indicate antimicrobial performance. If desired, surface evaluation methods such as ATP may be employed to “spot-check’ reduction of microbial activity.
	3. Disinfectant does not require removal or rinse.
		1. If desired, it is acceptable to wipe dry or air dry
		2. Do not rinse structural surfaces for mold remediation projects. Mold problems are associated with abnormal moisture conditions, so the addition of moisture after drying undesirable moisture is counterintuitive.

3.04 POST-REMEDIATION EVALUATION AND VERIFICATION

1. After completion of cleaning and disinfecting/sanitizing, the remediator should conduct a Post-Remediation Evaluation (PRE) to determine that tear-out, drying, cleaning, antimicrobial application, and other aspects of remediation prior to coating application have been completed.
	1. The PRE should be conducted implementing internal quality control procedures.
	2. The PRE can consist of, but is not limited to: visual inspection, olfactory observations, laser particle counting, and moisture measurements.
	3. The PRE should determine that the structures and systems in the scope of work are free of contamination, debris, dust, unrestorable materials, malodors, and visible mold.
	4. If the PRE indicates that the completion of these phases of remediation are questionable, recleaning is recommended.
	5. Remediators should document all aspects of the PRE.
2. Post-Remediation Verification (PRV) is conducted by an IEP if requested by the Owner or Owner’s Agent after the remediator has advised that the PRE is completed.
	1. The PRV is a verification that a structure, systems, and/or contents have been returned to normal building conditions for the project site (see IICRC Standard and Reference Guide for Professional Mold Remediation, 2008 [Standards Section 12.2.11, page 49: Reference Guide: Chapter 11, page 178].
	2. The PRV should be conducted by an independent IEP.
	3. The PRV should not be conducted by the remediator.
	4. APPLICATION: FUNGICIDAL COATING
3. Fungicidal Coating Objectives:
	1. Fungicidal Coating (alt., Sealant) is an EPA-registered antimicrobial coating formulated to kill residual mold and mildew remaining after pre-cleaning contaminated surfaces. Fungicidal Coating also inhibits the future growth and spread of mold and mildew on the cured film surface.
	2. Fungicidal Coating/Sealant is an EPA-registered product. EPA-registered products must be used only in accordance with the product’s EPA-accepted label. Review label carefully prior to application to ensure intended use is listed on the label. If there is any uncertainty concerning whether intended use is listed on the product label, consult the manufacturer prior to application.
	3. Fungicidal Coating/Sealant should be applied after completion of cleaning and disinfecting/sanitizing as delineated in sections 3.02.C and 3.03 of this specification, and after completion of the Post-Remediation Evaluation and Verification process delineated in section 3.04 of this specification.
	4. Apply Fungicidal Coating/Sealant to achieve a contiguous wet film and ensure surfaces are completely coated. Wet film thickness should be approximately 3 mils, although surface profile and porosity can affect wet film thickness. A contiguous film is a key objective as it will eliminate insufficiently coated areas that could provide a nutrient source and support new mold growth.
		1. Dry Film Thickness (Coverage Rate):
			1. 2.5 mils DFT (220 sq. ft./gal.)
			2. 4 mils DFT (140 sq. ft./gal.)
		2. Properly coated surfaces will appear white and painted, although 100% hide of the underlying surface is not required. Surfaces appearing frosted, misted, or dusted with the white coating are not sufficiently coated. As a semi-gloss, a light (flashlight, penlight) directed onto a properly coated surface at an angle should demonstrate a consistent and easily visible sheen across the entirety of the coated element.
	5. Fungicidal Coating is for interior applications such as walls, plaster, wallboard, drywall, concrete, masonry block, wood, primed metal, and galvanized metal. Product is also recommended for use on interior wood framing, primed metal, concrete and wallboard inside wall cavities and other interstitial spaces in structures.
4. Methods of Application
	1. Brush: Apply liberally and uniformly with a polyester or nylon brush
	2. Roller: For best results apply with a 1/4" – 3/8" nap roller (roller cover manufacturer recommendations may vary. When applying when applying to substrates that will be visible to future occupants , it is commonly advisable to use the lower film thickness to minimize stippling or “orange peel” surface aesthetics.)
	3. Airless Spray: Fungicidal Coatings can be successfully applied with most major brands of airless spray equipment. Protect all surfaces not to be coated with any method of application, but provide additional attention when spraying as the atomized mist of coating can spread unpredictably.
		1. Typical settings for airless spray equipment: [Recommended Airless Spray Equipment: Titan 640ix or 740ix for high-volume projects/users.][[66]](#endnote-66)

(Reversible) Tip Tip Operating Airless Min. Pump Hose

Orifice Fan Size Air Pressure Hose ID G.P.M. Length

0.017" to 0.019" 517-521 2000 - 3000 psi 1/4" 0.50 50' -100'

