



## ERGOFITO DIL

Hydrocarbon Diluter



### PREAMBLE:

When Hydrocarbons are treated with natural bacteria such as Ergofito Aqua, the hydrocarbons need to be emulsified to allow for a greater surface for the bacteria to commence decomposition.

By adding commercially available surfactants or dispersers an additional chemical element is often added to the mix rendering the natural decomposition more arduous. A totally natural and bacterial friendly emulsifier is required;

Ergofito DIL is a bacterial organic emulsifier.

[www.ergofitobio.com](http://www.ergofitobio.com)

for any queries, please contact: [info@ergofitobio.com](mailto:info@ergofitobio.com) / +27 82 678 0070



## **HOW ERGOFITO DIL WORKS:**

Ergofito DIL is a product that has the ability to increase wetting, emulsification and de-agglomeration.

It manipulates water by neutralizing the magnetic charges of the water particle.

The product increases the wetting ability of the water.

All water contains particles that are charged, some positive some negative.

Therefore, there is a constant intermolecular tension as well as a surface tension in water.

Ergofito DIL charges all the elements negative and breaks down the tension.

This increases the surface contact area between water and contact areas enabling the water to spread and penetrate surfaces more effectively.

Fine particles that come into contact with untreated or “raw water” don’t penetrate into the water as a result of the surface tension.

Water that has been treated with Ergofito DIL is able to wet fine particles at a ratio of 1:1. **This allows for:**

The wetting of all floating materials, dusts, carbon, sulphur, chemicals, pigment dust and powders that are required to be mixed into water for:

- Cleaning, suspension, blending and removal,
- Extinguishing of carbon and petroleum material when burning.

- Dispersion of powders, herbicides, pesticides, fertilizer, disinfectants, sanitizers and ultra-fine dusts into watery suspensions

Emulsification is the dispersion of oil and solvent-based materials in water; these include oil, fat, solvents, cream, margarine, tar, grease, butter, some bacteria, bacteria-forming crystals, fungi, minerals and chemicals.

Reducing surface and interfacial tension by neutralizing static charges within liquids allows for the integration of up to 30% oil-based liquids into 70% water.

**This solves problems and difficulties that include, among others:**

Fine & ultra-fine air-borne globules can now be emulsified into water droplets (gases)

Oil-based dirt and unwanted materials can now be mixed with the water for removal or mixing

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Oil-based bacteria-habitat can now be removed

Oil, grease or fat can now be lifted from surfaces

Burning solvent-based materials, floating on top of fire-fighting water can now be mixed

Suspensions or emulsions like paint can now be stabilized

### **ERGOFITO DIL USAGES:**

Emulsification of all oil and solvent-based materials enable mixing into water for:

Cleaning and removal

Extinguish when burning

Dispersion of oil-based materials for emulations

De-agglomeration of all particles in that breaking aggregate chains, reduce particle size to allow soil suspension, e.g. with carbon black agglomeration in water, particles grow bigger in size and sink to the bottom, called sagging, while de-agglomeration of carbon black in water, particles are sheared down and remain in ultra-fine size.

By neutralizing the positive and negative charges between liquid molecules and solid particles, the cohesion is reduced

When particles do not cluster or agglomerate, they stay in suspension

When charges between globules (droplets) are reduced, they will stay in suspension

This solves the following problems and difficulties:

Particles & materials are not attracted to surfaces and are easily removed

Solids in cleaning water remain in fine particles which do not settle out

During grinding or milling, fine particles do not re-agglomerate

No segregation of liquids in suspensions or emulsions like paint

Ergofito DIL has the ability to do all of the above, is environmentally friendly and contains no Glycol or Ammonia.

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## **WHAT ARE THE ADVANTAGES?**

Ergofito DIL is organic and environmentally friendly.

Ergofito DIL works better than any competitor products (When tested against known industry surfactants as a surfactant)

Ergofito DIL is cheap to produce and doesn't require excessively expensive equipment to manufacture.

The bulk raw material required in the manufacturing are organic and very environmentally friendly

Ergofito DIL is a product with several global applications spread over the health, mining, industry, agriculture sectors.

Ergofito DIL is a breakthrough technology product that allows further advances in problems currently considered impossible to solve

## **APPLICATION PROTOCOL:**

- 1: Dilute Ergofito DIL 1:20 with fresh or sea water for marine applications.
- 2: Apply the above mix on any hydrocarbons and mix
- 3: After a few minutes follow up with Ergofito Aqua. See Ergofito Document on Oil Remediation.

The applications are far too numerous to list.

It is important to know that all hydrocarbons including heavy sludge is shattered into minuscule particles which allows the removal, separation or bacterial treatment of the hydrocarbons.