

Goldmorr Training Course

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Introduction

Goldmorr is a division of 21st Global Pty Ltd., which is an Australian-owned company developing decontamination products and programs for global distribution. We have an industrial chemist on board with over 25 years of expertise in the antimicrobial industry. Our products are currently being used in Australia, Canada, England, Japan, USA and New Zealand. Developing solutions for bacterial, biological and microbial problems is our main focus.

Our chemists' successes to date include the decontamination, restoration and protection of mold-affected buildings and artifacts, development of antimicrobial surface coatings and development of a decontaminant used in the neutralization of weapons-grade Anthrax in biological warfare, tested and funded by the U.S. Government.

Our company has developed products for, amongst other fields, infection control. Our barrier control film has been hailed in a white paper to be the next generation in infection control.

In 2000, we developed a mold remediation product, known as GM2000, which was engineered to target airborne particulates, including mold spores. The product had a huge success in elimination of these airborne particulates and ultimately led to the development of The Goldmorr System.

We started using The Goldmorr System in San Diego, CA, in 2002 with outstanding results. Our managing director, Rob Goldsworthy, has been supplying the restoration industry for many years with enormous expertise in handling water, sewage, moisture and air quality issues and is sought after as a consultant on many specialized decontamination projects. Furthermore, in 2020, Rob & Sue Goldsworthy and team completed the most comprehensive mycotoxin study within the built environment, to date.

The Goldmorr System course is designed for technicians who have existing knowledge in the field of water damage and restoration.

We are proud of our ever-expanding network of Goldmorr technicians using our products across the globe.

Welcome to the Goldmorr family!

**Manual created by Rob & Sue Goldsworthy.*

NOTES

Understanding Mold

What is mold?

Mold is one type of fungus that decomposes dead organic material. Molds can sometimes infect living plants and animals. The spores and fiber-like structure of individual mold colonies are too small to see without a microscope. When enough mold grows together on a surface, it will appear in different colors. The color of mold is influenced by the nutrient source and the age of the colony. **It is impossible to determine what type of mold is growing by visual inspection only.**

Molds are naturally-occurring organisms playing a major role in the earth's ecosystem. They are the most important part of nature's ability to recycle. These microscopic fungi exist everywhere except under water, parts of the Arctic and Antarctic and in artificial environments, like sterile rooms.

Fungi have to depend on other organisms or on the forces of nature to carry them to a food source or to bring food to them. Mold spores and mold fragments are in the air we breathe every day.

What makes mold grow?

Mold needs moisture to grow. No moisture = no growth! Mold also needs food, oxygen and (ideally) a warm temperature. Since mold decomposes dead organic material, it can grow on wood and can also digest some synthetic materials such as adhesives, pastes and plants. While mold cannot feed off inorganic material such as concrete, glass and metal, it can however grow on dirt, debris or hairs that are on/in these surfaces. Molds prefer wet or damp materials but can get their moisture from the air in the form of high humidity (typically above 60% relative humidity).

If mold has the opportunity to grow (add moisture), it will. The key to reducing the growth of mold in buildings is to minimize the moisture. Reduce the ways in which water and moisture accumulate in the building structure and mold won't continue to be a problem.

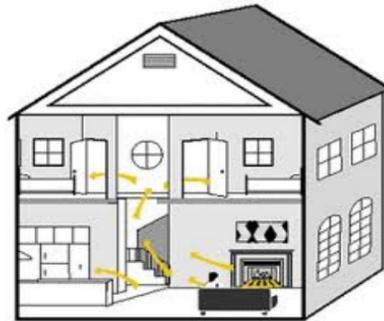
Remember, molds do have their place in the ecosystem outside. Some of the most beautiful places on earth, such as rain forests, exist largely because of fungal growth.

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How does mold spread?

Mold can grow by extension of tiny root hairs called **hyphae**. Mold also makes spores that are like very small seeds. When spores are released, they can be carried by air or water to new locations. As mold dries, this release is accelerated in an effort to spread the seeds to new areas to grow. Spores are so small that they are affected primarily by air currents, including the natural circulation of air throughout a home. If you have visible growth occurring from a water intrusion event, do not dry the area or the building materials without pre-treatment. As the moisture of the mold or building material decreases, the release of spores increases exponentially. Ideally, in the case of water intrusion/flooding where extensive mold exists or is likely to form, treat with GM2000 both before and after drying to make the environment safer in which to work.

In addition to the previous information supplied, mold and mold spores can be carried on your clothing. Every time you open a door or window, mold spores will enter your dwelling, as they exist in the outside air. For artificially-heated and -cooled dwellings, mold spores will enter through the fresh air intake and be circulated throughout your home. Simply walking from room to room will also spread mold spores via your shoes, clothing and air movement.



Another way spores can be spread is if an occupant moves furniture contaminated with mold spores into a dwelling, thus introducing active mold growth into what may have been a “mold free” zone. This is important for people to keep in mind.

Mulching of garden beds or decaying plant debris close to a home contributes to the spread of mold as well. Homes that are built airtight become incubators for mold, if high humidity or a moisture source is present.

Please review the inspection chapter of this manual to ensure you are aware of the many contributing factors to look out for during your inspection.

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Mold Remediation Born from the Asbestos Industry

There are fundamental differences between MOLD and ASBESTOS. The basic difference is that asbestos is manmade and mold is natural. So, why do we treat them the same?

A paper commissioned by the U.S. Chamber of Institute for Legal Reform and the Center for Legal Policy at the Manhattan Institute, released July 17, 2003, and titled “The Growing Hazard of Mold Litigation” articulates this very well. *(For those interested, you can Google the title and download a copy in its entirety.)*

This paper incorporates two separate reports:

- 1) “A New Plague – Mold Litigation: How Junk Science and Hysteria Built an Industry”
- 2) “A Scientific View of the Health Effects of Mold”

The paper explains such things as the term “toxic” in relation to mold and when this term came about. *(Basically it was used by the media to instill fear.)*

Other interesting points include:

- Mold makes up 25% of the earth’s biomass
- The increase in litigation
- Mold requires the same basic conditions as humans to exist

It covers very high-profile cases and the science that has proven the findings to be incorrect. It is quite an amusing read, as it is written in very plain language without a lot of legal mumbo jumbo.

It does not paint the mold remediation industry in a good light; but without some of the myths circulating, there would not be a mold remediation industry.

What we are trying to achieve with our system is a balance between not taking mold seriously and overkill. To be able to find that balance, we need to take a logical and sensible approach to mold – not just go and rip the guts out of a house because that’s the only way to do it.

How many times have you taken perfectly good drywall out of a house or building?

How many times have the residents of homes had to be temporarily relocated?

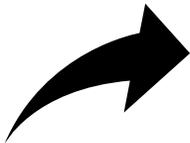
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Containment

One of the unique and sometimes criticized aspects of the Goldmorr method is the lack of supposed containment. By now, you will have seen how mold spreads and know that, once the spores break free and start moving around, they are transferred to other areas. So, we fog the entire dwelling. We close the doors and windows, and the whole house becomes the containment.



Typical containment: Note the amount of space, just in one room. This is not containing or treating the appropriate space.



These 2 photographs illustrate how air circulates around the home. This is common sense. **Note the home diagram:** The windows are shut and the heat from the fireplace is circulating through the home. With the windows and doors shut while you remediate the mold, you can see how you can treat the entire home.

NOTES

Industrial Hygienists

Our research has shown this to be a very confusing subject. On one hand, you have Certified Industrial Hygienists (CIH) who are highly-skilled individuals with a broad knowledge of, amongst other expertise, all things microbial and fungal. They should have letters after their names (CIH) and be current members of the AIHA (American Industrial Hygiene Association) or the like. There are fewer than 7,000 CIH's globally. On the other hand, apparently anyone can "call" him-/herself an Industrial Hygienist (IH) without any formal qualification whatsoever!

In any case, it has long been established that there is no need for pre-testing on a job where there is visible mold present. If you can see mold, you have mold! So, our concern in relation to IH's is testing after remediation, if required.

The first thing to remember is always be present when IH's conduct sampling. We have heard of an incident where the outside air sample came back as level 1 or 2! This is pretty much impossible unless you are in a sterile environment. Outdoors, I don't think you would get that result even if you were in Antarctica! Of course the IH does not like to admit that perhaps this sample or result is not correct. We also know of another example where a doctor in mycology takes samples prior to remediation by directly swabbing the mold. Of course he gets a high result because we know the mold is there...we can see it! But, guess who was quoting for the remediation job?

Be aware and keep your eyes and ears wide open. There are many IH's out there who are directly involved with the remediation process. This is a breach of ethics on their part. There are also IH's who get "kickbacks" from remediators. This is also a breach of professional ethics and probably highly illegal.

The second thing to remember is that IH's are there to collect air samples only. Plain and simple. They are not there to critique how you have done your work, although some may try. The bottom line is the RESULTS! The EPA does not state how a job is to be done and definitely does not imply there is only one method of mold remediation.

IH's are there to collect samples...it is not their job to tell you how to do yours!