* + 1. Technique of Spraying - For best results, apply fungicidal coating in sweeping strokes always keeping the tip of the gun parallel to the surface at a distance between 12" to 18" inches. 
			1. The speed at which the product is applied depends on the system used.
			2. Normally a slow to moderate sweeping stroke of first horizontal followed by vertical passes in a ‘crosshatch’ pattern will afford the desired results.
			3. If necessary, an angular mist coat may be applied to even out irregularities.
			4. Best results are achieved when the filter in the spray gun handle is removed. For production work, a front feed gun produces best results. For finish quality application, a coarse filter in a standard gun is ideal.
		2. Coverage rate via airless spray will be lower (less square feet per gallon) compared to brush or roller application. While this difference can be as much as 50% less than other methods, adjustment of spray equipment and proper training of applicators can reduce this differential substantially.
1. Limitations
	1. Surface and Subsurface Moisture Content: Prior to the application of a fungicidal coating, moisture content should be within the commonly accepted maximums for ordinary painting (i.e., 15% moisture content for wood, for example).
		1. If moisture content is above the acceptable range for application of a coating, continue structural drying before coating application.
		2. Topical moisture on the surface of a substrate material, such as that from wet cleaning and disinfecting/sanitizing, is acceptable provided subsurface moisture content has been addressed as the mold-resistant coating may be applied to surfaces which are damp to the touch. Avoid application of the mold-resistant coating to visibly wet surfaces, such as beading moisture
		3. For surfaces with existing or suspected liquid moisture migration which cannot be entirely corrected, a mold-resistant waterproofing coating system is advisable.[[67]](#endnote-67)
	2. Surface Conditions Potentially Requiring Primers: Generally, the application of a fungicidal coating is best when applied directly to the surface as addressed with the Peroxide Cleaner and the Antimicrobial Disinfectant/Sanitizer. The fungicidal performance occurs when the wet film of the fungicidal coating encounters residual mold. However, the Fungicidal Coating does not prime ferrous metal (to inhibit corrosion/rust), and does not block stains prone to migration (such as tannin bleed). Consult the manufacturer when these or other surface conditions suggest potential addition of a primer to the coating system.
	3. For outdoor projects, consult manufacturer for other products suited for exterior applications.[[68]](#endnote-68)
	4. This product is not acceptable for use inside HVAC systems. For information on proper use of chemicals and coatings inside of HVAC systems, consult the manufacturer and review the most recent guidance from the National Association of Duct Cleaners of America (NADCA).[[69]](#endnote-69)
	5. Fungicidal Coating is supplied ready-to-use. Do not thin or dilute.
	6. Fungicidal Coating may not be tinted. Do not mix with other coatings, solvents, or colors in oil.

3.06 CLEANING

 A. Remove remaining debris promptly from work area and dispose of properly.

 B. Remove spilled, splashed, or splattered coating materials from all surfaces.

D. Do not mar surface finish of items being cleaned.

E. In areas of older buildings where significant paint was disturbed by remediation operations, wipe any occupant-accessible surfaces with manufacturer approved lead-specific surface cleaner[[70]](#endnote-70).

F. Cleanup tools and other equipment with warm, soapy water before coating dries.

G. Review product labels for proper disposal of unused product and empty containers.

3.07 FINISH SCHEDULE

A. Apply fungicidal coating systems to all areas shown on the drawings or specified in the Room Finish Schedule.

* 1. WARRANTY

A. Installer shall provide Owner, through Assessor, Architect/Engineer, with an acceptable form of warranty against defects in workmanship for a period of one (1) year from date of substantial completion. This warranty shall be for physical aspects of coating performance such as adhesion to assure that the applied fungicidal coating will not peel or otherwise detach from the surface in normal conditions within the properly maintained structure. The installer’s warranty shall not be required to guarantee complete fungal removal or resistance against future mold growth.

B. Issuance of manufacturer warranty shall not be a condition precedent to extension to manufacturer an opportunity to inspect, and/or documentation of installer procedures during remediation. Manufacturer must sign warranty for document to be valid.

C. Extent of warranty shall be limited to the repair or replacement of defective surfaces at no cost to the Owner, and for any damage directly resulting from such defects during the warranty period of 10 years. The warranty shall not include any remedy for repair labor, or for defects caused by abuse, improper maintenance or operation, or by normal wear, tear, and usage. Contact the manufacturer for the entire warranty. This section is informative only and does not constitute a warranty.

