

MATERIAL SAFETY DATA SHEET



Prepared: 7/06/05
Supersedes: 9/26/03
N.A.: Does Not Apply
N.K.: Not Known

Section I

Product Identification

Manufacturer's Name: **CL Solutions**
Emergency Telephone Number: 1-859-442-8590
Address: 1157 Industrial Rd., Cold Spring, KY 41076

Chemical Name: Bacterial Inoculant for Petroleum Hydrocarbon remediation.

Trade Name: **PETROX**

Microbial Formulation: The product formulation consists of naturally occurring microorganisms.

Section II

Hazardous Ingredients

Proprietary Blend of Inorganic Salts More than 1%

Section III

Physical Data

Boiling Point (°F) N.A.
Specific Gravity 2.26
Vapor Density (Air = 1.0) 2.9
Percent Volatile by volume (%) N.A.
Evaporation Rate N.K.
Solubility in water Soluble
Appearance and Odor White to off white powder/No Odor.

MATERIAL SAFETY DATA SHEET

Section IV

Fire and Explosion Hazard Data

Flash Point (Method Used)	N.A.		
Flammable Limits LEL	N.A.	UEL	N.A.
Extinguishing Media	Water, Fog, Foam		
Special Fire Fighting Procedures	None		
Unusual Fire and Explosion Hazard	Stable below 1000°F. Use NIOSH/OSHA approved pressure self-contained breathing apparatus when material is involved in fire.		

Section V

Health Hazard Data

Toxicology

Acute Studies

* Rat oral LD₅₀ is greater than 5 g/Kg of body weight as evidenced by no observed mortality after rats were dosed with 5 g/Kg at a concentration of 500 mg PETROX/ml of water and a dose volume of 10 ml/Kg of body weight.

* Rabbit dermal LD₅₀ is greater than 2 g/Kg of body weight; as evidenced by no observed mortality after rabbits were exposed to the test material applied to abraded and non-abraded occluded skin for 24 hours. No severe dermal effects were reported at the dose site.

* Eye irritation in rabbits was reported as slight. Highest observed scores out of a possible score of 110 were:

1 hour: 12; 24 hours: 8; 48 hours: 4; 72 hours: 4; 4 days: 2; 7 days: 2;
10 days: 2; 14 days: 2.

* Rat inhalation of the test material at an average analytical exposure concentration of 1.2 mg/l of PETROX (nominal concentration of 37 mg/l) for 6 hours produced no mortality. Approximately 40% of the dust was less than 10 microns in size.

Chronic Health Hazards

*Although chronic studies using PETROX are not available, inhalation of this product should be prevented, due to unknown long-term effects.

MATERIAL SAFETY DATA SHEET

Special Notes:

Not for human and animal consumption.

Emergency First Aid Procedures

Eye Contact	Flush eyes with sterile water until irritation subsides or stops.
Skin contact	Wash with soap and water.
Inhalation	Although not an acute hazard as tested in rats, product is respirable and chronic effects are unknown. Upon prolonged or repeated respiratory contact, see a physician.
Ingestion	Low order of toxicity. Upon ingestion, induce vomiting and contact a physician.

Section VI

Reactivity Data

Stability	Stable
Incompatibility (Material to avoid)	N.K.
Hazardous Decomposition Products	This product does not undergo spontaneous decomposition. Typical combustion products are carbon, carbon dioxide, nitrogen and water.
Hazardous Polymerization	Will not occur.

Section VII

Spill or Leak Procedures

Steps to be taken in case material is released or spilled.	No Hazard. Wash away with plenty of water.
Waste Disposal Method	Use normal solid waste methods in conformance with pertinent federal, state, and local regulations.

Section VIII

Special Handling & Protection Information

General Precautions	Treat as you would any chemical or biological material. Always wash hands thoroughly after use.
Respiratory Protection	Use Paper or Cloth mask.
Ventilation	Material should be handled in a manner that will minimize dusting.
Eye Protection	Use Safety Goggles.
Special Precautions	Slight off-gassing of carbon dioxide & nitrogen may occur after hydration. To prevent pressure in the bottle-bag and drum do not replace the plastic cap on the bottle-bag or tightly cover drum after hydration. This product is not intended for human or animal consumption.

MATERIAL SAFETY DATA SHEET

Section IX

Additional Information

Contact

John Morris
Managing Director
CI Solutions LLC
During Business hours, Eastern Time Zone 1-859-442-8590

Notice

The information given and the recommendations made herein apply to our product(s) alone and not in combination with any other product(s). Such information and recommendations are based on our research and on data from other reliable sources and are believed to be accurate but no guaranty of their accuracy is made. In every case we urge and recommend that purchasers, before using any product, make their own tests to verify this data under their operating conditions and to determine to their own satisfaction whether the product is suitable for their particular purposes.

THE PRODUCT(S) DISCUSSED HEREIN ARE SOLD WITHOUT ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED.

MATERIAL SAFETY DATA SHEET