Consider what type of testing is best. Mold sampling is ineffective, as the type of mold spore does not matter. If there is visible mold, it needs to be removed. Period. Furthermore, knowing the number of mold spores within a given sample does not help because there is no standard for acceptable or unacceptable levels of mold. Instead, particle counts are a better alternative. While there is no standard for mold, there is an International Standards Organization (ISO) standard for particle counts. More on that later...

NOTES

IICRC, CDC & U.S. EPA

The Institute of Inspection Cleaning and Restoration Certification (IICRC), along with a host of experts and respected industry gurus, tells us that common sense should prevail regarding mold remediation. That's what we are teaching here. We are not saying to change your whole system. We are not saying that you will never need to tear out any more drywall ever.

The U.S. Environmental Protection Agency (EPA) says of its own mold course, "The absence of a method or technique from this course does not indicate or imply that it is not effective."

The Centers for Disease Control and Prevention (CDC) goes as far as to tell people to "add mold inhibitors to paint before painting," highlighting the acceptance that there are products that will successfully keep mold away.

Discussion

Testing: Why, when there is visible mold, is testing being carried out?

The CDC and the EPA tell us this is unnecessary; and, quite frankly, if you can see it, you have mold!

How many times have you ripped out perfectly good drywall?

Instructors for the IICRC have taught remediators to tear out drywall. However, the S500 and S520 say to remove the mold...not to remove the drywall. It is environmentally disastrous (just think of how much is going to landfills). Consider the homeowner, the cost of ripping out the drywall, the cost of replacing it and the time it takes you to perform that job. Updates to the above-mentioned documents now include chemical remediation.

If building products are damaged, of course, you need to remove and replace them. If you have mold and no damage to the building products, though, remove the mold...do not remove the building materials!

The bottom line

What we want is to make you more professional: arm you with information that will inform and empower you to achieve an outstanding level of professionalism, do the job right and get your clients referring people to you. Your clients do not want their homes torn apart because of mold, if it is unnecessary. They don't want to have to move out of their homes during deconstruction and reconstruction of an indefinite period of time. You will learn to utilize some valuable tools that will empower your clients, as well. If they feel good, you feel good; and you have done yourself proud.

NOTES

U.S. Environmental Protection Agency (EPA)

How many of you have a Commercial Applicator's License?

EPA-registered products such as Microban and Fiberlock are registered pesticides. We believe that all "antimicrobial" EPA-registered products are under the pesticide classification.

If you are accepting money for applying these products, you are generally required to have a license and/or pollution liability insurance. While there are some exceptions in some states (we have not researched them all), it is easy enough to find the information on the EPA website about products that carry a registration. Remember that you must abide by both federal and state laws in the application of pesticides.

Our products are not registered with the EPA simply because they do not have to be. Our products are not pesticides. You do not need a Commercial Applicator's License to use it; and we are not making the same claims as any of the other products. The composition of our product is quite different than any other commercially-available products for use in mold remediation.

Labeling of some of these products is also important. If you are using a hospital- or commercial-grade product, you are not permitted to use this in a residential setting. Unless that labeling expressly includes residential use, it is not permitted.

To safeguard you, as a remediator, there are terminologies you need to know. The main one is "kill." Since our products are not pesticides, we do not make "kill claims." Wording on your invoices and reports should be more along the lines of "cleaning."

Your clients will also be happier with the "cleaning" angle, as it may prevent them from having to have their homes listed on the many mold registers that exist. When we have established the 10 ft² definition, this may also be of assistance to both you and your client and any duty of disclosure (i.e., if they have a duty of disclosure if the mold exceeds 10 ft² in any one room, then they may not need to disclose at all if, in fact, there are separate manifestations).

We are not advocating anything at all unethical here – we are merely putting it out there for interpretation and discussion as some persons may have previously been disadvantaged by an incorrect interpretation of the wording.

NOTES



Inspection



Initial Phone Call / Assessment

When we refer to an assessment, we are telling the client we are going to assess whether remediation should be performed. Listening begins over the phone with the customer's initial contact.

The initial call can provide limited qualification of a potential client during this process. By asking some basic questions, it is possible you will have a better understanding of the issue prior to inspection. *First, it is helpful to determine if the customer is a tenant, property manager or owner. (The motivation of a tenant is usually to get out of a lease. In general, we do not recommend doing work for a tenant...we prefer to get a work order from a property manager or owner.)* Then you may want to ask some or all of the following questions of the customer:

1. Why do you believe you have a problem?
2. Do you see what looks to be visible mold growth? In what areas of the premises? Have you checked behind the furniture?
3. Have you had any other inspections or testing? If so, can we see copies?
4. Is this party in control of the project (have they written a scope)?
5. Are there any known water intrusion issues (leaks)?
6. How old is the building?
7. What's the history concerning water damage/intrusion/mold remediation?
8. Did you or any contractor/maintenance personnel do anything that may have mitigated moisture?
9. Have there been changes to the structure from its original design?
10. Did occupant complaints occur regularly/recently/seasonally?
11. Are any of the occupants under doctor's supervision for allergies, asthma or other respiratory conditions? (We don't get into health issues, but it could help determine a source of contamination.)

During the actual assessment, you should listen to the needs of the customer first. Listen to him/her so you can find out what his/her motivation is. Sometimes it's obvious because mold is growing visibly; and the client is smart enough to know that isn't normal. Unfortunately, that's not always the case. Again LISTEN to what s/he is saying. If the client says s/he is experiencing health symptoms and rattles off a list of symptoms from memory, it's probably because they have been on the internet and they are either paranoid or up to something. You are not a doctor and should make no comment as to whether mold is contributing to the client's health issues. That is a job for a health professional only. Your job is mold.

What's his/her motivation...health? Ok, that's understandable – especially if there is a newborn baby at home and the customer wants reassurance. But sometimes it's money; and you have to be able to recognize the difference. Why is this important for us? We, as a company, have to be aware of the projects that are most likely to involve litigation – for both our clients and for us. Tenants are usually motivated by money and moving.

Keep in mind

- You only have one chance to make a first impression.
- Persons conducting inspections should be prepared for any and all questions.
- Pride yourself on your thoroughness: make a checklist & stick to it.
- Never become complacent: check everything yourself.
- Never assume the first issue you see is the only one.
- Know your moisture levels.
- If you see mold, you have mold. (Testing for species is irrelevant.)
- Initial reports will win you the job.

Common Contributors to Mold Growth

Below are some of the most common contributors to the growth of mold:

- Flooding
- Hot water service incidents
- Dishwasher leakage
- Washing machine leakage
- Burst or leaking pipes
- Leaking or overflowing AC units
- Roof leaks



Other causes of mold

When inspecting a property, here are some other things to look for/consider:

- Garden beds abutting the building
- Irrigation splashing or dripping against exterior walls of the building
- Inadequate ventilation
- How much sunlight does the building get?
- What direction does the building face?
- Are there large trees that keep it in the shade for longer periods?
- Are occupants running a vaporizer for small children or asthmatics?
- If mold is in the kitchen area, is the exhaust fan working over the stove?



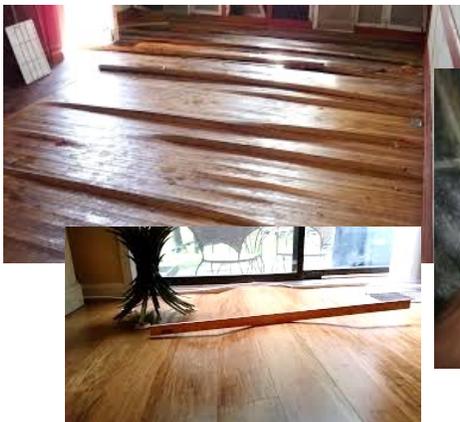
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Visual Triggers

Visual triggers are warning signs indicating – sometimes screaming – “Hey! There’s a problem over here!” When an investigator walks into a building, s/he takes in everything (sights, sounds, smells and, of course, what the client is saying) to help guide him/her to problematic areas.

Some of the most common indoor triggers are:

- MOLD: The appearance of mold may include many textures and colors. Growth may appear as a solid patch or discrete colonies (circles of growth).
- Unexplained earthy or musty odors (non-cooking related)
- Water stains on drywall
- Drywall defects (nail pulls/pops, tape seams puckering, patching)
- Rusting on metal (windows, fixtures, tack strip, HVAC vents)
- Tile defects (popped tile, sprawling, darker grout near wet areas)
- Condensation
- Flooring/concrete defects (cupping of wood/efflorescence on cement materials)
- Enzyme staining under linoleum or behind wallpaper
- Baseboard swelling, pulling or separating from wall
- Visible growth on clothing (Leather goods and shoes are the first signs.)
- Expansion or swelling of any processed building materials
- Bubbling or peeling paint – particularly around light fittings
- Noticeable painting or spot treatment in a small area or along the base of a wall, corner or where the wall meets the ceiling



This was not meant to be a complete list. A room-by-room checklist is the most comprehensive way to ensure all possibilities are exhausted.

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Common Sights



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Air Exchange

In our experience, the most common of all is the least obvious!