END OF SECTION

HYPERGLOSSARY

|  |  |  |
| --- | --- | --- |
|  |  |  |
| ABRA | American Bio-Recovery Association  |  |
| CADPR | California Department of Pesticide Regulation | California agency responsible for the regulation of pesticides. Online database includes subregistered products but does not offer .PDF of product labels |
| CDC  | Centers for Disease Control | The Centers for Disease Control and Prevention is a national public health institute in the United States. It is a United States federal agency, under the Department of Health and Human Services, and defers to EPA regarding selection and regulation of disinfectants, although field personnel may have preferences for individual projects. CDC does not approve products. |
| CIDE | as in -cide (a suffix) | Often seen as a suffix such as virucide, bactericide (alt bactericide), fungicide indicating treatment has been registered with a disinfection level claim of antimicrobial performance. Virucide-level performance is only seen on hard, non-porous surfaces because on those surfaces there is a more inherent assurance that the disinfectant's active ingredient can come into contact the targeted microbes and reduce the amount of viable infectious organisms by 99.999 % |
| CSI | Construction Specifications Institute | The Construction Specifications Institute is a United States national association of more than 8,000 construction industry professionals who are experts in building construction and the materials used therein |
| DIN | Drug Identification Number | The regulatory identifier assigned by Health Canada to an approved product. |
| EOP | Emergency Operations Plan | Describes how people and property will be protected in emergencies and disasters. Identifies personnel, equipment, facilities, supplies, and other resources available--within the jurisdiction or by agreement with other jurisdictions--for use during response and recovery operations. |
| EPA  | U.S. Environmental Protection Agency | Responsible for US regulation of pesticides, including antimicrobial surface treatments. Registers antimicrobial product labels to avoid adverse impacts to human health and to the environment, as well as to verify efficacy. EPA produces List N of antimicrobial disinfectants prequalified for control activity for reduction of the new emergent coronavirus (SARS-CoV-2) which is responsible for COVID-19 disease. EPA does not issue approval for disinfection products. |
| FDA | U.S. Food & Drug Administration | Responsible for treatments for human bodies, as well as the Food Code. A division of US Department of Health & Human Services. Responsible for Hand Sanitizers/Skin Sanitizers. |
| GPM | Gallons per Minute | Measure of flow thru an airless sprayer |
| GRAS | Generally Regarded As Safe | A status a disinfectant may qualify for based on the percentage composition of ingredients from a consensus list including several substances both natural and relatively benign |
| HC | Health Canada | The agency of the federal government of Canada that evaluates, approves and regulates products affecting potentially the health of Canadians. This responsibility includes antimicrobial surface disinfectants. HC registers labels as acceptable statements of proper and safe use, as well as assigns a DIN number (Drug Identification Number) |
| HVLP | High Volume Low Pressure | Type of atomizing sprayer, used commonly for fine painting |
| IAQA | Indoor Air Quality Association  |  |
| ICRA | Infection Control Risk Assessment | Generally from Healthcare. A documented process after considering the facility's patient population and program: Focuses on reduction of risk from infection through phases of facility planning, design, construction, renovation, facility maintenance |
| IDER | Infectious Disease Emergency Response | A plan for response to infection in a group, and/or community spread. |
| IICRC | Institute of Inspection, Cleaning and Restoration Certification  |  |
| ILT | Instructor Led Training | In-person instruction |
| ISSA | International Sanitary Supply Association  |  |
| List N | List N: Disinfectants for Use Against SARS-CoV-2 (COVID-19) | Disinfectant products on this list meet EPA's criteria for use against SARS-CoV-2, the virus that causes COVID-19. These products are for use on surfaces, NOT humans |
| MSW | Microsoft Word Document | Acceptable form of submittal for this specification |
| NADCA | The HVAC Inspection, Cleaning and Restoration Association  |  |
| NDA | Nevada Department of Agriculture  | Nevada Department of Agriculture maintains a public database where .PDF format labels of subregistered products are available.  |
| NFL | National Football League | North American professional American football alliance which coordinates a season of spectacular indoor & outdoor competitions that involve public gatherings. |
| NRCA | National Roofing Contractors Association |  |
| NYSDEC | New York State Department of Environmental Conservation | State agency that maintains the NYSPAD (NYS Pesticide Authorization Database) where a searchable database of .PDF pesticide labels (including subregistered products) is available |
| PCA  | Painting Contractors Association |  |
| PDF | Portable Document Format | Acceptable form of submittal for this specification |
| PPE | Personal Protective Equipment | Protective devices to prevent unwanted/unhealthy entrance into a human body via routes such as eyes, dermal (skin), respiratory (inhalation), and mucous membranes (e.g., mouth, nose). Includes but not limited to gown, gloves, goggles, filtering face pieces. While personal protective equipment (PPE) such as respirators can help protect an individual from a hazardous material, engineering controls protect all workers & occupants by reducing or eliminating the hazard. Safety Data Sheets (SDS) are generally the primary source of product health & safety information specifically for workers during material/product storage, transport, preparation and application.  |
| PPLS | Pesticide Product Labeling System | The Pesticide Product Label System (PPLS) is a searchable database of EPA-registered pesticide product labels |
| RTU | Ready-To-Use | Supplied without need for dilution or mixing |
| SDS | Safety Data Sheet | Safety Data Sheets (SDS) are generally the primary source of product health & safety information specifically for workers during material/product storage, transport, preparation and application. When using EPA-registered disinfectants, it is emphasized that the Safety Data Sheet AND the EPA-registered product label must BOTH be considered to appreciate EH&S considerations. The documents both have such information, and frequently different information is available from each source. For example, the pH of a liquid disinfectant may be on an SDS, but is unlikely to be on an EPA-registered label. In addition, future interactions of a product residual are likely not described in an SDS, may not be described on an EPA-registered label for an antimicrobial product, and may be an unregulated attribute of a product. |
| SHEP | Surface Hygiene: Epidemic & Pandemic.  |  A type of training specific to disease outbreak, especially newly emergent pathogens. Can be used to label the subdiscipline of specialized surface decontamination associated with unwanted microbes and the arrest or prevention of community spread |
| SSPC | The Society for Protective Coatings |  |
| STAT | Stat  | Often seen as a suffix such as bacteriostat, fungistat indicating treatment has a post-application performance, typically a certain resistance against resumption of unwanted microbial activity and/or microbial recolonization of the surface treated. At the time of this edition of this specification, there are no EPA-registered virustats, and there is no scientific consensus that any technology offers a surface treatment that deactivates viruses for any future period beyond the wet contact time during application. Some bacteriostats are EPA-registered products for preserving textiles and other semi-porous and porous surfaces against infestation by odor-causing bacteria. Performance life can be weeks, as many as three months (90 days), but typically this performance is limited to a disclaimer that user may also need to reapply whenever odors return. Similarly, there are disinfectants with EPA accepted claims on their label indicating extended resistance against new fungal growth. These claims are limited generally to mold control when the disinfectant is repeatedly applied (such as weekly) and this practice should not be conducted indefinitely. More extended fungal resistance can be found in Fungicidal and Mold-Resistant sealers and coatings that can resist mold growth for more than ten years {such as AfterShock Fungicidal Coating, the IAQ 6000 series of structural mold-resistant coatings, and the IAQ 7000/8000 series of mold-resistant coatings for the inside of ductwork of HVAC systems. |
| TDS | Technical Data Sheet | Product information supplied by a manufacturer in a form that is commercial in purpose, but is more oriented towards detail and guidance for proper use (as opposed to Marketing aimed at a pre-purchase audience). Not a detailed specification |
| UHMWPE | Ultra High Molecular Weight Polyethylene). | Used in packings of airless sprayers to avoid deterioration common to standard internal materials when machine is used to spray disinfectant |
| UL | Underwriter's Laboratories | The UL seal for a classified product indicates the product has undergone rigorous testing to prove a product performance capability or attribute exists and results in the intended benefit. UL classification also involves periodic and random quality assurance testing and inspections of production. UL also maintains branded quality assurance programs such as Ecologo. |
| ULV | Ultra Low Volume | Measure of flow thru a fogger mister |
| VILT | Virtual Instructor Led Training | Real-time (live) instructor led training when students are in a different physical location |
| WHMIS | Workplace Hazardous Materials Information System | WHMIS stands for the Workplace Hazardous Materials Information System. It is a comprehensive system for providing health and safety information on hazardous products intended for use, handling, or storage in Canadian workplaces |
|  |  |  |
| ABRA | American Bio-Recovery Association  |  |
| CADPR | California Department of Pesticide Regulation | California agency responsible for the regulation of pesticides. Online database includes subregistered products, but does not offer .PDF of product labels |
| CDC  | Centers for Disease Control | The Centers for Disease Control and Prevention is a national public health institute in the United States. It is a United States federal agency, under the Department of Health and Human Services, and defers to EPA regarding selection and regulation of disinfectants, although field personnel may have preferences for individual projects. CDC does not approve products. |

END NOTES

 (INCLUDES SUPPLEMENTARY SYSTEM PRODUCTS BY NAME)

This section is provided as a courtesy to the specifier or project designer/manager.

