

SERUM 1000 USAGE INFORMATION



WHAT IT IS

1. Oxidisation cleaner that releases organic contamination from substrates, ready for removal.
2. 20% formulated hydrogen peroxide (H₂O₂) that reacts with organic matter to release organic contamination from the substrate of porous and semi-porous material and from the surface of non-porous material.
3. Green and environmentally friendly. Degrades to water H₂O and oxygen O₂.
4. Less than 0.5% of surfactant is left behind. This surfactant is on the US EPA's GRAS list (Generally Regarded as Safe). No toxins are left behind.
5. Serum 1000 is not registered as a disinfectant or fungicide with the US EPA and as such no claims can be made regarding killing mould or other microbes.

SAFETY AND PPE

1. Appropriate PPE will protect you from mould and microbe related exposure and the product you are using to remediate the area.
2. Applicable PPE:
 - a. Respiratory and eye protection. E.g. Full face respirator with twin filters (particulate and acid gas/organic vapour protection).
 - b. Coverall, chemical resistant gloves, and boot covers.

HOW IT WORKS

1. All mould removal protocols require that you remove the organics from the structure. The state of the organics does not matter.
2. Serum 1000 is designed to wet the surface, breaking the surface tension, and penetrating the substrate. The interaction of Serum 1000 and the substrate releases and boils the organics to the surface via the profuse foam generated.
3. Serum 1000 penetrates the biofilm, oxidising the protein points in the associated enzyme's structure. This destroys the enzymes, including mycotoxins. It also oxidises and releases other organics in the biofilm, releasing and lifting these to the surface of the substrate.
4. After applying the product and all the organics are released and captured from the substrate via the foam, the substrate must be allowed to dry to touch. In the right conditions, this can happen in as little as an hour.
5. Thorough HEPA vacuuming is then undertaken to remove all the organics from the surface of the substrate.

HOW TO USE SERUM 1000

1. ENVIRONMENTAL ENGINEERING CONTROLS

a. CONTAINMENT AND AIR FILTRATION (HEPA RATED)

- i. Ensure the remediation area is properly isolated and controlled. I.e. air exchange between the remediation and non-remediation (external) areas must be controlled. Exhausting air outside the remediation area or structure and ensuring that make up air entering the remediation area does so through a HEPA filter is a good example.

b. DEBRIS AND SURFACE PREPERATION

- i. All non-restorable materials and excess surface soiling should be removed from the area. Debris such as dirt or sawdust should be removed from all surfaces in the remediation area.

c. DRYING – CONTROLLING SUBSTRATE MOISTURE CONTENT

- i. Elevated moisture content in materials will dilute the product and act as a barrier against it properly penetrating the substrate and successfully releasing and extracting organic contaminants form these materials.

d. APPLICATION, CLEANING AND COMPLETION

- i. When using the Mini Eliminator, where possible set the sprayer outside the remediation area or as close to the exit as possible.
- ii. Start applying Serum 1000 from the furthest point away from the exit, working your way back towards the exit.
- iii. When applying to vertical surfaces, work from the bottom to the top with the spray nozzle approximately 6” from the surface.
- iv. Start applying from left to right, slightly overlapping the spray strokes.
- v. When applying to elevated or ceiling surfaces, ensure that you plan the application so as to not need to walk back under treated areas before the product dries.
- vi. Some areas of extremely dense or heavy organics may need to be brushed with a stiff bristle brush or other method of aggressive cleaning/agitation. Normally, only a few strokes of the brush or brief aggressive cleaning will be required.
- vii. These areas may also require reapplication to ensure all organics have been released and boiled to the surface.
- viii. Dry the materials to the required drying standard or goal. Mechanical drying can be used to expedite this process if required.
- ix. Using a HEPA vacuum (H rated is preferable to ensure HEPA filtration integrity) with a brush head attached to vacuum every square inch of the surfaces in the remediation area.

- x. HEPA vacuuming is the most important step in the Serum protocol. Serum 1000 has released all of the contamination to the surface, and this **MUST** be **REMOVED** by HEPA vacuuming.
- xi. HEPA rated air filtration and the containment controls must remain in place throughout the entire process. HEPA rated air filtration should be operational for a minimum of 24 to 48 hours following the completion of work.

CONSIDERATIONS

1. Accelerated Serum 1000 may cause damage to painted surfaces, particularly plasterboard sheeting.
2. Accelerated Serum 1000 is most effective when used to remediate timber frames, followed closely by other substrates such as concrete and masonry. When remediating materials other than hardwood timber, concrete and masonry, such as plasterboard sheeting and other, more sensitive building materials, it is recommended to start with Serum SBC (Surface Bloom Cleaner), moving onto Serum 1000 with caution for more stubborn sections.