Air exchange issues are simply explained by cold air. In the summer months, air conditioning units are running cooler than the air outside; and in winter months, the air inside is warmer than the outside air. When cold air meets warm air, you have an exchange issue. This results in moisture causing condensation – hence, an air exchange issue. (Pay particular attention to areas around aluminum vents of AC units and areas surrounding windows.)

Below are a couple common instances where you will find air exchange issues.

Apartments

In a timeshare apartment situation, the occupants will clean the apartment and all take showers before leaving. They then lock up the apartment, and it may be a week or more before anyone else occupies it. The apartment has no natural ventilation between these different parties occupying it; so, the steam and water from the bathroom alone can be enough to cause condensation and mold.

City apartment living brings its own problems, as well. We find in Australia many occupants of these apartments have them locked up all day after having the heating on overnight. The air inside is warm, and the air outside is cold. While they are working all day, moisture is building up on the inside of their windows and creating the perfect environment for mold. Upon inspection, this becomes obvious, as it radiates out from the windows, across walls and ceilings and can often be found on the back of furnishings placed against the walls. Most city apartments are surrounded by other city apartments and during the cold winter months receive very little by way of sunlight. One of the hazards of high-density city apartments and construction!

Ask your client

Nobody knows more about the mold problem in their dwelling (i.e., home or office) than the occupants themselves. In most cases, they will know where it starts (be it around windows, in the laundry or near the sink). They usually will know where the roof leaks, too. They will know, if the wind is blowing from the west they get a leak around a certain window. It may start around the stove in the kitchen because the exhaust fan has not been working for the last 12 months.

Sometimes the client “removes the evidence.” They will wipe away all the visible mold – like the homeowner that cleans before the housekeeper comes.

NOTES

Real World Examples

Why it is so important to check all areas

A hotel client called to find out what was causing an odor in one of their suites. They found wet drywall under a sink, around windows and behind a toilet on the backside of a shower stall. When they opened the drywall, they found no visible mold. They still couldn't find the source of the smell.

We looked at all the areas they pointed out; and yes, indeed the drywall was wet – a problem, but not the cause of the mold. We found that the outdoor deck was over a block crawl space that extended halfway under the suite.

After exposing a vent covered by plants, we found the crawl space was wet and wood members were covered in mold and fungus. The French door to the unit was also leaking. If we had stopped there, we would have missed 2 more problems. On the front side of the suite, a sprinkler was spraying into the footing around the building; and the downspout was dumping all the roof water into a hole that led under the footing into the crawl space.

We found several sources of water intrusion, even before got to the leaking sink and shower enclosure.

Be careful what we say (and to whom we say it)!

A large commercial client called and was extremely upset that one of our field technicians spoke to a tenant. Our technician was sent out to a commercial property to perform remediation and drying services. While there, a tenant asked the tech a simple question about what the tenant was instructed to do. The technician was very professional and informed the tenant about what to expect during the process. It seems like a logical and harmless inquiry, and it is – as long as the answer comes from the landlord or managing agent.

The tenant only heard what she wanted to hear and extracted what she needed to reinforce her own motivations. She secretly wanted to get out of her lease, and anything regarding the health of her office was ammunition to get out.

Needless to say, the managing agent did not want to deal with us again – even after \$10,000 worth of remediation work done for free! They took the free work, but the war was lost because we didn't have their trust. You always need to keep in mind just who the client is.

NOTES

Inspection Tools



Moisture Meter

The one at left is an Extech M0290. You may have your own, but this kit comes with many different probes which may be useful from time to time.

These meters help to determine the actual content of moisture on walls, in carpets, etc. They measure temperature and humidity.



Infrared Camera

These cameras have come a long way since they retailed in the thousands of dollars. You can now purchase them for as little as a couple hundred.

They are useful for showing leaks, which may be concealed in walls as a result of leaking pipes, roof leaks, etc.



Particle Counter

These items are very useful in determining the quality of air within a dwelling, as well as getting you close to the source of the mold. The particles will increase as you get closer to the source. These meters can also assist in determining whether mold is present in the walls. For example, if you get a high particulate reading when you are sampling directly from a power outlet, you may wish to investigate further to determine if there is a leak behind the wall.

NOTES



Correction with Goldmorr's Proprietary Products



GM6000 Additive (*& Stain Remover*)

Product Info

GM6000 is an additive to pool chlorine, sodium hypochlorite or $\geq 10\%$ bleach, which are available locally to technicians. Because of the limited shelf life of bleach, GM6000 is best mixed at the time of use. The viscosity of this product is usually quite jellylike and sits on the surface. We sell only the additive, which assists the bleach to perform better. The addition of the GM6000 additive will thin the bleach out and enable it to penetrate and work.

GM6000 is your stain removing product. You can spray or wipe the product directly onto the surface, and it will penetrate porous surfaces, destroying all contaminants. You can wipe or spray on walls, onto timber surfaces, brick, concrete, etc. It will not affect most paint. One type that it may affect is the eco-friendly paints. Try a small amount in an inconspicuous spot if unsure.

GM6000 can be used for large spaces such as underneath structure timbers (like crawl spaces or attics) and applied by way of a pump-up or an electric spraying system. Please note that you will need a spraying system that is made of marine-grade stainless steel, as the bleach you are adding to the GM6000 will corrode fittings. Always flush your equipment well with water following use to prevent any damage to it.

Guidelines for applying GM6000 and important reminders

Premises should be unoccupied of humans and animals during the remediation process. Always remember that GM6000 will bleach color out of surfaces with which it comes into contact. Micro cleaning is the best way to apply and clean surfaces like walls, doors and ceilings where there are soft furnishings, including carpet.

1. Cover all soft furnishings with a plastic-backed canvas or fabric-topped drop cloth. DO NOT use plastic drop sheets, as the product will pool and run off when the plastic drop sheet is moved. Be careful not to walk through GM6000 and then onto the carpet (i.e., may bleach carpet).
2. Use a microfiber type of mop for ceilings or plain white rags for walls. (When cleaning walls, start at the bottom to prevent drip marks down your walls.)
3. Dampen the cloth or mop with GM6000 and simply micro clean until the mold has all vanished. (Do not over wet clothes or mops, as they will drip.)
4. Pack up all drop cloths and cleaning items after using GM6000 and before fogging. Please note that all cloths and microfiber mop heads that have been in contact with GM6000 should be sealed in a plastic bag when returning them to your work vehicle because they contain VOC's (Volatile Organic Compounds); and those may mix with the air in your vehicle's cabin.

NOTE: When applying GM6000 in tropical regions (i.e., where the constant humidity is above 60%), you will be required to follow the application of GM6000 with drying off the surfaces using either a clean, dry microfiber cloth or using mechanical drying techniques, such as air movers and/or dehumidifiers.

www.goldmorrusa.com



- **Stain remover (visible mold)**
- **Pre-applied before GM2000**
- **For use on hard, colorfast surfaces ONLY**
- **Sprayed or wiped on directly**
- **Will penetrate porous surfaces**

Most all jobs will require a combination of GM6000 for visible mold and GM2000 or GM Thermo for airborne particulates (see more info in GM2000 & GM Thermo sections). Always use this product first. **After using GM6000, ALWAYS fog with GM2000 or GM Thermo to eliminate VOC's left behind from the bleach.**



GM2000 is the most unique product

It eliminates mold, but GM2000 does not harm anything or any surface. It does not use bleach. Creating a fog through the application process, the product is suspended in the air. It has hyper-wetting agents, is statically charged & moisture seeking and draws everything into the droplet. It basically settles out and turns all the particles and airborne contaminants to CO₂ before it reaches the ground. Simply follow up with HEPA vacuuming, if necessary.

- **Tested against spores (wet & dry)**
- **Tested against toxins**
- **Skin tested**
- **Biodegradable**

Fogging it into the air will clean the air of contaminants – even dust particles. This is more effective than air scrubbers working for 7 days in a room. Fogging takes roughly 20 minutes for an entire house.

GM2000 is also an effective odor eliminator/neutralizer. It will aid in the elimination of VOC's associated with the bleach used with the GM6000 and other biologically-related odors. One of the exceptions to this is animal urine. Animal urine odors differ depending on many factors, including diet-related considerations.

Helpful information: As mold grows where there is moisture, it will only grow where the water is or has been. This helps in determining the area to be treated (e.g., in the case of a roof leak, the water will follow a path of least resistance...so, if it is growing behind a wall, it will be growing where the water has traveled). GM2000 will follow the path of the water, as it is moisture seeking. When fogging GM2000, it will be attracted to the moisture and, on contact, will spread out to cover the same area as the water path. Because the water has broken the surface tension and maybe soaked through the wall, the GM2000 will follow it.

Guidelines for applying GM2000 as a fogging agent and important reminders

Premises should be unoccupied of humans and animals during the remediation process. Application of GM2000 could not be simpler. Remember, it will not bleach out color.

1. Remove any cloths and equipment from the premises, if you have previously treated with GM6000.
2. Fill your choice of ULV fogger with GM2000.
3. Starting at the back of the house, start fogging until you work your way to the front door.
4. Lock the door when you leave.

Frequently asked question:

(Answered by all who use this system and fast becoming a Goldmorr motto)

Q: How much GM2000 do I use?

