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Micro-Blaze® Products FAQs

What does Micro-Blaze® Emergency Liquid Spill Control products contain?

Micro-Blaze® Emergency Liquid Spill Control is a unique formulation containing wetting agents, nutrients, and safe to use, non-pathogenic bacteria.

What are wetting agents? What are nutrients?

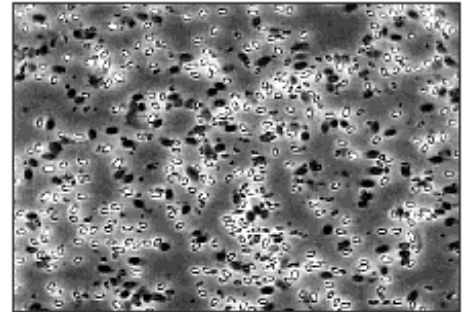
Wetting agents help break down the surface tension of soils and other material. They also break down hydrocarbon-based compounds into smaller molecular structures that the microbes can digest more efficiently. Nutrients, sometimes called "biocatalyst", are comprised of substances that help support the growth and reproduction of the microbes - like "vitamins". Micro-Blaze® products contain our own biocatalyst product called "Budkicker".

What is a microbe?

It is a microscopic organism - bacteria. Micro-Blaze® microbes are found naturally in the world's soils. We select them for their affinity for the hydrocarbon contaminants commonly found in the commercial / industrial workplace. The microbial strains are then "cultured" to aggressively degrade those contaminants. Under optimum conditions, they will double in population every twenty minutes.

What kind of microbes are in Micro-Blaze® products?

Bacillus spores - they are natural, non-pathogenic bacteria. Upon application onto a spill or contaminated soil, they germinate and become active within 15 to 20 minutes. In ideal conditions, they double in population every 20 minutes and digest the wastes as long as all the necessary ingredients (water, oxygen and a food source, i.e. the organic wastes) are present. The harmless byproducts of their degradation process are CO₂ and water and trace amounts of organic salts. Read more about our ingenious little waste degraders on our website.



How many microbes are in one gallon of Micro-Blaze® Emergency Liquid Spill Control?

There are approximately 400 billion in one gallon of Micro-Blaze® Emergency Liquid Spill Control. Verde's quality control ensures our customers of plenty of viable microbes in a quality product that will work on organic and hydrocarbon contaminants.

Is Micro-Blaze® on any kind of "approved" list with government agencies?

Micro-Blaze® is on the U.S. EPA National Contingency Plan (NCP) as a bioremediation effectiveness agent*. Micro-Blaze® products are also listed with many state and local agencies. For a detailed listing, please contact your Micro-Blaze® distributor.

What are the differences between microbial products and enzyme products?

Enzymes will only liquefy a waste; *it will not digest it*. All an enzyme product will do is change the form of the waste. Microbes produce their own enzymes which helps the microbe to digest the waste, changing it into harmless byproducts of carbon dioxide and water. You can have an enzyme product without microbes. Some microbial products contain *vegetative* microbes that do not have the ability to revert to a "spore" form when conditions are not favorable. Micro-Blaze® microbes will revert to a "spore" form and will "germinate" when conditions become better; and, upon recognizing that a food source is still present, will again start digesting the organic hydrocarbon wastes and contamination.

Will these microbes harm our wetlands?

The *Bacillus* spores, in all likelihood, are already present in the soils and waterways of the earth's wetlands. They are very tolerant of brackish and sea water and effectively remediate within a pH range of 4.5 to 11.5.

If they are already in the wetlands, why not use the existing microbes already present to clean up any contamination?

The *indigenous*, or existing, *Bacillus* and other microbes already exist in the normal wetlands ecosphere, digesting the typical flora and fauna wastes found in such places under normal circumstances. When an oil spill or other hydrocarbon / organic contamination enters the wetlands, the microbes present are neither in large enough numbers to start digesting the influx of material nor are they adapted to digesting that particular type of waste. They either die off from the volume and toxicity of the contamination or become so reduced in number that it could take *years* before the surviving populations of bacteria become large enough and acclimated enough to start effectively remediating the waste.

Will the microbes eat my asphalt roadway?

No. The microbes do not recognize roadway asphalt as a food source. Gasoline and other spills on the asphalt are more cause for concern; it can degrade the asphalt road surface quickly.

Will the microbes mutate?

No. Micro-Blaze[®] products contain naturally occurring bacterial species. No genetically engineered microbes are used.

Will the Micro-Blaze[®] products kill my grass?

No.

Are Micro-Blaze[®] products corrosive?

No -- the pH range of the products when mixed is 7.0 – 8.0. The microbes work in situations where the pH can range from 4.5 to 11.5 -- a greater range of viability than with other microbial products.

Will the microbes eat dirt or metals?

No -- only organic materials.

How long does it take the microbes to eat a gallon of oil?

It all depends on surface conditions, oxygen, water and nutrients. Pure oil in a gallon bucket would take a very long time. Spread out thin on a roadway or concrete surface, the oil may be digested in a fairly short time as long as conditions are favorable and the Micro-Blaze[®] is mixed with water and applied properly.

Will the microbes eat my oil reserves in the ground?

No.

Some of the compounds successfully remediated with Micro-Blaze[®] Emergency Liquid Spill Control:

- Benzene and benzene compounds
- MTBE
- Toluene, Acetone and paint sludge
- Polyurethane resin wastes
- Glycols
- Petroleum-based waste products
- AFFF wastes
- Pipeline condensate
- DMF (dimethylformamide)
- AN (acrylonitrile)
- Methanol
- Organic chemical wastes

Contact your Micro-Blaze[®] distributor for more information on your specific project.

Micro-Blaze[®] is listed on the US EPA's NCP Product Schedule. As required by EPA regulations: "That (listing) does not mean the EPA approves, recommends, licenses, certifies, or authorizes the use of Micro-Blaze on an oil discharge. This listing means only that the data have been submitted to EPA as required by subpart J of the NCP § 300.915."