

MICROBIAL CLEANING PRODUCTS

The heart of the microbial remediation process offered by our products is a microbe that eats oil. These microbes are cultivated, not genetically engineered, to eat oil and other organic substances such as paraffin, grease, creosote and aromatic hydrocarbons. They convert oil, gasoline and diesel fuel to harmless, natural occurring products, environmentally safe for humans, pets, plant and aquatic life.

THE MICROBIAL CLEANER PROCESS

- NATURAL PROCESS
- EXCEPTIONAL CLEANER
- PROBLEM SPECIFIC
- BREAKS DOWN OIL
- MICROBES THAT EAT OIL AND GREASE
- BIOCATALYST WAKES UP ORGANISMS
- NUTRIENTS ACCELERATE REPRODUCTION
- LIVING ORGANISM
- Ph RANGE 4 TO 11
- WORK FROM 40°F (4.4°C) TO 120°F (48.8°C)
- WATER PROVIDES OXYGEN

The microbial cleaner process is specifically aimed at cleaning and remediating unwanted hydrocarbons. These may be either in the form of petroleum-based hydrocarbons, or fats and greases. We have developed the most advanced products to work in various areas.

Microbial cleaning is achieved with a two-part system. The first part is a nutrient-rich liquid and the second part are microbes in dry form. The liquid composition allows for three major functions. First, the liquid assists the microbes in breaking the hydrocarbon down to molecular size. This is done in order to achieve the maximum surface area of the hydrocarbon to allow the microbes the greatest area of activity. In breaking down the fats, oils and greases, the cleaning process begins. The second component of the liquid is a biocatalyst which literally wakes up the microbes and stimulates their feeding and reproductive cycle. The microbes are stored in a dormant phase until ready for use, which gives an indefinite shelf life to the product. Once the microbes come into contact with the liquid they awaken from the dormant state and begin to feed. The third component is a blend of nutrients to insure that the microbes begin their process of multiplication in the shortest amount of time.

The microbes are the second part of the system and are the simplest life form. They are single-celled bacteria. Even though they are simple, they have devised a system to locate food and to distinguish one item from another. Different organisms have different foods of choice. The strains we have painstakingly selected for our products have been

chosen for their affinity to the various forms of hydrocarbons we want to clean and remediate. These are cultured microbes which are gathered from around the world. They are not genetically engineered. They are put into a dormant state and impregnated on a carrier. This allows them to stay alive, but require no food for extended periods of time. The microbes have been observed to live for several years in this state. These organisms are living creatures and as with any living creature, there are precautions which must be addressed. The microbes will not survive an excessive amount of bleach or bactericide. They can survive in a pH range of 4 to 11. They must not be subjected to a temperature higher than 120°F (48.8°C). The lower the temperature the slower they work, until you reach about 40°F (4.4°C). Below this point they essentially go dormant again. Freezing will not kill the microbes. A common rule of thumb is that if you could work in the environment, so can they.

Just like humans, the microbes must have water to work. The water provides oxygen to the microbes as well as media for movement. Since they have no arms or legs, the microbes work on their food source at the oil water interface only. They can not work in pure oil as they will die for lack of oxygen. This is the reason the liquid part of our product is so important. It provides all the necessary ingredients for the proper environment for the organisms to feed and multiply.

Once the food supply is depleted, the microbes will attack and ingest each other as long as water is present. If no water is available, the microbes will return to the dormant state and await a supply of water and food.

NFPA/HMIS RATINGS

Health - 0, Flammability - 0, Reactivity - 0

PATENTED FORMULA