A: If in doubt, FTSSOOI



Application for Content Cleaning

All carpets and fabrics can be treated with GM2000 as it will not cause bleaching or make color bleed.



This leather jacket was cleaned using GM2000.

As a general rule, we use GM2000 for our content cleaning, as you are mainly dealing with soft furnishings. This product is for the removal of visible debris, including mold. GM2000 will eliminate the mold and spores without bleaching. It may not remove staining. If the black stain in the fabric is caused by mold, the mold may have begun to “eat” the fabric; and, at that point, the item may not be salvageable. Most leather, vinyl and plastic can be saved.

Simply apply with a sprayer or microfiber cloth, and safely wipe away. An additional benefit is it is not scented, so there can be no question of it masking odors.

NOTES



Another use for GM2000: DRY DOWNS

All premises that have suffered a water event, flooding, storm, post fire (*with a lot of water being poured into a dwelling*), broken pipes, etc., need to be dried out. This is done by way of extraction of the water and dryers of varying types.

1. **Prior to dry down completion**

Spray the surfaces with GM2000 prior to drying being completed.

2. **Check that the premises are completely dry to your local standards**

If in doubt, perform a check with your moisture meter in all areas to ensure everything is completely dry.

3. **Before you leave**

Fog the premises with GM2000 after drying and before leaving.

These three steps, when incorporated with your dry down, will ensure you have performed the best possible treatment to keep mold away.

It is important to note, despite your best efforts, there are times when mold will start to grow after this treatment. Some of the reasons are that there could be excess exterior water lying around the home, or it may be that the area experiences excessive rain following the event for which you are treating. At any rate, these are circumstances beyond your control. After you have treated a home and the homeowner opens so much as a window (which, of course we recommend from an airflow aspect), if there is excess moisture surrounding the home, or the next door neighbor has experienced same problem and has not dealt with the mold issues, spores will travel and make their way into the home you just treated. These are considerations that must not be ignored and should be noted when issuing a report.

It would be a good idea to make sure the homeowner or insurance company has your card and is asked to call you at the first sign of any mold.

If we remember to perhaps include some basic guidelines when issuing reports, then the homeowner and the insurance companies can save themselves a lot of expense and disruption.

IMPORTANT: Please ensure you are aware of the recommended/regulated moisture levels permitted in your state. This can include levels in concrete, timber (different types of timber can have different moisture levels permitted) and other construction materials.

NOTES



Product Info

GM Thermo fogging is the process by which an oil-based product is converted to smoke. These very fine smoke particles will find their way into any place that smoke has previously been. Use in confined spaces is ideal as GM Thermo will get into all the tiny or hard-to-reach places. GM Thermo works similarly to GM2000 in that it is a non-mechanical air scrubbing product. GM Thermo will also work on mold, just like the GM2000 product.

It's ideally suited for use in larger spaces or where access is limited. It is commonly used after fire damage to eliminate any microbial growth and the odor of smoke. It has been used to treat roof spaces, basements, larger buildings such as theatre and libraries, as well as hotels and office buildings.

GM Thermo is an oil-based alternative fogging product, useful for the following types of projects:

- **Confined spaces: attics, subfloor**
- **Air handling units & ducting**
- **Smoke damage jobs (additive for Unsmoke)**
- **Large industrial jobs**

CAUTION: Combustible mixture

Guidelines for applying GM Thermo and important reminders

Premises should be unoccupied of humans and animals during the remediation process. There are precautions you need to be aware of, as you are using smoke. The precautionary notes regarding the fire department are because smoke will come out of the eaves, thus giving the impression that a home/structure is on fire.

- **Notify your local fire department. (Failure to do so can result in significant fines.)**
- **Deactivate and make plans to reactivate smoke detectors.**
- **Ensure there are no pilot lights on in the premises. (If there are, confirm all flames are extinguished.)**
- **Ensure you have eliminated any tripping hazards.**
- **It can be a good idea to tie a rope to the exterior door so if you have very dense smoke, you can find your way out of the building.**
- **ALWAYS GET THE CORRECT EQUIPMENT TRAINING!**



If you are doing a smaller confined space, you should use electric equipment, such as what is known as a kettle fogger (pictured at left).



(CONTINUED)

For larger jobs, you must ensure you and any other workers who will be using thermal fogging equipment have had training on the equipment you plan to use. The larger equipment is gas/petrol powered and produces a flame to burn the Thermo oil. The equipment can drip the product onto the floor, and then the flame can ignite the oil if the equipment is not used correctly. Ensure you are shown the adjustments to run the smoke as a dry smoke. It may sound like the equipment is running very rough, but this is normal for a dry smoke. If the smoke is wet, it can leave a residual, which will require you to clean it off the surfaces.

Always ensure the premises you are Thermo fogging is not attached, by way of air conditioning ducting, to any adjoining buildings. If this is the case, you will need to isolate the ducting between buildings. Blueprints are a great way to determine this, as well as consultation with the facility manager.

Air intakes of the HVAC units are the easiest and quickest ways to ensure the product is distributed to all areas of the structure you are fogging.



The above photograph is a large Thermo fogger in action. You can see how much smoke it produces and, therefore, how much product it can pump out. To use this in a 3-bedroom home would fill it with smoke in a matter of a few minutes. We also used this to decontaminate a theatre complex using the air intakes as our primary means by which to spread the smoke. This took around 6 hours and was scheduled as an overnight job to cause the least amount of disruption to the occupants or show schedules.

NOTES

Important Points to Remember

- Always ensure the home or office is unoccupied (including animals) at the time you are performing the remediation process and the structure remains unoccupied for 3-4 hours post remediation.
- Cover all fish tanks before fogging. Plants are okay left uncovered.
- If it is an individual space (i.e., an office) within a larger building that has ducted air conditioning, cover and tape the vents so you are containing the area.
- GM6000 does have associated VOC's from the bleach to which it is added. Those VOC's are neutralized by GM2000 or GM Thermo. **ALWAYS FOG with GM2000 or GM Thermo AFTER USING GM6000.**
- Always ensure you take care when using GM6000, as it will bleach. Cover anything and everything that could be affected.
- When using drop sheets to cover furnishings or flooring, make sure you choose a drop sheet that will not allow the product to soak through or run off. Liquid will soak through an unlined drop sheet. Liquid will run off a plastic drop sheet. We recommend a drop sheet that is canvas or fabric topped and plastic backed.
- Do not walk through GM6000 onto unprotected soft flooring. It could bleach the flooring.
- GM2000 is a non-bleaching product.
- If painters are going into a home or office following remediation, the walls must be dry and the painter should be using a pre-painting product (primer) prior to painting. Mention this in your reports and to your client personally. This should be obvious, but sometimes the obvious is overlooked.
- Notify authorities when using a fogging process (i.e., Thermo) that produces smoke.

NOTES



Safety & Equipment for Application of Products

Occupational Safety & Health

All of you have completed OS&H courses through the Occupational Safety and Health Administration (OSHA) in the past, as a requirement of your state laws. When using chemicals of any description, it is wise to wear personal protective equipment (PPE). You are required to wear PPE when using our products, for your own protection. More than anything, it is important to remember you are dealing with mold here. You do not want to be breathing in mold spores and causing possible health problems for yourself. You are also using sodium hypochlorite, which needs to be used with caution.

Full face mask



Always wear a well-fitted full face mask (never half face). Well-fitted means you should be clean shaven to form a good seal. **NOTE:** Some states require a Fit Test and medical evaluation to be performed in order to be medically qualified for unrestricted use of respiratory protective equipment in accordance with OSHA requirements. Please check your state regulations.

Protective (chemical suit) coveralls



Always wear a disposable, chemical protective suit to prevent your skin coming in contact with sodium hypochlorite. *(Ideally a suit with attached hood, zipper closure & storm flap, elastic wrists and attached boots is best, like example above.)*

NOTES



Gloves

Always wear suitable gloves. Ideally the gloves at the left (or similar) should be worn. They need to be the correct size and should be disposed of as they wear or show signs of damage. Always tape them to prevent GM6000 from running into the gloves and coming in contact with your skin.

Safety signs

“Cleaning in Progress” signs or “Do Not Enter” signs positioned correctly to warn people and keep them out of the area in which you are working are also recommended. A sticker/sign on the front door when you leave with the time of safe re-entry stated is also recommended.



Working in the heat

When working in the heat, it is important to keep your fluids up by taking regular breaks and drinking water. Electrolyte packets are available to help with hydration as well.

Additionally, ice vests can be very helpful to keep you cool. If you purchase the cheaper version from Asian countries, they can often have ice inserts around the kidney area. **Please DO NOT use the ice inserts around your kidneys, as ice in that area can cause health issues.** The more reputable brands do not have them. Ice vests need to be worn under your chemical suit, so you may need your suit to be a size bigger to accommodate for the vest. Do not purchase neoprene vests that require dunking in water, as they rely on airflow to cool them down.



NOTES

Drop sheets

We cannot stress enough how important it is for you to use fabric-topped, PVC-bottom drop sheets when working with GM6000. If you use PVC only, product will likely run off the drop sheet and onto the carpet, bed or furnishings that are being protected. If you use only canvas-fabric drop sheets, the GM6000 will soak through. Below is an example of a drop sheet readily available from stores like Bunnings, Home Depot and general hardware stores (in the painting section).

