



[MetalZorb® Metals Removal Media FAQs](#)

What is MetalZorb®?

MetalZorb is a high capacity sponge filtration medium that effectively reduces, removes and recovers dissolved heavy metals, including lead, mercury, zinc and gold, from stormwater and waste water. Captured dissolved metals are held in the media, preventing the captured metallic ions from leaching out.

How does it work?

MetalZorb is a highly effective sponge product that consists of a multitude of highly absorbent half inch cubes, combined together in various configurations to address metals removal at any site. The sponge pores are self-filtering to prevent total occlusion of the active polymer component.

Why do you call MetalZorb “The Gold Standard in Metals Removal”?

This patented sponge product provides the ideal technology for reducing and absorbing heavy metals and metallic ions from both high and low flow applications. Applications for this product are expansive – and include industrial effluents, landfill leachates, stormwater runoff, and any type of non-point source pollution where unattended gravity flow occurs.

In what order does MetalZorb absorb various metallic ions?

The order of affinity of the polymer for metals is influenced by solution parameters such as pH, temperature, and total ionic content. The affinity sequence for several representative ions is generally expected as noted in the [MetalZorb Order of Affinity](#).

Do you have a capacity calculator to help understand its use in my application?

The MetalZorb Treated Sponge Product [Capacity Calculator](#) provides the equation for calculating the sponge capacity.

Will MetalZorb work in my existing vault filtration system?

This sponge product can be used in existing filter vaults, catch basins – and even downspout filtration units by simply replacing the current media in the filtration system.

Can MetalZorb handle both high flow and low flow applications?

MetalZorb sponge provides the ideal technology for reducing and absorbing heavy metals and metallic ions from both high and low flow applications, including industrial effluents, landfill leachates, stormwater runoff, and any type of non-point source pollution where unattended gravity flow occurs.

Will MetalZorb remove high levels of zinc?

Although zinc can be more stubborn than some metals, in most cases it is reduced to acceptable levels. Many variables exist when treating roof drainage water. Flow rate and p/H are unpredictable and will affect the result. The CleanWay Storm Clean® standard downspout filter system will provide the needed reductions even with high zinc concentrations. If additional media contact time is needed to bring zinc levels below permit limits, MetalZorb® sponge medium can be contained in a mesh bag and inserted into the strainer within the filter to provide the added contact time needed.

What is the expansion factor of MetalZorb?

When referring to the expansion of the medium due to “wetting out”, the MetalZorb sponge is shipped fully water swollen. This means that there will be minimal increase of the physical size of the sponge when it first comes into contact with water.

When referring to “Bed Expansion” as a requirement for effective backwash, it’s important to note that backwash is not required or recommended for this type of filter medium.

Can MetalZorb be used as a ‘polishing’ agent in a treatment train?

Depending on operating conditions, if the existing pretreatment is performing well, MetalZorb can economically be deployed as a “polishing” step in the treatment train.



Can you use MetalZorb sponge product in remote applications?

This sponge product works well when installed in remote or unattended locations for effective absorption that can be monitored effectively by radio-transmitting sensors.

How often should I change my MetalZorb filter element?

The frequency for changing out a filter element is dependent upon weather and the condition of the roof. As the sponge medium absorbs dissolved metal ions, dust particles and debris from the roof accumulate in the filter element and reduce the water's ability to make contact with active absorption sites within the sponge medium. Note: comparative sampling and experience will help set your best maintenance schedule. We recommend starting the rainy season with a new filter element and change the element mid-season. Then you can adapt your schedule to the weather and site conditions.

Important: Sample the untreated water as it enters the filter and compare the analytical result to the treated water sample collected at the same time, in order to obtain true picture of the efficacy of the filter.

How long does the metals removal media last?

The duration of treatment and operational lifetime depend upon several factors such as:

- unit size
- cumulative flow volume
- concentration of pollutants of concern
- absorption efficiency of the unit within a specific treatment system
- desired removal efficiency
- consistency of slurry
- average size of suspended particles

Can you give an example of how long it lasts?

One cubic foot of Type M sponge product can hold about 190 grams of lead at saturation. If the water to be treated contains 1 ppm of lead and the unit is achieving 100% lead removal and not absorbing anything else, one cubic foot of sponge can treat 50,000 or more gallons of water. At an average flow rate of 1,000 gal/week, one cubic foot will last almost a year.

What are the general chemical properties of MetalZorb?

MetalZorb is a specially treated sponge product designed specifically for the removal of heavy metal contaminants. To learn about the general chemical properties and technical applications, refer to the [MetalZorb-Properties](#) information.

Are there disposal considerations? How do I dispose of the spent media?

MetalZorb is non-toxic, bio-degradable, and non-hazardous prior to use, and does not contain materials that require special handling or pose any threat to human health or the environment.

MetalZorb can easily be disposed of as solid waste. After the sponge has absorbed metal ions, metal is bound to the sponge and will not be released without special chemical treatment. The metals are now in a solid waste form.

1. CleanWay recommends that used sponge be disposed of at an approved solid waste disposal facility. Disposal regulations vary by state and by facility. Consult your local waste disposal authority for details.
2. Saturated sponge may be disposed of by compaction. If the sponge has been exposed to potentially toxic metals (mercury or lead), analysis may be needed.
3. Used sponge can be blended into feed stock at a plywood factory.
4. While certain metals (i.e., copper) will alter the color of the sponge, others will not present a visual indicator of media saturation. Periodic analysis of effluent will be required to determine when sponge should be replaced.

What is the difference between MetalZorb and FORAGER® Sponge?

In 2008, CleanWay Environmental Partners acquired the FORAGER® Sponge product developed by Dynaphore for the effective removal of metals from water. CleanWay changed the name from FORAGER Sponge to MetalZorb®. Since the technology acquisition, CleanWay continued the product development of MetalZorb, incorporating enhancements in performance and expanding the application of the metals removal technology to stormwater, waste water and industrial process water. The FORAGER Sponge product is now available exclusively from CleanWay under the name MetalZorb.



For in situ applications, can you swap out the spent sponge product?

Effective ground water remediation can be achieved by vertically positioning fishnet bags filled with MetalZorb at the gate of a barrier wall funnel system. Units filled with sponge product can be periodically retrieved and replaced with fresh sponge to ensure continuous effective metals removal.

What metals does MetalZorb sponge product absorb?

This highly effective sponge product targets heavy metals such as zinc, copper, lead, and other heavy metals commonly found in stormwater and industrial process water discharge.

MetalZorb features high ion absorption capabilities and quick, aggressive kinetics to capture dissolved metals which are then held in the media so they won't leach out.

How do I know which MetalZorb media blend to choose?

We work with you to determine the right media blend for each installation, to ensure that the solution addresses your site-specific water quality requirements. For assistance, please contact us at 800-7232-1373.

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