

HYDRA BIO START DUAL-ACTION



Treatment Cholera and Typhoid Outbreaks

Use In Septic Tanks and on Surface Effluent Spillages



HYDRA®

Features & Advantages

- ◆ **DUAL ACTION** - Contains oxygen release agent and effluent digesting bacteria.
- ◆ Contains 12 good bacteria strains, to out compete harmful bacteria.
- ◆ Ideal for use when there are cholera and typhoid out breaks.
- ◆ Improves the efficiency of small and large septic tanks and sewage plants.
- ◆ Bad odour and flies are controlled as a result of clear, fast flowing and suitably treated waste.
- ◆ Includes Pseudomonas and Bacillus spores.
- ◆ Speeds up the process of degrading organic material, reduces BOD / COD levels.
- ◆ Eco friendly, completely biodegradable homogenous powder. Easy to use, simply pour inside the tank or sprinkle onto surface to be treated.

Description

Common disease outbreaks such as Cholera and Typhoid can overwhelm existing sanitation systems due to the sheer volume of effluent produced through watery diarrhoea.

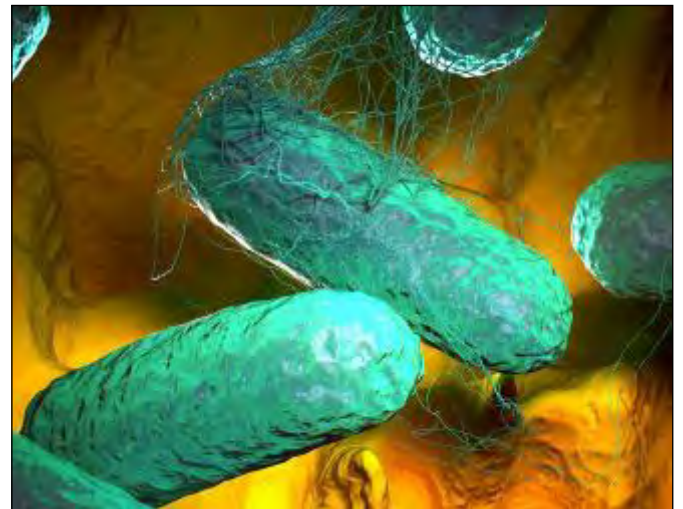
Cholera results from infection by *Vibrio Cholerae*, a gram negative, facultatively anaerobic rod in the family *Vibrionaceae*.

Cholera Symptoms

Symptoms of Cholera can begin as soon as a few hours or as long as five days after infection. Often, symptoms are mild. But sometimes they are very serious. About one in 20 people infected have severe watery diarrhoea accompanied by vomiting, which can quickly lead to dehydration. Although many infected people may have minimal or no symptoms, they can still contribute to spread of the infection.



Typhoid fever results from infection by *Salmonella Enterica Serotype Typhi* bacteria, it can also be caused by *Salmonella Paratyphi*, a related bacterium that usually causes a less severe illness these bacteria are related to the bacteria that cause salmonella food poisoning.



Typhoid Symptoms

Typhoid fever is a bacterial infection that can spread throughout the body, affecting many organs. Without prompt treatment, it can cause serious complications and can be fatal.

Typhoid fever is highly contagious. An infected person can pass the bacteria out of their body in their stools or, less commonly in their urine.

Both of these bacteria are deposited in water or food by a human carrier or flies and are then spread to other people in the area by eating that food or drinking the water.



The Solution



DUAL ACTION Hydra Bio Start

Is a dual action product, it contains a slow release oxygen release agent which boost the oxygen levels in septic tanks and treatment plants. helping the good bacteria rapidly reproduce

This same oxidiser also acts as a disinfectant when spread over surface spillages on the ground as it is much more concentrated.

Hydra Bio Start's contains naturally occurring microbes in massive numbers, giving rapid growth of good bacteria for optimal sewage treatment.

The bacteria included in **Hydra Bio Start** are not genetically modified. They however produce various enzymes such as protease, lipase, cellulose, and amylase which hasten the biological breakdown of effluent, turning it into a food source for the 12 different synergistic bacteria strains in the product.

Hydra Bio Start includes minerals, micro-nutrients and trace elements, this perfect combination boosts growth of micro-organisms producing a rapid accumulation of good biomass.

The fast-growing micro-organisms in **Hydra Bio Start** rapidly establish an effective biomass. This product also boosts the activity of any existing biomass.

Hydra Bio Start Is completely biodegradable and homogeneous, it does not contain any harmful bacteria.

Hydra Bio Start will also improve performance of the system in extremes of weather.

If the plant is malfunctioning because of excessive use of bleach, **Hydra Bio Start** will restore the necessary biological activity.



How To Use

SEPTIC TANKS & SEWAGE PLANTS

Initial Start-Up

By using **Hydra Bio Start** on in the septic tank or treatment plant the good microbial population will rapidly colonise the system (results are seen within 48 hours).

This enables the system to work faster and more effectively breaking down the effluent and eliminating the harmful bacteria that are contaminating the system.

Dilution Rate

Use 1 kg/m³ of **Bio Start** in the primary tank of size 1m³ to 5m³.

Use 0.75/m³ of **Bio Start** for the tank size of 10m³+

Easy to use, simply add directly to the septic tank or sewage plant.

RAW SEWAGE SPILLAGE ON GROUND

Simply sprinkle **Hydra Bio Start** over contaminated area, due to its rapid oxygen release, when applied like this **Hydra Bio Start** acts as a disinfectant rapidly killing harmful pathogens.

Hydra Bio Start aids in:

- Killing the harmful bacteria.
- Then cleans up the ground where the spillage has occurred, depriving the harmful bacteria of a food source.
- Helps stop outbreaks by eliminating Cholera and Typhoid bacteria.

Hydra

Research & Development



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