This section may be included or excluded in the project specific specification at their discretion.

1. The Clean-Kill-Coat concept has been widely adopted throughout the mold remediation industry as helpful for understanding the typical sequence of operations in mold remediation, and for training as to what products are intended for which tasks. Clean-Kill-Coat was originated by Fiberlock in the very early 2000s. This C-K-C link will provide more information: [Clean-Kill-Coat](http://adr.sh/1sd5/6eh8/d/k) [ENG] or [Limpiar-Mattar-Pintar](http://adr.sh/1sd5/77ri/d/k) [ESP]. Also, Benefect & Fiberlock Clean, Kill, Coat Video - <http://adr.sh/1sd5/bgmv/d/n> [↑](#endnote-ref-1)
2. Section and Subsections designated at 1.02 and elsewhere in this specification are derived from the MasterFormat system. MasterFormat®, a publication of CSI and CSC, is a master list of numbers and titles classified by work results of architectural, design, construction, and operations processes. It is primarily used to organize project manuals and detailed cost information, and to relate drawing notations to specifications. CSI is the Construction Specifications Institute. CSC is Construction Specifications Canada. The U.S. and Canadian formats were merged into a single format in 1972 (as the Uniform Construction Index, or UCI). For specification information for other nations, such as BSI in the UK, or AUS-SPEC in Australia, contact ICP’s MasterWorks team for more information: specifications@icpgroup.com. Note that content of specification systems is typically protected by copyright, certain instances of use may require permission of the ownership organization. [↑](#endnote-ref-2)
3. MasterWorks (formerly the ICP Design Services Team (DST)) is a resource for all 30 brands and over 14,000 construction products from ICP. It is built around the MasterWorks portal to the ICP online community: [www.icpmasterworkscommunity.com](http://www.icpmasterworkscommunity.com). MasterWorks is a multi-disciplinary, support-oriented resource for industry professionals looking to intelligently manage projects. Part of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION), MasterWorks offers both on-demand and SME (subject-matter-expert) assistance in project design, specification implementation, and the execution of construction projects involving any products manufactured by [ICP Group](https://www.icpgroup.com/) (Innovative Chemical Products). The mission of the MasterWorks Team is to convey knowledge and solutions of unsurpassed accuracy and innovation to the professionals that conceive, construct, repair and maintain our built environment. In addition to provision and customization of specifications, an ever-expanding offering of resources includes: compliance expertise, training/continuing education [inc. CEUs such as AIA and IICRC], standards development, institutional approval support and qualified applicator referrals. To access the ICP Design Services Team:

Web: [www.icpmasterworkscommunity.com](http://www.icpmasterworkscommunity.com)

Email: specifications@icpgroup.com

Phone: 800-342-3755 x 2241 [↑](#endnote-ref-3)
4. ICP Building Solutions Group is only affiliated with the Indoor Air Quality Association (IAQA) as one of the association’s charter members since IAQA inception as an industry trade association in 1995. This referral to the FIND A PRO service is provided only as a benefit to the users of this specification previously unfamiliar with mold remediation, and for those who seek specialized services from experienced practitioners. Referral to IAQA and any member professional does not constitute implicit, tacit, or explicit endorsement of the association or the mold remediation professionals affiliated with IAQA. [↑](#endnote-ref-4)
5. RE: mold remediation in HVAC generally, and specific use in ductwork of chemicals (cleaners, disinfectants, sanitizers, odor counteractants) and coatings ( resurfacing materials, repair coatings, selants), it is advisable to defer to this NADCA paper.  [*Using Chemical Products in HVAC Systems*](http://adr.sh/1sd5/92oa/d/l)is to date the authoritative guidance on this subject. It was written over a two-year period in a consensus process involving stakeholders from across the indoor air quality industries, and that included USEPA who had representation at every conference call and meeting, as well as participation from ICP start to finish, as ICP subject-matter-experts served on that committee so manufacturers were represented. [↑](#endnote-ref-5)
6. To access the IICRC S 520 document, go to <https://www.iicrc.org/page/SANSIIICRCS520>. The ANSI/IICRC S520 is a procedural standard for the remediation of mold damaged structures and contents. The HVAC Remediation Chapter or Section is currently number 13. [↑](#endnote-ref-6)
7. The NADCA assessment standard, *Assessment, Cleaning and Restoration of HVAC Systems,* is available at no charge from the association directly [here](http://acrstandard.nadca.com/). [↑](#endnote-ref-7)
8. The ACCA assessment standard, *Restoring the Cleanliness of HVAC Systems,* is available at no charge from the association directly [Here](https://www.acca.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=4b0500b6-eed0-49d6-a87c-99a56b128a20). [↑](#endnote-ref-8)
9. To access the IICRC S 520 document, go to <https://www.iicrc.org/page/SANSIIICRCS520>. The ANSI/IICRC S520 is a procedural standard for the remediation of mold damaged structures and contents. [↑](#endnote-ref-9)
10. A Note RE: the IICRC S 520 Standard v Reference Guide: While the standard is intended to avoid prescriptive and contextual information (often invaluable for training), that type of information is available in the Reference Guiide for Mold Remediation. N..B., the IICRC cannot currently engage in updates to the Reference Guide. Therefore, over time it is expected that updates to the standard will create inevitable differences between the Standard and the Reference Guide. It is a best practice to consult and compare both documents. Click here for an IICRC webinar recording on the [ANSI/IICRC S520 Standard and IICRC R520 Reference Guide - Summary of Changes - What You Need to Know](https://youtu.be/Ow4DxLSgZMs) [↑](#endnote-ref-10)
11. The ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION) provides product training via MasterWorks. The ICP ERG (Environmental Remediation Group, including the Fiberlock and Benefect brands) management team and field representation may designate on a project-by-project basis the training or PK (Product Knowledge-Awareness) curriculum necessary to be qualified for a specific project. In-person training and/or hands-on instruction may be required at the discretion of the authorized Fiberlock/Benefect representative.