NOTE:
This canvas drop sheet is clearly marked in front of the word “canvas” as having plastic backing.



Safety Data Sheets (SDS’s)

It is a requirement of most countries/states that you have SDS’s available in your work vehicle. Usually these are to be stored underneath the front seat in a folder.

Transport of microfiber clothes, mop heads, and/or drop sheets with GM6000 spills

It is important to seal these items in plastic bags for transportation following use. In the case of a van-type work vehicle, VOC’s from the bleach can cause fumes within the van’s cabin, if these items are not sealed.

Transportation and storage of bleach/sodium hypochlorite

Please follow the manufacturer’s instructions. Always ensure the lids are tight during transport to prevent spillage. Do not leave sealed containers in a hot vehicle. If your vehicle is going to be stationary for a period of time, you may need to loosen the cap. Store in a cool, dry place.

NOTES

Equipment for Product Application

Microfiber cloths and mops

These are readily available. Ensure they are colorfast. Mops should have flat heads for the most consistent and effective use of product. They are used for micro cleaning surfaces with both GM6000 and GM2000.

**Do not use cloths or mops with GM6000 and then use those same items with GM2000. One or the other – always!*

Squeeze bottle



These bottles are readily available. They allow you to apply product directly onto your cleaning cloth or mop and without over spraying that may be caused by the use of a pump-up sprayer.

**Always ensure the bottle remains upright and sealed. During transportation, keep upright and seal in a Ziplock bag. Ensure you are conscious of the fact that if a small spillage occurs in the bag, the base of the bottle will have product on it. In the case of GM6000, placing this onto a surface will cause bleaching.*

Pump-up sprayers

For larger surface areas, use sprayer of your choice.



Foggers



This is our preferred fogger, a Tri-Jet (left). It is for the application of GM2000 during the fogging process. There are others that are suitable, including the Hurricane (right). We prefer the Tri-Jet because it is stainless steel, which means that it will dent, not crack. A Hurricane is plastic and will crack, not dent.



NOTES



Testing

Post-Remediation Testing

What kind of testing do we recommend?

We recommend particle count testing. The reason for this is because we are treating the whole home so the air is restored to what could be termed as “normal, breathable air.” Normal air is made up of many different types of normal particles. There are ISO (International Standards Organization), US Fed209E and WHO (World Health Organization) standards for particles; whereas, there are NO mold standards. Your customer can actually watch you take the sample or even hold the meter and take the sample him-/herself. Total indoor air quality will give a much more accurate state of what a client is breathing.

IAQ Analytics puts this in a report for you, which is signed off by a microbiologist.

This is a much better testing method than an Air-O-Cell sample. Air-O-Cell samples are basically a particle count whereby the air passes over a small slide inside the cartridge, and the cartridge collects particles. If there is heavy debris, including dust, the slide may not capture a true measurement of the particles. A small amount of the slide is viewed under a microscope and manually identified and counted – not always very accurately on either identification or the count. It is then multiplied out by a standard number which is supposed to represent a cubic meter – also not very scientific.

*For example, if you are taking in the same amount of air (45 liters over 5 minutes is the norm) and you are in a laundry room which is, say, 3 cubic meters, the multiplying number should not be the same as if you did the same sample in a large ballroom. In the laundry room, you may have potentially run through 50% of the air. In the ballroom, you would have only run through maybe 5%. Therefore, you would need to multiply the laundry by 2 and the ballroom by 20. It is haphazard at best and is not likely to be defensible.

**Note: The example here is not intended to be accurate in numbers or multipliers...merely an example in round figures.*

When do you perform testing?

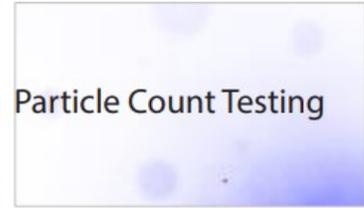
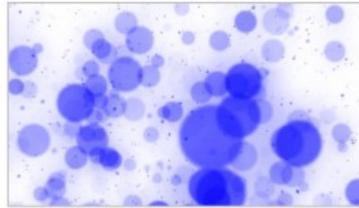
Post-remediation sampling should not be done until **24 HOURS** (or later) after the completion of your job. The reason for that is because products will biodegrade after 24 hours. While the bulk of biological and fungal airborne particulates will be removed after 3 hours (the dwell time), there may still be moisture particles in the air because of the home being closed up during the dwell time. After 24 hours, these moisture particles will have naturally evaporated. **REMEMBER: it is safe for occupants to return to the premises after the dwell time (3 hours/4 is even better) – they do not have to wait 24 hours to return.** Normal use by the occupants of the home is also encouraged, although not necessary, to gain a true reading of the state of the air.

NOTES



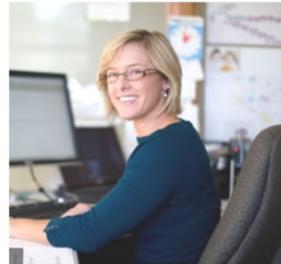
Available to Goldmorr technicians ONLY!

How to prove your air has become cleaner:



3 EASY STEPS:

1. Take air samples
2. Submit readings online
3. Receive report



*Clearance meets international standards

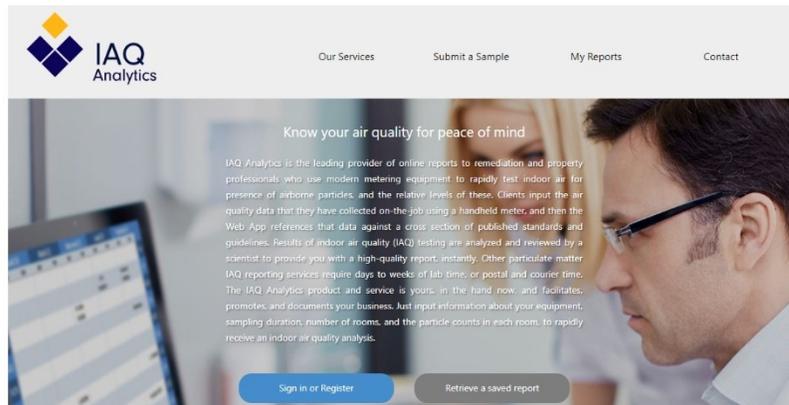
*Certified by a microbiologist



Receive printable reports immediately

Your results in context

What the website looks like:



Visit iaqanalytics.com to get started right away!

Accurate air quality measurement takes teamwork



IAQ Analytics is the leading provider of indoor air clearances to remediation professionals. Clients collect data rapidly with a handheld meter, then input the data to a web app. The app references the data against a cross section of published standards and guidelines. Results of indoor air quality (IAQ) testing are analyzed rapidly and reviewed by a scientist, to provide you with a high-quality report.

Other particulate-matter IAQ reporting services require days to weeks of lab time, or postal and courier time. The IAQ Analytics product and service is yours, in your hands now, and facilitates, promotes and documents your business. You provide information about your equipment, sampling duration, number of rooms, and the particle counts in each room. Then you instantly receive an IAQ analysis at a fraction of the cost of Air-O-Cell tests.

Ever wanted to be able to cross check a result against an international standard or check its accuracy? IAQ Analytics allows you to use your own meter. Data from that instrument is combined with published standards information. You save money by doing the key part yourself. Obtaining a color-coded pass/fail report allows you to interpret meaning clearly.

Location	IAQ Level
Kitchen	9.5
Left Side	9
Rear Entrance	9
Outdoors	8

Full reference table for IAQ Level determination:

IAQ Levels are assigned according to the limits defined in Table 1.

Table 1. The IAQ Level grading system refers to coarse particle counts and also the fine particle counts.

IAQ Level	maximum particles per cubic meter of air			
	Fine particles			Coarse particles
size	≥ 0.3 μm	≥ 0.5 μm	≥ 1 μm	≥ 5 μm
7.5	N/A	1,110,000	263,000	9,250
8	N/A	3,520,000	832,000	29,300
8.5	N/A	11,100,000	2,630,000	92,500
9	N/A	35,200,000	8,320,000	293,000
9.5	N/A	111,000,000	26,300,000	925,000
10	N/A	352,000,000	83,200,000	2,930,000
10.5	N/A	1,110,000,000	263,000,000	9,250,000
11	N/A	35,200,00000	8,320,00000	29,300,000
11.5	N/A	11,100,000,000	2,630,000,000	92,500,000

NOTE: The data reported on most particle counter screens cannot be directly referenced to the table seen here without going through additional calculations, such as by submitting data to IAQ Analytics.

