

MATERIAL SAFETY DATA SHEET

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PRODUCT: ZymeOut™
MSDS No.: 0001.001

Date Prepared: March 2009
Date Revised:

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: ZymeOut™
General or Generic ID: Enzyme
Mixture

Company

LCP Tech, Inc.
8120 Indian Hill Rd
Cincinnati, OH 45243
513-505-3013

2. COMPOSITION/INFORMATION ON INGREDIENTS

Proprietary Mixture of Enzymes in Water

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye Ocular administration of fluid can produce conjunctival irritation which cleared in 72 hours. Acute eye irritation testing in rabbits (EPA 40 CFR 158.340 Guideline Reference OPPTS 870.2400) showed no corneal opacity noted in any observation period. Conjunctival irritation noticed in 3/3 eyes, which cleared by 72 hours.

Skin Acute Dermal Irritation testing conducted in Rabbits (EPA 40 CFR 158.340 Guideline Reference OPPTS 870.2500) showed irritation after the 3-minute, 1-hour and 4-hour exposures but there was no sign of corrosion. Erythema was very slight and edema absent at 1 hour following the three minute exposure. Erythema was well defined and edema very slight at 1 hour following the one hour exposure. Erythema was absent to well defined 1 hour following the 4 hour exposure. Edema was absent to very slight 1 hour following the 4 hour exposure and absent at 24, 48 and 72 hours.

Swallowing Oral LD₅₀ of this fluid is greater than 5000 mg/kg. Acute oral toxicity – Up and Down Procedure (LD₅₀ in rats) conducted with the standards set forth in EPA Health Effects Test Guidelines, OPPTS 870.1100 December 2002 showed that all animals survived the 5000 mg/kg oral dose. Instances of diarrhea, wetness and soiling of the anogenital area were noted on Day 0, however, animals appeared normal for the remainder of the study. Necropsy results were normal for 2 animals and revealed abnormalities of the kidney in one animal. Body weight changes were normal.

Inhalation No data

Symptoms of Exposure: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea).

Target Organ Effects No data

Developmental Information No data

Cancer Information No data

Other Health Effects No data

Primary Route(s) of Entry No data

4. FIRST AID MEASURES

Eyes If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or if there is any visual difficulty, seek medical attention.

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Skin Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse. Handle with gloves only.

Swallowing Seek medical attention. Drink water to dilute. If individual is drowsy or unconscious, do not give anything by mouth. Place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended. Potential for diarrhea if concentrate is ingested.

Inhalation If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin.

5. FIRE FIGHTING MEASURES

Flash Point None

Explosive Limit Not applicable

Autoignition Temperature Not Applicable

Hazardous Products of Combustion: Will not occur. Temperatures over 195°F may result in thermal decomposition. By-products are totally benign.

Fire and Explosion Hazards None

Extinguishing Media Not Required

Fire Fighting Instructions Not applicable

NFPA Rating Health – 0, Flammability – 0, Reactivity – 1

6. ACCIDENTAL RELEASE MEASURES

Product is biodegradable. Spills can be washed away or returned to container if uncontaminated.

Small Spill Absorb liquid on vermiculite, floor adsorbent or other adsorbent material.

Large Spill Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay or earth, floor adsorbent, or other adsorbent media or picked up by a shop vacuum cleaner.

7. HANDLING AND STORAGE

Handling Recommended storage temperature between 50°F and 100°F. Temperatures over 195°F may result in thermal decomposition. By-products are totally benign.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection Wear safety glasses in compliance with OSHA regulations. Consult your safety representative.

Skin Protection Wear resistant gloves (consult your safety equipment supplier). Wear normal work clothing covering arms and legs.

Respiratory Protections

If overexposure has been determined or documented, a NIOSH/MSHA jointly approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators under specified conditions. (See your safety equipment supplier.)

Engineering or administrative controls should be implemented to reduce exposure.

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Engineering Controls Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below level of overexposure (from known, suspected or apparent adverse effects).
Exposure Guidelines No exposure limits established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point 221°F (105°C) at 760 mm Hg.
Vapor Pressure 10 mbar (mmHg.)
Vapor Density (Air=1) N/A
Specific Gravity 1.03 g/cm³
Appearance Clear/Cloudy
State Liquid
Physical Form Mixture
Evaporation Rate N/A
Color Colorless
Odor Minimal
pH 10-11

STABILITY AND REACTIVITY

Hazardous Polymerization Product will not undergo hazardous polymerization
Hazardous Decomposition At high temperature, it may form nitrogen oxides.
Chemical Stability Stable
Incompatibility Not applicable

10. TOXICOLOGICAL INFORMATION

Oral LD₅₀ of this fluid is greater than 5000 mg/kg. Acute oral toxicity – Up and Down Procedure (LD₅₀ in rats) conducted with the standards set forth in EPA Health Effects Test Guidelines, OPPTS 870.1100 December 2002 showed that all animals survived the 5000 mg/kg oral dose. Instances of diarrhea, wetness and soiling of the anogenital area were noted on Day 0, however, animals appeared normal for the remainder of the study. Necropsy results were normal for 2 animals and revealed abnormalities of the kidney in one animal. Body weight changes were normal.

11. ECOLOGICAL INFORMATION

No effects of this fluid have been observed on seed germination, plant growth/survival or plant biomass. In addition, research has shown no adverse impact on marine or terrestrial life forms (including insects and birds) under typical environmental exposure conditions. LCP fluids do not bio-accumulate, so there is no opportunity for biomagnification and concentration in the food chain.

12. DISPOSAL CONSIDERATION

Contaminated adsorbent may be deposited in a landfill in accordance with local, state and federal regulations. For assistance with your waste management needs, contact your company's waste management expert.

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13. TRANSPORT INFORMATION

DOT Information – 49 CFR 172.101

DOT Description Not regulated by D.O.T.

Container Mode Drums

NOS Component None

RQ (Reportable Quantity) – 49 CFR 172.101 Not applicable.

14. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status None listed

CERCLA RQ – 40 CFR 302.4(a) None listed

SARA 302 Components – 40 CFR 355 Appendix A None

Section 311/312 Hazard Class – 40 CFR 370.2

Immediate (X) Delayed () Fire () Reactive () Sudden Release of Pressure ()

SARA 313 Components – 40 CFR 372.65 None

OSHA Process Safety Management 29 CFR 1910 None Listed

EPA Accidental Release Prevention 40 CFR 68 None listed

International Regulations Not filed

State and Local Regulations

California Proposition 65 None

15. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.