

MUCKBIOTICS ZERO

COLD WATER BIOLOGICAL SLUDGE REDUCTION TABLETS



KEY BENEFITS & HIGHLIGHTS

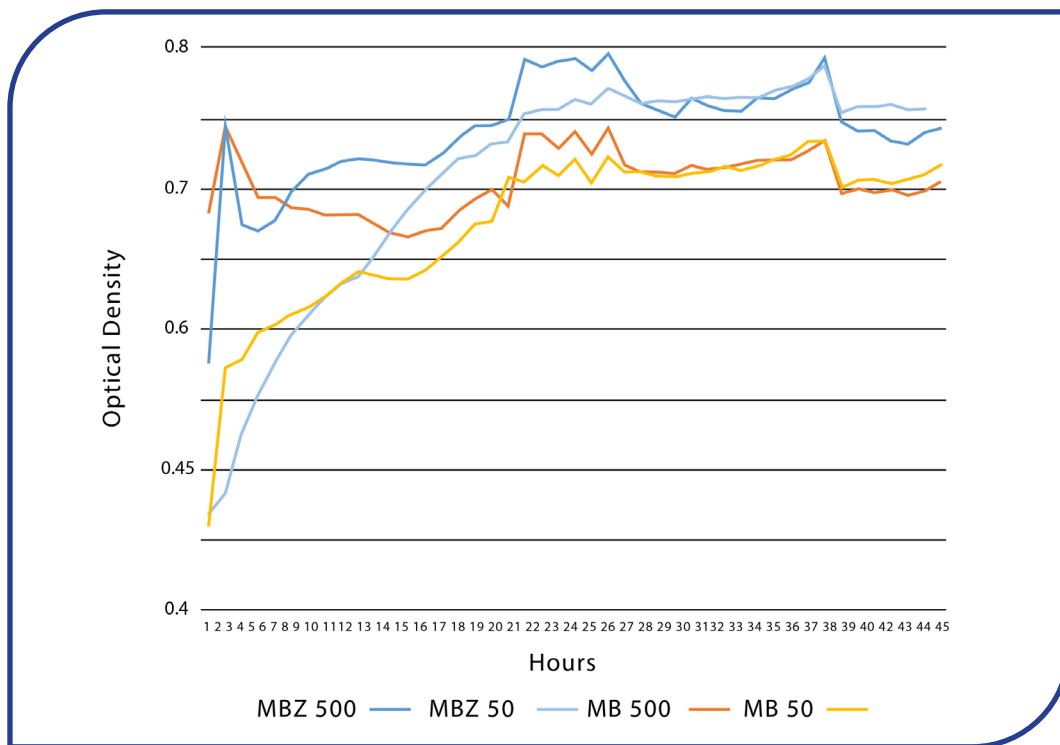
- Tablet technology sinks and slowly releases directly in the organic sediment layer
- Removes build up of organic matter and reduces nutrient loading
- Boosts biological nutrient removal and improves water quality in cold water (34-60°F)
- Safe for fish and other aquatic organisms

MuckBiotics Zero is the first probiotic (beneficial bacteria) tablet designed for restoration and maintenance of impaired cold water resources (34-60°F). Enhanced with psychrophilic microorganisms, this advanced probiotic combines scientific research with novel bioengineering, resulting in a product that treats the entire water body, starting at the bottom. MuckBiotics Zero tablets digest organic matter (muck / sludge), boosts biological nutrient removal and improves water quality. They are excellent for early season applications to restart microbial communities after cold winters have slowed their metabolic activity. They are also excellent for late season applications to improve the digestion of the fall nutrient influx (leaves from trees, dead aquatic plants / algae, etc) and reduce the nutrient loading going into the winter.

MuckBiotics Zero is applied by broadcasting the tablets evenly over the surface of the targeted area. The tablets sink to the bottom and rapidly populate the aquatic environment in which they are applied. MuckBiotics Zero should be applied across the entire surface of a water body for best results. It also excels at targeting shorelines, coves, or similar specific areas prone rapid accumulation of organic matter. MuckBiotics Zero DOES NOT kill aquatic plants or algae.

MuckBiotics Zero is recommended for use in lakes, ponds, water gardens, reservoirs and similar water bodies. This product is non-toxic and will not harm fish or other aquatic organisms.

Bacterial growth rates in cold water



Summary

The microbial community in an aquatic ecosystem slows down as water temperatures cool (below 60°F). The bacteria and other organisms that are active in warmer water are drastically slowed or even go dormant. Bacterial activity can reduce as much as 50% with every 5 degrees temperature drop. MuckBotics Zero and Polar Blend can increase biological activity by over 1000% in temperatures as low as 34°F.

1000%

**increase in biological activity
in temperatures as low as 34°F!**

Dose Rate

ONCE PER MONTH OR AS NEEDED

If used in conjunction with algaecide or herbicide, apply MuckBiotics Zero after chemical treatments for best results. Do not mix directly with algaecides or herbicides

Available Sizes

- 30 lb container, bulk

Surface Acres	Targeted Muck Reduction	Muck Maintenance & Prevention	Degradation of Floating Debris
1/2	10-25 lbs	5-12.5 lbs	2.5-7.5 lbs
1	20-50 lbs	10-25 lbs	5-15 lbs
10	200-500 lbs	100-250 lbs	50-150 lbs
100	2000-5000 lbs	1000-2500 lbs	500 - 1500 lbs

