

CASING CUTTER



Casing Cutter is a revolutionary, non-toxic, bio-based colloidal solution that simplifies removal of residuals from the well bore and used for the maintenance of oil, gas and water wells.

Conventional methods of removing oil-based filter-cake include multiple treatments using a variety of enzymes, mineral acids and oxidizers in an effort to rid the well bore of residue.

Casing Cutter is a single step, highly concentrated, non-flammable, multi-purpose well bore cleaner that not only de-scales the casing, it also aids in the removal of:

- Mud
- Pipe Dope
- Oil
- Sand
- Barite
- Paraffin
- Other Solids from Casing & Production Tubing

Casing Cutter is also used to eliminate iron bacteria. The casing cutter treatment reduces opportunities for bacteria to oxidize the dissolved ferrous iron and with that it also eliminates the resulting biological slimes that plug screens and degrade the well's ability to flow freely. It is formulated from a variety of readily available plants and minerals. The natural ingredients mean it is fully biodegradable, and will not contaminate or pollute the environment.

Casing Cutter is made using proprietary technology to create plant based "micelle" emulsifiers and dispersants that disrupt the carbon bonds of hydrocarbons and other organic materials on contact. Dirt contained in a water based mud adheres to steel surfaces in part via hydrogen bonding. The surface activity of Casing Cutter's nano-emulsifiers allows them to penetrate and break these hydrogen bonds, releasing the dirt from the steel. The interaction between these nano-scale micelles and surfactants also prevents the emulsified materials from re-depositing on the cleaned surface.

ZenEarth Casing Cutter counters the need for multiple-step, conventional, caustic and environmentally hazardous chemicals typically now in use. Additional benefits:

- It is formulated from a variety of readily available plants and minerals. The natural ingredients mean it is fully biodegradable, and will not contaminate or pollute the environment.
- It is non-reactive with other chemicals and may also increase well flow through its natural surfactant ingredients.
- There are no environmental charges or disposal fees after use.
- It is non-corrosive and will not damage or scar metal surfaces.
- It is safe for the user. Many of the standard work-safe procedures are a thing of the past as there are no VOC's, it is non-toxic, nonhazardous, non-flammable and non-cancer forming.

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.

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

