## **HEAVY DUTY SLUDGE REMOVER**

Originally designed to aid in oil tanker recovery during the first Gulf War, ZenEarth's Heavy Duty Sludge Remover is a safe, readily biodegradable and environmentally friendly liquid which will quickly and effectively remove crude oil sludge from all surfaces. It's highly effective formula includes a surfactant/solvent blend with characteristics making it easy to remove and retain crude oil and other hydrocarbons for resale.

Sludge Remover is the safest choice for cleaning a wide range of hydrocarbon products and also cuts through thick heavy build-up all the way to the surface of the item to be cleaned. In addition to lifting and removing contaminants, the product renders grease, oils and other lipids biodegradable.

The proprietary renewable chemical/mechanical formula delivers superior emulsifying, degreasing and dispersing performance while ensuring safety for workers. Heavy Duty Sludge Remover micelle uses a process of molecular degradation of carbon bonds and in the event that a spill occurs, this leads to rapid decomposition, as degraded organics are rendered consumable by resident bacteria.

## Other benefits include:

- Will not damage or scar metal, fiberglass or plastic surfaces it comes in contact with.
- Proprietary formulation easily lifts dirt, crude oil and other petroleum derived products from all surfaces and leaves no dangerous residues or scum behind.
- Repeated use leaves a near invisible polymer residue that aids in preventing readherence of contaminants.
- The micelle process degrades long chain molecules and cuts hydrogen bonds to make the now short chain hydrocarbons easily digestible to bacteria. 99% of the contaminants will have completely disappeared in less than 30 days which removes the need to collect and dispose of runoff or rinse water.
- In addition to being an extremely effective agent, Heavy Duty Sludge Remover encapsulates and suppresses volatile organic compounds (VOC's) which enhances worker safety.
- Works well in fresh water or brine.



## ZEN EARTH **PRODUCTS ARE:**

**Bio-Based** 

**Readily Biodegradable** 

Non-Toxic

**Non-Corrosive** 

Non - Hazardous

Non - Caustic

Non - Flammable

**Non - Cancer Causing** 

## DO NOT **CONTAIN:**

**Ozone Depleting Substances** 

**Petroleum Distillates** 

**Glycol Ethers** 

**Caustics** 

**California Proposition** 65 Chemicals

The active ingredients behind all "green" ZenEarth cleaning, solvent and lubricating products are combinations of various readily biodegradable plants

and naturally occurring minerals. ZenEarth's proprietary, renewable, chemical/mechanical process creates a truly unique product that is safe for human use and for the environment. It is effective and versatile.

All ZenEarth active ingredient formulas are effective as a result of the creation of electrically charged particles known as micelle. When activated in water, micelles repel each other in a ceaseless random movement. Measuring only 2 - 4 nanometers in size, their extreme surface-area-to-volume ratio enables far greater efficacy than conventional technologies or formulas. Micelles do not produce a chemical reaction that generates new compounds when introduced into another material or the environment, instead they break down carbon based compounds into smaller particles that can be easily assimilated and metabolized by normal soil or water microorganisms.