Note that training from ICP does not replace other training mandated by federal, state or local regulation. Regarding licensing required for mold remediation activities as a professional service, as of the date of this specification, licensing programs with varying requirements for contractors and/or assessors exist in the United States in New Hampshire, Connecticut, New York, Texas, Louisiana, Florida, Maryland and the District of Columbia.

Concerning lead paint activities, the contractor is responsible for potential requirements such as EPA lead-safe remediator training (RRP), and/or state-issued lead abatement licensing for firms, supervisors and workers.

 To access MasterWorks’ team:

Web: [www.icpmasterworkscommunity.com](http://www.icpmasterworkscommunity.com)

Email: specifications@icpgroup.com

Phone: 800-342-3755 x 2241 [↑](#endnote-ref-11)
12. Some regulatory authorities require pesticide applicator licenses for any utilizing government-registered products making antimicrobial (pesticidal) claims in the conduct of professional mold-related activity. At the date of issue of this specification, several U.S. states had instituted this type of requirement for mold remediators specifically, and most states have in place restrictions on the use of certain pesticidal substances and application methods. Such requirements may not apply to mold prevention activity not associated with prior water damage and/or mold infestation. It is the responsibility of the users of this document to verify whether such requirements exist in the area of the project in question. [↑](#endnote-ref-12)
13. The terms disinfect and sanitize are used by mold remediation professionals often interchangeably, and legal definitions vary across government jurisdictions and agencies. For the purposes of this specification, the most common general distinction is used: disinfection is an action performed to reduce microbial activity on hard, non-porous surfaces; whereas sanitizing is an action performed to reduce microbial activity on semi-porous and porous surfaces. [↑](#endnote-ref-13)
14. Moisture content in different types of structural materials are measured on different scales, and the measurement scales of moisture detection instruments (e.g., moisture meters meters can vary among manufacturers of these devices. Consult the manual from the moisture meter manufacturer for instructions concerning substrate type and scale of measurement for that material. [↑](#endnote-ref-14)
15. Note the shelf life for the Advanced Peroxide Cleaner is applicable only to the container sizes larger than one quart due too packaging. Quarts at the time of this writing do not have vented caps and therefore shelf stability can be as little as 90 days. [↑](#endnote-ref-15)
16. HydroBoost is an optional additive specifically designed to magnify the cleaning and stain removing power of Advanced Peroxide Cleaner (APC). Ideal for situations that demand extreme cleaning and powerful stain removalHydroBoost works by instantly increasing the oxidation potential of Advanced Peroxide Cleaner. HYDROBOOST offers Extra cleaning power; Easy to mix; doesn’t leave a residue; and increases labor savings by reducing scrubbing time. HydroBoost is ideal for deeply penetrated contaminants, including blood and OPIM (Other Potentially Infectious Materials). [↑](#endnote-ref-16)
17. At the date of issue of this specification, the [DECON 30](https://benefect.com/pdf/decon-30-product-data-sheet-usa.pdf) (Ready-To-Use) listed in Section 2 has been registered for sale and use in all U.S. states, as well as the United States jurisdictions of Puerto Rico, the U.S. Virgin Islands, and Guam. [↑](#endnote-ref-17)
18. For MICROBIAL MITIGATION projects in other nations contact the ICP BSG ENVIRONMENTAL REMEDIATION GROUP. [↑](#endnote-ref-18)
19. EPA announced 7/7/20 that new guidance is available on how manufacturers can add directions for use of disinfectants with electrostatic sprayers. ICP is participating in the development of detailed electrostatic instructions in accord with EPA’s new guidance. At present, applicators should follow label instructions for “spray” to precleaned surfaces, and assure the minimum wet contact time is achieved. For more information on this EPA announcement and program: EPA takes action to help Americans disinfect indoor spaces efficiently and effectively at <https://www.epa.gov/newsreleases/epa-takes-action-help-americans-disinfect-indoor-spaces-efficiently-and-effectively>; and Expedited Review for Adding Electrostatic Spray Application Directions for Use to Antimicrobial Product Registrations at <https://www.epa.gov/pesticide-registration/expedited-review-adding-electrostatic-spray-application-directions-use>. [↑](#endnote-ref-19)
20. At the date of issue of this specification, the [ShockWave](https://www.fiberlock.com/wp-content/uploads/8316-1.pdf) RTU (Ready-To-Use) listed in Section 2 has been registered for sale and use in all U.S. states, as well as the United States jurisdictions of Puerto Rico, the U.S. Virgin Islands, and Guam. [↑](#endnote-ref-20)
21. EPA announced 7/7/20 that new guidance is available on how manufacturers can add directions for use of disinfectants with electrostatic sprayers. See preceding note for analysis, and for more information go to <https://www.epa.gov/newsreleases/epa-takes-action-help-americans-disinfect-indoor-spaces-efficiently-and-effectively> [↑](#endnote-ref-21)
22. At the date of issue of this specification, the IAQ 2500 (Ready-To-Use) listed in Section 2 has been registered for sale and use in all U.S. states, as well as the United States jurisdictions of Puerto Rico, the U.S. Virgin Islands, and Guam. [↑](#endnote-ref-22)
23. EPA announced 7/7/20 that new guidance is available on how manufacturers can add directions for use of disinfectants with electrostatic sprayers. See preceding note for analysis, and for more information go to <https://www.epa.gov/newsreleases/epa-takes-action-help-americans-disinfect-indoor-spaces-efficiently-and-effectively> [↑](#endnote-ref-23)
24. At the date of issue of this specification, the [ShockWave](https://www.fiberlock.com/wp-content/uploads/ShockWave-8310-1-Label.pdf) (Concentrate) listed in Section 2 has been registered for sale and use in all U.S. states, as well as the United States jurisdictions of Puerto Rico, the U.S. Virgin Islands, and Guam. [↑](#endnote-ref-24)
25. Cryptococcus neoformans is generally considered a requirement for disinfectants when contamination includes avian guano, including pigeons. [↑](#endnote-ref-25)
26. Standard categorization for disinfectant concentrates. [↑](#endnote-ref-26)
27. Includes human coronavirus in a 98% soil load. [↑](#endnote-ref-27)
28. Variation with acidity of tap water. 9.5-10 reflects filtered water provided in Metro Boston USA. [↑](#endnote-ref-28)
29. EPA announced 7/7/20 that new guidance is available on how manufacturers can add directions for use of disinfectants with electrostatic sprayers. See preceding note for analysis, and for more information go to <https://www.epa.gov/newsreleases/epa-takes-action-help-americans-disinfect-indoor-spaces-efficiently-and-effectively> [↑](#endnote-ref-29)