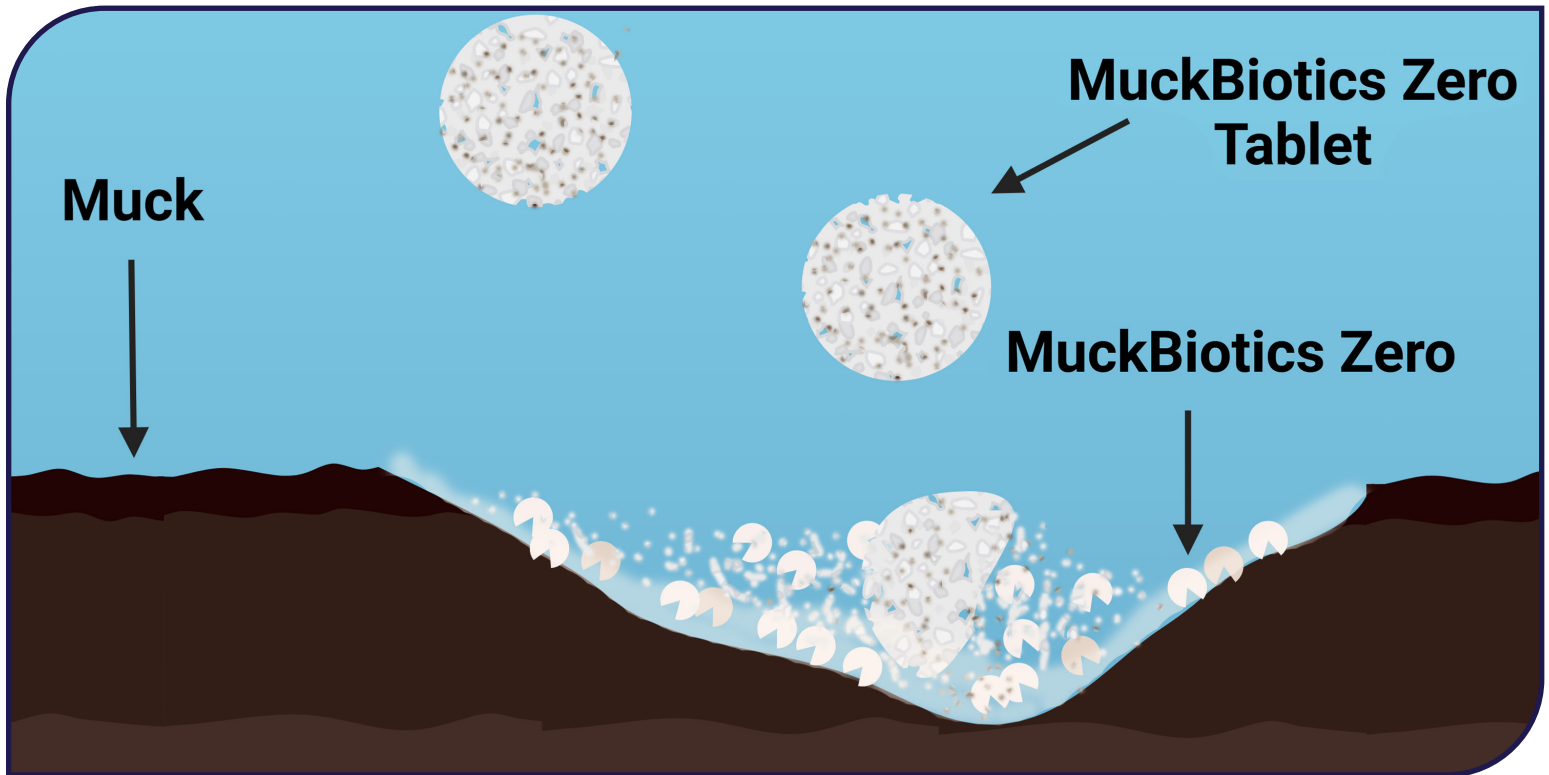


Professional Tip

MuckBiotics Zero and Polar Blend can be used together to target organic matter in the sediment and the water column at the same time.

The Science Behind It

MuckBiotics Zero is a nontoxic, bioengineered technology designed to cover the surficial sediment (“muck”) layer with bio stimulants and a broad spectrum of beneficial bacterial cultures. These stimulants and bacterial cultures help establish a desirable microbiota at the water-to-sediment interface that accelerates the digestion of organic matter and provides sediment compaction by reducing mucilage produced by undesired bacteria. A healthy microbial community augmented with MuckBiotics Zero functions as a “biofilter” and reduces nutrient loading by targeting organic bound nitrogen and



THE DIVERSIFORM BLEND™

Through complex enzyme pathways, the bacteria and biostimulants in MuckBiotics Zero accelerate the breakdown of muck into smaller and smaller molecules. This in turn spurs the bacterial growth and uptake of nitrogen, ammonia, and phosphate. In the end, MuckBiotics Zero turns thick levels of muck into microscopic levels of bacterial biomass, water, and carbon dioxide. Every component in the tablets have been chosen for their abilities to consume large amounts of organics and for their hunger for problematic nutrients.

TABLET TECHNOLOGY

Unlike other bacterial amendments, MuckBiotics Zero represents targeted sludge reduction. The dense tablets sink into the sludge and deliver bacteria and biostimulants directly where they are needed. With the tablet delivered directly into the sludge, all the ingredients remain in the area of treatment, making it the most efficient possible sludge reduction approach. This means application can happen as infrequently as once per month. MuckBiotics Zero can be applied in all weather conditions. The tablets can be broadcasted evenly over the surface of the targeted area by hand or with a spreader.