IAQ Level Reference Table Notes

Levels

Each full level covers a logarithmic range of particle counts (x10). Each half level represents an approximate tripling of counts. Levels 6 to 7.5 represent low numbers of coarse and fine particles. Level 8 represents commonly-found indoor counts of fine and coarse particles. Level 8.5 may warrant some further investigation. Level 9 represents the upper range of what could be found indoors when windblown or mechanically-generated particles have become amplified temporarily (see an IAQ report for interpretation of Levels 8.5 and 9). Levels 9.5 to 11.5 represent very high levels of air contamination. Many air-sampling meters will sound an alarm when counts (at a chosen size) reach a point between Level 8.5 and Level 9. Level 12 is currently not assigned by IAQ Analytics. If data is entered which corresponds to counts higher than Level 11.5 or lower than Level 7.5, then an asterisk will be obtained in your report; and you should double check your raw data to make sure it has been correctly entered. This color coding of levels is reflected in each IAQ Analytics report.

Expectations

According to International Published Standard Comparisons (see below as well as the separate document “PSC Reference Tables”), it is expected that all counts in a single sample of air will generally fall within a single row, though some deviation is tolerated. Additionally, two particle sizes are usually considered.

Time duration

Strict sampling duration (time) is required, and IAQ Analytics saves you from having to cross reference the various duration options. We make it easy. Technicians seeking an IAQ Level will set and use a 1-minute sampling time on their meter, in order to obtain a report. Setting a 1-minute sample time allows reaching Level 7.5. The \geq symbol refers to particle size, not counts. Pass (green), caution (orange) and fail (red) cutoffs were determined empirically by IAQ Analytics Pty Ltd., using data from real remediation jobs. Additionally, Level 8 corresponds to the particle counts found to occur in the majority of premises that have normal air quality.

Table derivation

This table draws on table 1 section 4.3 of ISO 14644-1 (2015)E [Cleanrooms and associated controlled environments – Part 1: Classification of air cleanliness by particle concentration], as well as table 1 sections 4.6.1 and 4.6.2 of WHO Technical Report Series, No. 961 (2011), Annex 6 and industry data. An IAQ Level is a separate standard than ISO 14644-1 or WHO TRS 961. An IAQ level represents the optimal application of limits to the residential and commercial property industry. It does not represent the ISO classification requirements in full and should not be taken out of context. IAQ Analytics offers a separate service reporting on ISO and WHO standards for clients who are not in the residential and office/business property sector.

NOTES

IAQ Level Reference Table Notes (CONTINUED)

Key Sources

The published standards ISO 14644-1 (2015) and WHO TRS 961 (2011) Annex 6 constitute the formal basis for referencing an air standard to particle counts. In addition, a vast body of data received from remediators and submitted on the IAQ Analytics website is the empirical data used to set pass, caution and fail limits corresponding to numerical levels in published standards. While the application of these limits with these interpretations is subjective, it has been found to be robust and reproducible. Importantly, the IAQ Analytics system enables a technician or operator to test his/her own air, in the knowledge that both the coarse and fine particles have been considered to some extent. The fact that each operator uses a calibrated meter makes the outcomes reproducible and able to be assessed under ISO and WHO grading and classification systems.

Caveats

IAQ Analytics reports only on “In Operation” states, not “At Rest” states or “As Built” states. “In Operation” may also be called “In Use.” IAQ Levels extend beyond the upper ISO and WHO levels found in the documents referenced above because, in practice, air quality in contaminated premises can often be very compromised. This is partly because the premises are “In Use,” but also because no single building regulation covers all premises for which an IAQ Level can be sought. IAQ Levels refer only to room air and not to the following: surfaces, building structures, ventilation, heating, cooling or air conditioning infrastructure that may or may not have affected the air quality.

For more information, visit www.iaqanalytics.com or email us at customerservice@iaqanalytics.com

NOTES



Product Info Sheets
(to give to your customers)

& Sample Reports
(for your use)



Product Information Sheet

GM6000 is an additive product and is used in conjunction with bleach-based products for the removal of staining caused by algae, mold, mildew, dirt, or soil, from hard surfaces such as tiles, brickwork, timber and concrete.

People say bleach does not work. Why would I allow you to use it?

Ultimately, you are the client; and if you do not want a bleach-based product used, or you have a sensitivity to bleach-based products, we can discuss alternatives. But, it is important to note that bleach is a commonly-used cleaning agent with more data to support it working than not working. Some bleach products are registered with the EPA, but there are more that are not registered. Bleach-based products are used for such things as sterilizing baby bottles, root canal treatments at your dentist, hair dyes and many other everyday activities.

The EPA (www.epa.gov) does not recommend the use of bleach except “when professional judgment may indicate its use (for example, when immune-compromised individuals are present).” You have called a professional, and his/her judgment should definitely be considered when evaluating the best products or methods for correcting your individual situation.

The CDC recommends bleach for the cleaning of environmental surfaces: “After throwing up or having diarrhea, immediately clean and disinfect contaminated surfaces. Use a chlorine bleach solution with a concentration of 1000-5000 ppm.” Again, you have called a professional, and his/her judgment should be considered in your individual situation.

The right professional should have the expertise to advise you on the situation where a bleach-based product is appropriate. S/he has the knowledge to know dwell times, appropriate surfaces where bleach can be used to remove staining and appropriate dilution rates for your individual circumstances. Because of its widespread use, you will know already if you have sensitivity to bleach; and it is important that you disclose this to your professional. S/he can offer alternatives if you are concerned.

Please note that this information sheet is current at February 6, 2015 and supersedes any and all other information supplied prior to this date. Only information authorized by 21st Global Pty Ltd., directly can be relied upon for its accuracy. 21st Global Pty Ltd., makes every effort to ensure its accuracy and compliance with local regulatory bodies.



Product Information Sheet

GM2000 is a proprietary product first developed to combat the threat of Anthrax in the United States. It achieved extremely successful results. Since Anthrax is a spore, like mold, GM2000 has been modified for use in the mold industry, specially re-engineered to be effective in the elimination of mold spores (as a non-mechanical air scrubbing solution). It can also be used as a topical cleaning solution on both hard and soft surfaces by way of micro cleaning. It is water based and has been extensively tested both in laboratories as well as in the field by both the military in the United States and by independent testing laboratories in Australia and Singapore.

Non-mechanical air scrubbing occurs when GM2000 is applied by way of fogging. The fogging process suspends the solution in the air, slowly dragging airborne particulates out of the air. It can also be followed by HEPA vacuuming to remove the particulates from the dwelling.

Testing of this product has included skin irritation testing (also known as Acute Dermal Irritation/Corrosion Testing) and showed results of no signs of erythema or oedema at any time, with examinations conducted at 60 minutes, 24 hours, 48 hours and 72 hours. What this means is the product can be classified as non/low skin irritant.

Further testing of the product regarding its biodegradability was conducted with the result described as “rapid and excellent biodegradability,” with a degradation of 95% biodegradability. It is important to note the testing conducted was at a stronger dilution than the product now known as GM2000. Our industrial chemist continued testing the efficacy with an aim to achieve the lowest possible concentration to achieve effective results. This means the formulation used today is even less likely to cause any irritation and will biodegrade more rapidly.

Another test shows averaging >99.99% reduction when tested against *Pseudomonas aeruginosa*, *Escherichia coli*, *Candida albicans* and *Staphylococcus aureus* (*Pseudomonas*, *E. Coli*, *Candida*, and Golden Staph).

Testing was also conducted regarding GM2000’s effectiveness on one of the most feared species of mold (*Stachybotrys chartarum*), due to its ability to produce mycotoxins, and on *Aspergillus niger*, with outstanding results achieved in both situations. GM2000 was able to reduce *Stachybotrys chartarum* >99.99996% and *Aspergillus niger* >99.99998%.

GM2000 is used in conjunction with good remediation practices. Any concerns you may have should be discussed with your remediation profession.

The full test results are available at www.21stglobal.com.



Fogging Process

What is fogging?

This is the process by which a product that we use, GM2000, is applied within your dwelling. The product is misted by use of a fogging sprayer device and so can gain far greater and more consistent coverage of an entire home, similar to the steam created when you have a hot shower.

Why fog the entire house instead of only the room that has the mold?

This is simply because mold is a living microscopic organism that lives everywhere – in every yard and every home. Mold spores are carried on your clothing as well as being present in the air. If the entire dwelling is not fogged, then the mold will return in other rooms under the right conditions.

What does this all mean?

The bottom line here is that we can confidently use our GM2000 process knowing that you are extremely unlikely to have any reaction to it. It is not going to harm any of your furnishings either.

We have performed many treatments with occupants who suffer with such ailments as asthma and multiple sclerosis and others going through chemotherapy. All have reported improvements in their own well-being following mold removal and fogging, with a lot of clients opting for an annual fog regardless of the fact that mold may not be present.

If you have any concerns or questions, please contact us and we would be glad to discuss this further with you.

Note: If you are in the market to shop around for mold remediation, please ensure that the products used have been tested and pose little to no danger to your health and well-being.



General Information About Mold & The Goldmorr System

THE MOST COMMON CAUSES OF MOLD

Aside from a water intrusion event such as flooding, leaking roofs, damaged pipes or hot water systems, etc., the most common cause of mold comes from air exchange issues. Air exchange issues arise when excess humidity is present. This is common at times when the outside air is cooler than the inside air. This will result in condensation and subsequently an excess of moisture inside your home. In the winter months, this is commonplace with the use of furnaces and heaters. They warm up the air inside the dwelling – be it an office or a home – and if the outside air is colder, you start to see moisture on the inside of the windows. We have all seen what happens when you leave a beverage out on your counter: condensation forms on the exterior of the bottle or can, and before long it is sitting in a puddle of water. Technically, the temperature at which the condensation starts to form is called **Dew Point**.