30. Often referred to by water & fire damage restoration professionals as “Black Water”, or “Category 3” water intrusion/damage [↑](#endnote-ref-30)
31. At the date of issue of this specification, the [BENEFECT](https://benefect.com/pdf/decon-30-product-data-sheet-usa.pdf) BOTANICAL DISINFECTANT WIPES listed in Section 2 has been registered for sale and use in all U.S. states, as well as the United States jurisdictions of Puerto Rico, the U.S. Virgin Islands, and Guam. [↑](#endnote-ref-31)
32. For MICROBIAL MITIGATION projects in other nations, contact the ICP BSG ENVIRONMENTAL REMEDIATION GROUP. [↑](#endnote-ref-32)
33. **Surface area wiped, product type, and target strain impact bactericidal efficacy of ready-to-use disinfectant Towelettes**. Alyssa M West1, Carine A Nkemngong1, Maxwell G Voorn1, Tongyu Wu1, Xiaobao Li2, Peter J Teska2 and Haley F Oliver: *“Towelettes were less effective as surface area increased, which may have implications for disinfection of large surfaces Overall, there was a higher log reduction achieved when wiping the one and two ft2 surface areas compared to the eight ft2 surface area. Although the extent to which bactericidal efficacy is impacted is product dependent, it indicates that wiping a larger surface will lead to reduced bactericidal efficacy.”* [↑](#endnote-ref-33)
34. At the date of issue of this specification, the AfterShock Fungicidal Coating listed in Section 2.01, C, has been registered for sale and use in all U.S. states except California. AfterShock is also registered for use in the United States jurisdictions of Puerto Rico, the U.S. Virgin Islands, and Guam. As of the date of this specification, AfterShock may not be used in California, or exported to any nation, including Canada. For mold remediation projects in Canada, Australia, New Zealand, and the United Kingdom, substitute the Fiberlock IAQ 6000 mold-resistant coating, manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8360-5 (Pail, 5-gallons)). [↑](#endnote-ref-34)
35. As of the date of issue this specification, the Fiberlock brand fungicidal and mold-resistant coating products for mold remediation are for indoor use only. For outdoor applications, substitute mold-resistant coatings formulated for exterior exposures. Example: [Stopz Mold](http://adr.sh/lfpzCz) Resistant Interior and Exterior Primer/Finish, [F583 Series](https://www.fixallpaint.com/product/stopz-mold-resistant-interior-exterior-primer-finish/), manufactured by FIXALL a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fixallpaints.com](http://www.fixallpaints.com) (Product ID: F583 (Five-Gallons)). [↑](#endnote-ref-35)
36. The typical dry film thickness and corresponding coverage rate constitute the minimum acceptable for the extension of a performance warranty unless otherwise agreed to in advance and in writing by designated Fiberlock representation. [↑](#endnote-ref-36)
37. At the date of issue of this specification, the AfterShock Fungicidal Coating listed in Section 2.01, C, cannot be produced or sold in tint bases, tinted to custom colors (or lower sheen finishes). When a mold preventative finish in a color other than white (and/or, with a matte/flat finish) is the objective, substitute the Fiberlock IAQ 6000 mold-resistant coating, manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8360-5 (Pail, 5-gallons)). [↑](#endnote-ref-37)
38. At the date of issue of this specification, the AfterShock Fungicidal Coating listed in Section 2.01, C, cannot be produced or sold in a clear finish. When a clear mold preventative finish is the objective, substitute the Fiberlock IAQ 6100 mold-resistant coating, manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8361-5 (Pail, 5-gallons)). [↑](#endnote-ref-38)
39. At the date of issue of this specification, the IAQ 6000 listed in Section 2.01, D, may be sold or used in all U.S. states and territories including California, Puerto Rico, the U.S. Virgin Islands, and Guam. As of the date of this specification, IAQ 6000 is acceptable for mold remediation projects in Canada, Australia, New Zealand, and the United Kingdom, [↑](#endnote-ref-39)
40. At the date of issue of this specification, the Fiberlock IAQ 6000 mold-resistant coating may be sold and used in all U.S. states, as well as the United States jurisdictions of Puerto Rico, the U.S. Virgin Islands, and Guam. Please note that alternative versions of this specification are available that feature the AfterShock Fungicidal Coating listed in Section 2.01, C. However, this specification was developed specifically for remediation projects in California, and the AfterShock has been registered for sale and use in all U.S. states except California. As of the date of this specification, AfterShock may not be used in California, or exported to any nation, including Canada. The IAQ 6000 is fully compliant and acceptable for mold remediation projects in Canada, Australia, New Zealand, the nations of the EU, and the United Kingdom. Fiberlock IAQ 6000 mold-resistant coating is manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8360-5 (Pail, 5-gallons)). [↑](#endnote-ref-40)
41. As of the date of issue this specification, the Fiberlock brand fungicidal and mold-resistant coating products for mold remediation are for indoor use only. For outdoor applications, substitute mold-resistant coatings formulated for exterior exposures. Example: [Stopz Mold](http://adr.sh/lfpzCz) Resistant Interior and Exterior Primer/Finish, [F583 Series](https://www.fixallpaint.com/product/stopz-mold-resistant-interior-exterior-primer-finish/), manufactured by FIXALL a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fixallpaints.com](http://www.fixallpaints.com) (Product ID: F583 (Five-Gallons)). [↑](#endnote-ref-41)
42. [RESERVED] [↑](#endnote-ref-42)
43. [RESERVED] [↑](#endnote-ref-43)
44. At the date of issue of this specification, the IAQ 6000 listed in Section 2.01, D, may be sold or used in all U.S. states and territories including California, Puerto Rico, the U.S. Virgin Islands, and Guam. As of the date of this specification, IAQ 6000 is acceptable for mold remediation projects in Canada, Australia, New Zealand, and the United Kingdom, [↑](#endnote-ref-44)
45. At the date of issue of this specification, the Fiberlock IAQ 6000 mold-resistant coating may be sold and used in all U.S. states, as well as the United States jurisdictions of Puerto Rico, the U.S. Virgin Islands, and Guam. Please note that alternative versions of this specification are available that feature the AfterShock Fungicidal Coating listed in Section 2.01, C. However, this specification was developed specifically for remediation projects in California, and the AfterShock has been registered for sale and use in all U.S. states except California. As of the date of this specification, AfterShock may not be used in California, or exported to any nation, including Canada. The IAQ 6000 is fully compliant and acceptable for mold remediation projects in Canada, Australia, New Zealand, the nations of the EU, and the United Kingdom. Fiberlock IAQ 6000 mold-resistant coating is manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8360-5 (Pail, 5-gallons)). [↑](#endnote-ref-45)
