

Headstone Cleaning Guidelines

When to Clean: Cleaning headstones should only be undertaken to halt or slow down deterioration or to prepare for restoration, not for purely aesthetic reasons. There is a strong desire among people to return stones to their like-new condition – this urge should be strongly resisted. The cleaning process is a form of erosion, no matter how gentle, and by cleaning you are often decreasing the life of the stone. Also, if you clean, it sets up repetitive cycle of cleaning to keep that fresh “showroom” look. Stones are meant to have a patina and that patina can only be achieved through years of exposure that cleaning destroys.

That said, algae, lichen, and fungi can be damaging to grave stones because they trap moisture on and under the surface of the stone. They also secrete acids that can dissolve marble, sandstone, and mortar. And they may insert their "roots" into the pores of the stone. These growths will swell and shrink in response to moisture, leading to cracking and spalling of the stone.

If the decision to clean the marker is made, cleaning must be done by the gentlest means possible. Bleaches and hard detergents should never be used as cleaning agents. Cleaning markers is not recommended as a routine maintenance practice and should be done infrequently, at most, every several years.

Do Not Clean: Do not clean markers that are tilted, cracked, damaged, or have a grainy appearance. Markers that are made of more porous stone such as marble and sandstone should only be cleaned if growth is clearly causing rapid deterioration. The introduction of water and brushing to these stones may accelerate surface deterioration especially during freeze-thaw cycles.

Harsh Treatments: Do not use sandblasting, ice blasting, shell blasting, high-pressure water or hose spraying, acidic cleaners, wire brushes, metal instruments, or household cleaners when cleaning markers. Do not use bleach, chlorine, or pool shock. Once a harsh treatment is applied, it cannot be undone. The damage these tools and methods do might not be readily visible, particularly when a stone is wet, but will reveal itself over time.

Sealants: Do not apply sealants as a means of protecting the stone or prohibiting biological growth. No matter what the product advertises, sealants will trap some moisture inside the stone, eventually causing damage to the stones. It is hard to dismiss the pitch after an arduous cleaning, but sealants must be avoided. Once a sealant is applied, it cannot be reversed.

Who Can Clean: Volunteers or maintenance personnel who have been properly trained may clean markers. It is a great way to employ many volunteers in a useful and fulfilling activity. Training sessions can be quick and should take place on-site by an experienced cleaner who can assist in the identification of weak markers and supervise cleaning activities.



How to Clean: If there is truly a determined need to clean a stone, you need only four tools: a wooden stick, a soft bristle brush, a bucket, and water. With those four tools, here are five basic steps to cleaning:

1. On stable stone surfaces, thoroughly wet the stone with clean running water or a garden sprayer. Pull plants gently from cracks or clip them, and then brush away soil and debris from the stone. If there is a mass of plant life, do not yank the plant out, you will almost certainly damage the stone. Carefully clip and pluck each section to prevent pulling away any loose or weakened stone fragments.
2. After getting the worst of the biologics off the marker, brush or scrape off algae, lichen, and fungus. Always use tools that are softer than the stone, such as a wooden popsicle stick or caramel apple skewer. For scraping flat surfaces, use a wooden scraper, such as a raclette spatula, or a plastic putty knife.
3. Gently scrub the stone with light pressure in a circular motion using a natural soft-bristle brush (e.g., Tampico) on marble or a nylon bristle brush for harder granite to remove soil and biological growth from the stone. Do not use a dry brush as the abrasion from a dry brush can remove the surface of the stone. Constantly dunk your brush in a bucket of water, or better, allow a water hose to run on the stone as you brush.
4. Rinse your brush frequently. Do not abrade the stone by dragging dirt, sand, stone particles across the surface you are cleaning. If a gravestone is particularly dirty, change your bucket of water frequently, so that you are not dipping your brush into a suspended solution of grit and biological matter.
5. When done, rinse the stone thoroughly with water. Step back and admire your work.

Detergents: There is one detergent that has been accepted by many cemetery professionals and the National Park Service as the most effective yet gentlest stone cleaning solution today, [D/2 Biological Solution](#). D/2 is an anti-biologic, so it works on organics such as moss, lichens, fungus, etc. And it will keep working over time beyond the initial cleaning. Here is how HPNW recommends you use D/2:

1. First, if your stone is fragile, spray it with D/2 when temperatures are above 60 degrees and not raining, and just walk away. Come back in a month and you will see that your stone looks cleaner without any manual cleaning.
2. If your stone is not fragile, perform the five steps under *How to Clean*. If your stone still has strongly embedded organics, such as black mold, after initial cleaning, try using D/2.
3. Spray D/2 on the damp stone, covering it completely, and allow the D/2 to dwell 5-10 minutes. If the right organics are present, your stone will suddenly turn orange. Don't panic, the orange "blush" will soon fade away.
4. Lightly scrub the D/2 into the entire stone keeping the stone damp with the D/2.
5. Rinse the entire stone thoroughly with clean water.
6. Step back, admire your work once again, and come back in a week and see if the stone looks even cleaner. You may have to do additional spritzes of D/2 to remove all the organics. D/2 is a good item to experiment with in your cemetery.

Resources: Libman makes several models of Tampico and nylon scrub brushes that we prefer. Long lasting, not too stiff, and available everywhere. We like the long-handled model best with a small, roundish head – Tampico bristles for soft marble, green nylon bristles for harder granite.

D/2 Biological Solution can be obtained through several outlets, though none on the West Coast. LimeWorks (<https://limeworks.us/product/d2-biological-solution/>) and Atlas Preservation (<https://atlaspreservation.com/>) sell it, and it can be found on Amazon and eBay. D/2 is not cheap; however, a little goes a long way and a spray bottle applicator is best.