In the summer months, humidity (due to weather) will cause similar conditions to those occurring during the winter months that contribute to the ideal conditions for mold growth.

The reason mold starts to form and quickly get out of control is simply because mold spores are everywhere. Twenty-five percent of the earth's biomass is made up of different kinds of mold and mold spores. The spores are extremely small and float in the air. They are carried on clothing and can enter the structure simply on a breeze. They may be present in furnishings, plants or even food that has formed mold colonies (such as those seen on outdated bread or fruit). To flourish, mold spores simply need the right conditions. Favorable conditions for mold growth are:

- A relative humidity of 50% or higher
- Damp or dusty conditions
- Stagnant air

Controlling the moisture in any environment is the key element to controlling mold, as it will not grow in a dry, well-ventilated area. Your Goldmorr professional will advise you on ways you can reduce any excess moisture and humidity within your structure, which will aid in keeping mold at bay.

ABOUT YOUR GOLDMORR TECHNICIAN

Goldmorr technicians are highly-trained professionals who will do everything they can to identify and subsequently solve your mold problems. Typically, they will not remove mold-affected drywall/building materials from your home – *provided that those materials are still structurally sound*. (This approach eliminates expensive de-/reconstruction costs for the owner). Instead, they will remove the mold from the affected materials, leaving the materials looking like new. In most cases, you will be back in your home the same day.

ABOUT THE PRODUCTS

The Goldmorr System generally uses only two products during the mold removal process. The first product (GM6000) will clean any visible mold. Since it is a sodium hypochlorite-based solution, it is used on hard, colorfast surfaces only (walls, ceilings, tiles, concrete, etc.) and will not remove the paint from your walls or ceilings. It is common knowledge that sodium hypochlorite has associated VOC's (volatile organic compounds), similar to household bleach. However, part two of our process (fogging) will neutralize those VOC's. Our fogging product (GM2000) is biodegradable, non-toxic, low-/non-irritant and non-corrosive. Best of all, the technician will fog the entire structure to eliminate the mold spores throughout, thus preventing other colonies of mold from being able to form in other rooms or areas.

Your Goldmorr professional will provide you with a separate information sheet that explains the fogging process and why The Goldmorr System treats the entire dwelling and not just the affected room.



Indoor Air Quality Particle Testing (Customer Information)

What is Indoor Air Quality (IAQ) Particle Testing?

We use IAQ Analytics (part of The Goldmorr System’s products and processes), which is a patented system designed to report on particulates in the air. This method does not determine mold species, as speciation is not valuable information because there are NO standards for acceptable or unacceptable levels of mold(s). Instead, Goldmorr technicians will take several *particle count* readings within your structure (and usually an outdoor reading, too), which are then referenced to an International Standards Organization (ISO) standard and in coordination with the World Health Organization (WHO)...because particle counts in the air actually have been given limits and standards. (Furthermore, the instruments used to collect the data during testing have an ISO standard for calibration as well, much the same as speed cameras have calibration standards that must be met to validate your vehicle’s speed.)

Then, a comprehensive multi-page report is generated – complete with a chart showing each tested location’s designated IAQ level number (see actual result examples from real jobs below, left) as well as a reference chart explaining each numbered level and its pass/fail classification (see chart snippets to right of examples).

Example #1

Single Sample - particle counts per cubic meter and analysis				
Location	≥0.5 µm	≥5.0 µm	Time	IAQ Level
Living Room	13550176	394699	1m, 0s	9.5
Master Bedroom	14286572	397879	1m, 0s	9.5
Front Bedroom (2nd floor)	6958657	169611	1m, 0s	9
Back Bedroom (2nd floor)	5815547	126148	1m, 0s	9

Example #2

Single Sample - particle counts per cubic meter and analysis				
Location	≥0.5 µm	≥5.0 µm	Time	IAQ Level
Kitchen	1225441	6007	1m, 0s	7.5
Master Bedroom	996113	7067	1m, 0s	7.5
Master Bathroom	1373851	14134	1m, 0s	8
Outdoors	3448763	18021	1m, 0s	8

Reference Chart

Level	Pass/Fail	Alert/Status	Description
Level 9.5	Fail 9.5	Fail	Investigation into source contamination is required. Level 9.5 air quality requires improvement. Further investigation into source contamination is required.
Level 9	Alert 9	Alert. Conditional Status. Upper Range.	Level 9 counts indicate elevated levels of contaminant particles, which may include any of: dust, liquid microdroplets, pollens, possible indoor amplification of moulds, etc., though also may not be limited to these. Further investigation of potential contamination sources is required. The results reported may be affected by the degree of ventilation to outdoors, or by recent housekeeping, human activity, or work activity. Conditional means that contaminant levels can be interpreted based also on other indicators at the site, in addition to particle counts.
Level 8	Pass 8	Pass	Level 8, particle counts are within the acceptable range. also on other indicators at the site, in addition to particle counts.
Level 7.5	Still 7.5	Low counts.	Level 7.5, particles counts are in the lower range. Mechanically generated or windblown particles are at low levels, as these settle out in relatively still environments.

The 5-micron (5.0 µm) sized particles are most relevant to mold; so, when these counts are elevated, this indicates you have a mold problem. The goal of any effective mold and air quality remediation protocol is to return your indoor environment to ideal living conditions. As a part of that process, IAQ Analytics allows us to determine your current condition indoors.

Many daily activities like showering, cooking bacon, or getting ready for work using things like hairspray and perfumes (just to name a few) are not major concerns with air quality. However, they can temporarily affect testing. Since our aim is to ensure an accurate reading of your property, please comply with the following guidelines for best results.

Guidelines BEFORE testing:

1. Do NOT clean off any visible mold.
2. Keep doors and windows closed overnight and the morning of testing.
3. Avoid excessive humidity events (like showering) within an hour before the testing time.
4. Avoid spraying colognes, perfumes, hairsprays, etc., within an hour before the testing time.
5. Avoid cooking and running dishwasher, washing machine or dryer within an hour before testing time.
6. Deactivate all air fresheners 24 hours before testing time.
7. Turn off all air purifiers, fans and exhaust fans the morning of testing.
8. Do not smoke inside the property.
9. You may keep HVAC unit running as usual.

Quoting

During the quoting process, you should always stipulate an acceptance date on the written quote. We issue our quotes with a 14-day acceptance period. Other Goldmorr companies stipulate 7 days. The reason for this is simply that mold will only get worse. You do not want to quote a job this week and have them accept the quote in 2 months when you will potentially be looking at a jungle!

Example ONLY

Acceptance of Quote	
<i>(Please note that the quotes are valid for 14 days only from the date of inspection, as mold problems will only worsen with time.)</i>	
Date: _____	Quote #: _____
Name: _____	Contact details for access: _____
Address: _____	_____
_____	_____
_____	_____
Billing details: <i>(please initial)</i>	
_____ I acknowledge and confirm that any and all repairs noted have been carried out or will be completed prior to the commencement of the remediation process.	
_____ I acknowledge and confirm that payment of the invoice issued upon completion of work will be remitted in full within 7 days.	
_____ I acknowledge and confirm that if recommendations are not acted upon, I will void my 12-month guarantee.	
_____ I recognize that thorough, non-intrusive methods of identification have been utilized in determining the cause of the mold growth and no deconstructive processes have taken place unless specified in the quote.	
_____ I acknowledge that some causes/contributing factors of mold growth can only be identified by engaging in the services of other professionals such as plumbers, structural engineers or building engineers.	
_____ I declare I have disclosed any and all information that could in any way assist in accurate causal identification.	

Ensure you have them sign and acknowledge the stipulations you have made. *The above is a guideline only.*

Reference to a 12-month guarantee is a personal choice by individual businesses. If a job is done correctly, mold should never return. It can be hard to prove that a homeowner has maintained the recommended humidity levels or that they may not be using their exhaust fan, etc. The choice is up to the business owner.

Your logo:

Request for Inspection

Date of inquiry:

Requested by:

Owner Tenant Real estate agent Other

Received via: Phone Email Other

Referred by:

Contact for access:

Phone number:

Owner Tenant Real estate agent Other

Address of property to be inspected:

Details provided:

Inspection Date:

Inspection Time:

Technician Name:

Points to remember:

- Always remember who the client is
- When talking to a tenant (who is not the client), never discuss the possible causes, etc.
- Never ask about health issues and never indicate that mold can cause illness (you are not a doctor)
- Always ensure that someone over the age of 18 will be present during inspection

Questions to ask:

How long ago did the mold first appear?:

Approx. how many rooms affected? (Include detail):

Is it mainly: Around windows Walls Ceilings

Is there mold on: Furniture Clothing Curtains/blinds

Details:

Have there been any recent repairs made to the property?:

Are there working exhaust fans in the kitchen, laundry and bathrooms?
(Details):

Best time and day for inspection/other relevant details :

Your logo:

Work Method Statement

Site Address:

Date of job:

Prior to commencement of job, a risk assessment is to be performed to ensure the safety of workers during the course of their work. Using the grid below, please indicate any risks detected.