46. As of the date of issue this specification, the Fiberlock brand fungicidal and mold-resistant coating products for mold remediation are for indoor use only. For outdoor applications, substitute mold-resistant coatings formulated for exterior exposures. Example: [Stopz Mold](http://adr.sh/lfpzCz) Resistant Interior and Exterior Primer/Finish, [F583 Series](https://www.fixallpaint.com/product/stopz-mold-resistant-interior-exterior-primer-finish/), manufactured by FIXALL a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fixallpaints.com](http://www.fixallpaints.com) (Product ID: F583 (Five-Gallons)). [↑](#endnote-ref-46)
47. In order to ensure the finish of the cured film of IQ 6100 is crystal clear, it is imperative that the applicator and owner ensure proper drying conditions throughout the curing time . Failure to do so will result in coalescence that can be milky or hazy and is irreversible period. [↑](#endnote-ref-47)
48. At the date of issue of this specification, the IAQ 6000 listed in Section 2.01, D, may be sold or used in all U.S. states and territories including California, Puerto Rico, the U.S. Virgin Islands, and Guam. As of the date of this specification, IAQ 6000 is acceptable for mold remediation projects in Canada, Australia, New Zealand, and the United Kingdom, [↑](#endnote-ref-48)
49. At the date of issue of this specification, the Fiberlock IAQ 6000 mold-resistant coating may be sold and used in all U.S. states, as well as the United States jurisdictions of Puerto Rico, the U.S. Virgin Islands, and Guam. Please note that alternative versions of this specification are available that feature the AfterShock Fungicidal Coating listed in Section 2.01, C. However, this specification was developed specifically for remediation projects in California, and the AfterShock has been registered for sale and use in all U.S. states except California. As of the date of this specification, AfterShock may not be used in California, or exported to any nation, including Canada. The IAQ 6000 is fully compliant and acceptable for mold remediation projects in Canada, Australia, New Zealand, the nations of the EU, and the United Kingdom. Fiberlock IAQ 6000 mold-resistant coating is manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8360-5 (Pail, 5-gallons)). [↑](#endnote-ref-49)
50. As of the date of issue this specification, the Fiberlock brand fungicidal and mold-resistant coating products for mold remediation are for indoor use only. For outdoor applications, substitute mold-resistant coatings formulated for exterior exposures. Example: [Stopz Mold](http://adr.sh/lfpzCz) Resistant Interior and Exterior Primer/Finish, [F583 Series](https://www.fixallpaint.com/product/stopz-mold-resistant-interior-exterior-primer-finish/), manufactured by FIXALL a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fixallpaints.com](http://www.fixallpaints.com) (Product ID: F583 (Five-Gallons)). [↑](#endnote-ref-50)
51. In order to ensure the finish of the cured film of IQ 6100 is crystal clear, it is imperative that the applicator and owner ensure proper drying conditions throughout the curing time . Failure to do so will result in coalescence that can be milky or hazy and is irreversible period. [↑](#endnote-ref-51)
52. At the date of issue of this specification, the IAQ 6000 must be tinted by eye at an authorized ICP distributor. Tint bases are not available. Treat as a pastel base that may accept no more than two ounces of universal liquid colorant per gallon. [↑](#endnote-ref-52)
53. When a clear mold preventative finish is the objective, substitute the Fiberlock IAQ 6100 mold-resistant coating, manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8361-5 (Pail, 5-gallons)). [↑](#endnote-ref-53)
54. In section 3 EXECUTION, the term Fungicidal Coating may be exchanged for Mold-Resistant Coating if a treated article product (products not bearing EPA-registered labels) is to be specified. [↑](#endnote-ref-54)
55. Below-grade applications, especially on cementitious substrates, may have had a history of low-intensity but chronic moisture intrusion such as seepage or weeping of liquid water, in addition to above normal levels of vapor transmission and the associated condensation issues including mold. For such projects, a dual goal of a liquid-applied waterproofer and a mold preventative finish may be the objective. For such projects, involved parties can consider a substitution of the Fiberlock IAQ 9000 mold-resistant waterproofer, manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8395-5 (Pail, 5-gallons)). [↑](#endnote-ref-55)
56. When project requirements will involve waterproofing as the primary objective, the [Pli-Dek](https://plidek.com/) unit of the ICP BUILDING SOLUTIONS GROUP may be a more targeted and experienced resource for addressing unwanted serious moisture issues in buildings. [www.pli-dek.com](http://www.pli-dek.com). (800-364-0287). [↑](#endnote-ref-56)
57. Worksite signage recommendations are also found in the IICRC Standard and Reference Guide for Professional Mold Remediation, 2008 [Standards Sections 5 and 12: Reference Guide: Chapters 5 and 11]. [↑](#endnote-ref-57)
58. Example: Benefect Atomic Cleaner degreaser - see Section 2 (Basis of Design). [↑](#endnote-ref-58)
59. Example: Instant Mold Stain Remover (IMSR) manufactured by FIBERLOCK, a brand of THE ICP BUILDING SOLUTIONS GROUP (PREVIOUSLY ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8317-1-C4 (Gallons)). [↑](#endnote-ref-59)
60. The product in the Basis of Design for Peroxide Cleaner, may be used inside HVAC systems. For information on proper use of chemicals and coatings inside of HVAC systems, consult the manufacturer and review the most recent guidance from the National Association of Duct Cleaners of America (NADCA). Before using any chemical or coating in HVAC, review NADCA publication Using Chemical Products in HVAC Systems (2012) at: <http://www.nadca.com/sites/default/files/userfiles/documents/chemical_products_position_paper_web.pdf> [↑](#endnote-ref-60)
61. Manufacturer may have optional catalysts available for peroxides that can both increase stain mitigation and cleaning efficacy. [↑](#endnote-ref-61)
62. See 3.02, A, e, regarding removal of microbial staining, and proper supplementary use of mold stain removal products formulated using sodium hypochlorite. Example: Instant Mold Stain Remover (IMSR) manufactured by FIBERLOCK, a brand of THE ICP BUILDING SOLUTIONS GROUP (PREVIOUSLY ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8317-1-C4 (Gallons)). [↑](#endnote-ref-62)
63. In the United States, EPA-registered disinfectants/sanitizers may not be used inside HVAC systems. For information on proper use of chemicals and coatings inside of HVAC systems,

