

MATERIAL SAFETY DATA SHEET



Prepared: 5/23/2008

N.A.: Does Not Apply

N.K.: Not Known

Section I

Product Identification

Distributor's Name: **CL Solutions, LLC**
Emergency Telephone Number: 1-513-475-6625
Address: 3130 Highland Avenue, Third Floor
Cincinnati, OH 45219-2374

Chemical Name: Bacterial inoculant for Chlorinated Solvents remediation.

Trade Name: **CL-OUT**

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

Section II

Hazardous Ingredients

Basic Material Contains no hazardous substances

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

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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 CL-Out/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 CL-Out (nominal concentration of 37 mg/l) for 6 hours produced no mortality.

Chronic Health Hazards

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

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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, 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 the drum after hydration. This product is not intended for human or animal consumption

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Section IX

Additional Information

Contact

Mike Saul
Vice President
CL Solutions LLC
During business hours, Eastern Time Zone, 1-513-475-6625

Notice

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