Risks detected

Yes

No

Provide details:

Simple Risk Matrix

Likelihood	Consequences		
	Minor	Moderate	Major
Likely	Yellow	Red	Red
Possible	Green	Yellow	Red
Unlikely	Green	Green	Yellow

Risk Treatment Key

Intolerable Risk Level. Immediate action required
Tolerable Risk Level. Risks must be reduced so far as is practicable.
Broadly Acceptable Risk Level. Monitor and further reduce where practicable.

Risks corrected

Yes

No

Not able to be corrected

Risks acceptable

Yes

No

Your logo:



- Ensure any fish tanks are covered and that other pets and people have vacated the premises and are aware of the appropriate time to return.
- Identify exits and ensure all workers are aware of their locations.
- Place appropriate safety signs.
- In area where GM6000 is to be applied, cover all soft furnishings using only plastic-backed, calico-topped protective drop sheets.
- Ensure you are wearing personal protective equipment and that your mask is fitted correctly.
- Place GM60000 in an accessible, safe place and ensure you have appropriate disposal or storage vessels at the ready for cloths after micro cleaning.
- Proceed to micro clean surface mold, taking care not to drip, spill or splash GM6000.
- Store or dispose of used cleaning cloths upon completion of the micro cleaning phase.
- Remove any surplus GM6000 from the premises and ensure that, if pump-up vessels have been utilized, that you have released the pressure.
- Always ensure you do not have any GM6000 on your shoes when walking on carpet.
- Carefully remove, fold and correctly store drop cloths (correct storage should be in a plastic bag and sealed after use).
- Proceed to take photographs of the cleaned areas for post-cleaning report.
- Ensure you have sufficient GM2000 in your fogger or additional GM2000 readily accessible if required.
- Ensure power cords are untangled and undamaged.
- Proceed to fog GM2000 non-mechanical air scrubbing product from the rear of the premises to the exit.
- Personal protective equipment may now be removed prior to packing all equipment securely into your vehicle.
- Ensure the premises remains unoccupied for 3-4 hours following completion.
- Sampling for clearance purposes should be conducted no sooner than 24 hours after completion of remediation.



12-Month Limited Guarantee

This 12-month limited guarantee provides that, if all recommendations are followed, we will return to re-treat your property at no charge to you. As well as the recommendations included in the report, we also provide guidelines to aid in the prevention of mold returning through no fault of the processes that we have employed.

Homeowners/occupants should understand that climactic conditions and unforeseen weather events are excluded from this guarantee. Unforeseen pipe leaks, damaged roof tiles, dishwasher and washing machine leaks, and anything that is out of our control is also excluded. If recommendations were made to you regarding the installation of a dehumidifier, it should be used and serviced according to the manufacturer's instructions.

Guidelines are available from state and federal government bodies that relate to the prevention of mold in your home. We are including some guidelines here from the Insurance Information Institute and the Environmental Protection Agency to ensure that mold does not return. Suggestions include reducing humidity in your home and keeping it between 30% – 50% preferably, not to exceed 60%, by using air conditioners or dehumidifiers. Put exhaust fans in kitchens and bathrooms (in rental properties it may be wise to make sure they are activated by using the light switch so they are always on when the bathroom is in use). Do not install carpets in damp areas such as basements or bathrooms. Do not let water accumulate under house plants. Inspect hoses, pipes and fittings regularly. Consider replacing hoses to major appliances like washing machines and dishwashers every five years. Remember to inspect your refrigerator, ice maker and water dispenser along with water heaters, kitchen and bathroom sinks and toilets. Keep gutters clean of leaves and other debris. Maintain your roof to prevent water from seeping into your home. Properly dry any household items as soon as possible. Remove standing water around your home as quickly as possible. Standing water is a breeding ground for microorganisms, including mold, which can become airborne.

As soon as moisture appears on the inside windows or walls, it should be removed immediately by wiping with an absorbent cloth. This is usually caused by air exchange with the colder air outside meeting the warmer air inside and causing condensation. If condensation is not removed, it will cause mold growth. Never paint over mold: the paint will be likely to peel. Always ensure walls are completely dry before painting.

Ensure the ground surrounding your home slopes away from the home so water does not enter or collect around the foundation. Keep air conditioning drip pans clean and the drain lines unobstructed and flowing properly. When possible, use natural ventilation (such as opening windows and doors) to create natural airflow. When using clothes dryers, ensure there is adequate ventilation so condensation does not occur within your laundry (i.e. utilizing an exhaust fan or opening a window or door). If you are occupying a rental property, ensure all plumbing or structural leaks are reported immediately.

NOTE: Bathrooms are not covered by this guarantee as, with the presence of water, they are a breeding ground for mold.

**For further information on the prevention of mold in your home, visit your state health department website or the Environmental Protection Agency website.*

Site Location

Treatment Date

Owner / Company

Contact Phone Number



How to Get Started

Accessing the Goldmorr Online Store:

Initial sign up

1. Go to www.goldmorrusa.com.
2. Click menu tab “Online Store.”
3. Click “Proceed to the Store” on pop-up message.
4. Your first time, you will have to “Sign Up.”
 - a. Fill in preferred email
 - b. Create a password
5. You will receive a message saying “a request has been sent for approval.”
6. Retrieve approval in your email & return to site.

Subsequent log in’s

1. Go to www.goldmorrusa.com.
2. Click menu tab “Online Store.”
3. Click “Proceed to the Store” on pop-up message.
4. At “Log In” page, enter email & password (used in “Sign Up” step) and then click “Log In” at bottom.
5. If you wish to change your password, you can do so by using the “Forgot password?” link.

General Contact Information:

Goldmorr USA

National Distributor
Randy Gandara
(360) 480-9188
randyg@goldmorrusa.com

Contact for:

- General info
- Product shipment
- Payments

www.goldmorrusa.com

Goldmorr USA

Sales/Training
Bret Sallee
(870) 405-8703
brets@goldmorrusa.com

Contact for:

- General info
- Product “how to”
- Training

21st Global

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IAQ Analytics

(3rd party air quality testing)

www.iaqanalytics.com
customerservice@iaqanalytics.com

Visit website for
instructions on
submitting reports.

Product Reminders:

(How to use & how to mix)

Always follow general usage and safety guidelines as outlined in your Goldmorr manual

GM6000 (Additive) – 1 Quart

(Used as visible mold stain remover: Sprayed or wiped on directly)

1. Additive to be mixed with $\geq 10\%$ sodium hypochlorite solution.
Use on colorfast surfaces only!
2. Mixture rate is 1 part GM6000 to 19 parts sodium hypochlorite (*approximately 1 quart to 5 gallons.*)
3. Use “fresh” sodium hypochlorite. GM6000 by itself has a 2-year shelf life, but sodium hypochlorite degrades much more quickly.
4. Agitate container of GM6000 prior to mixing.
5. Only mix what you will be using for current job. Efficacy degrades after mixing with sodium hypochlorite (24 hrs).

GM2000 (Cleaning Solution) – 2.5 Gallons RTU

**(Used as fogging agent: Removes airborne contaminants such as dust, pollen, mold spores, odors, etc.)
(Used as micro cleaner: Safe for non-colorfast articles)**

1. Ready to use solution – Do NOT dilute.
2. Non-bleaching product.
3. Always shake or stir container before each use.
4. For air scrubbing application, pour into ULV (wet) fogger of choice & fog.
(Un-used GM2000 may remain in fogger and used later.)
5. For content cleaning, apply full-strength liquid to contaminated article and wipe clean as needed. Cleans soft and hard surfaces.

GM Thermo (Oil-Based Fogging Agent) – 1 Gallon RTU

(Used as fogging agent: Removes airborne contaminants such as dust, pollen, mold spores, odors, etc.)

1. Ready to use solution – Do NOT dilute.
2. Non-bleaching product.
3. Always shake or stir container before each use.
4. For air scrubbing application, pour into Thermal (dry) fogger of choice & fog.
(Un-used GM Thermo may remain in fogger and used later.)

IMPORTANT...remember the

1:19 ratio



1 quart = 32 ounces

(Using 1:19 ratio):

Take 32 ounces \div 19 parts = 1.7 oz./quart

1.7 oz. of GM6000 product to every 32 oz./parts bleach

(which means 1.7 oz. of product : 1 quart bleach)



1 gallon = 128 ounces

(Using 1:19 ratio):

Take 128 ounces \div 19 parts = 6.7 oz./gal.

6.7 oz. of GM6000 product to every 128 oz./parts bleach

(which means 6.7 oz. of product : 1 gal bleach)



5 gallons = 640 ounces

(Using 1:19 ratio):

Take 640 ounces \div 19 parts = 33.7 oz./5 gals.

33.7 oz. of GM 6000 product to 640 oz./parts bleach

(which means 33.7 oz. of product : 5 gal bleach)

*** BASICALLY: 1 Qt of GM6000 concentrate = 5 gal of product RTU ***