review NADCA publication Using Chemical Products in HVAC Systems (2012) at: <http://www.nadca.com/sites/default/files/userfiles/documents/chemical_products_position_paper_web.pdf> [↑](#endnote-ref-63)
64. Misting information can be found at: IICRC S520 Standard and R520 Reference Guide for Professional Mold Remediation, 2008 [Standards Section 12.1.7, page 43: Reference Guide: Chapter 11, pages 169-170]. [↑](#endnote-ref-64)
65. Manufacturer may have concentrated disinfectant products also available. Example: ShockWave Concentrate manufactured by FIBERLOCK, a brand of ICP BUILDING SOLUTIONS GROUP (formerly ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 8310-1-C4 (Case Total: 4 Gallons)). [↑](#endnote-ref-65)
66. Recommended Airless Spray Equipment: Titan Impact™ 640 or 740ix for high-volume projects/users. See: <https://www.titantool.com/industry/commercial/heavy-over-4-stories/impacttm-series-electric-airless/> [↑](#endnote-ref-66)
67. Consider a substitution of the Fiberlock IAQ 9000 mold-resistant waterproofer, manufactured by FIBERLOCK, a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 8395-5 (Pail, 5-gallons)). [↑](#endnote-ref-67)
68. As of the date of issue this specification, the Fiberlock brand fungicidal and mold-resistant coating products for mold remediation are for indoor use only. For outdoor applications, substitute mold-resistant coatings formulated for exterior exposures. Example: [Stopz Mold](http://adr.sh/lfpzCz) Resistant Interior and Exterior Primer/Finish, [F583 Series](https://www.fixallpaint.com/product/stopz-mold-resistant-interior-exterior-primer-finish/), manufactured by FIXALL a brand of the ICP BUILDING SOLUTIONS GROUP (previously ICP CONSTRUCTION); located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fixallpaints.com](http://www.fixallpaints.com) (Product ID: F583 (Five-Gallons)). [↑](#endnote-ref-68)
69. Before using any chemical or coating in HVAC, review NADCA publication Using Chemical Products in HVAC Systems (2012) at: <http://www.nadca.com/sites/default/files/userfiles/documents/chemical_products_position_paper_web.pdf> [↑](#endnote-ref-69)
70. Example: LeadSafe lead dust cleaner manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) [www.fiberlock.com](http://www.fiberlock.com) (Product ID: 5496-1-C4 (Gallons) or 5496-Q-C12 (Quarts)).

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PLEASE REMEMBER:

The effective performance of any mold remediation project is contingent upon the competence of the applicator.

If surfaces coated with fungicidal or mold resistant coatings are damaged, repair and recoat immediately to prevent exposure of surfaces on which fungal regrowth could take place.

This specification does not fully describe all the limitations, warnings and precautions related to the products described herein.

Reference should be made to the Technical Product Data Sheets for complete technical information on all products manufactured by Benefect and Fiberlock, both brand divisions of the ICP BUILDING SOLUTIONS GROUP.

Safety Data Sheets (SDS) should be referred to for health and safety information. Copies of all SDS sheets can be obtained by visiting [www.benefect.com](http://www.benefect.com) and [www.fiberlock.com](http://www.fiberlock.com)

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