

MATERIAL SAFETY DATA SHEET

Total Solutions
P.O. Box 240014
Milwaukee, WI 53224

**TOTAL
SOLUTIONS**

GENERAL INFORMATION NUMBER: (414) 354-6417
CHEMTREC: (800) 424-9300

REVISION DATE: October 4, 2006
DATE OF ISSUE: October 5, 2006

I - Product Identification**Liquidase 250**

PRODUCT CODE: 0534

CHEMICAL FORMULATION: Liquid bacteria/enzyme solution.

NFPA HAZARD IDENTIFICATION SYSTEM: HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

HAZARD RATING: 4 - Extreme; 3 - High; 2 - Moderate; 1 - Slight; 0 - Insignificant

II - Hazardous Ingredients

Values reported as TWA unless noted.

<u>SUBSTANCE</u>	<u>APPROX</u>	<u>OSHA</u>	<u>ACGIH</u>	<u>EPA 40 CFR:</u>			<u>CAS #</u>
	<u>%</u>	<u>PEL</u>	<u>TLV</u>	<u>302</u>	<u>355</u>	<u>372</u>	

Contains no hazardous components as defined in 29 CFR 1910.1200

Key: PEL: Permissible Exposure Limit TLV: Threshold Limit Value C: Ceiling level STEL: Short Term Exposure Limit
N/A: Not Applicable N/D: Not Determined N/E: Not Established Y: Yes N: No
302: CERCLA List of Hazardous Substances and Reportable Quantities (40 CFR 302.4).
355: SARA TITLE III / List of Extremely Hazardous Substances for Emergency Planning and Notification (40 CFR 355).
372: SARA TITLE III / List of Toxic Chemicals subject to Release Reporting (Community Right to Know) (40 CFR 372).

III - Physical Data

BOILING POINT (°F): N/D

SPECIFIC GRAVITY (WATER = 1): 1.01

VAPOR PRESSURE (mm Hg): N/D

VOC CONTENT (% by weight): N/D

VAPOR DENSITY (AIR = 1): N/D

EVAPORATION RATE (WATER = 1): N/D

SOLUBILITY IN WATER: Soluble

pH: 7.5

APPEARANCE AND ODOR: Cloudy, orange-brown liquid; bland odor.

IV - Fire and Explosion Hazard Data

FLASH POINT (°F): None (TEST METHOD): Closed cup

FLAMMABLE LIMITS IN AIR (VOLUME %) UPPER: N/A LOWER: N/A

EXTINGUISHING MEDIA: Water, foam, carbon dioxide, dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Cool fire exposed containers with water fog. Firefighters should be equipped with full protective gear including self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARD: None

V - Reactivity Data

STABILITY: Stable

INCOMPATIBILITY: None.

CONDITIONS TO AVOID: None.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce oxides of carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: None

VI - Health Hazard Data

ROUTES OF ENTRY **INHALATION:** **EYE CONTACT:** X **SKIN CONTACT:** X **INGESTION:** X
INGREDIENTS THAT ARE CONSIDERED BY OSHA, NTP, IARC TO BE SUSPECTED HUMAN CARCINOGENS: None

EFFECTS OF OVEREXPOSURE

IF IN EYES: Mild irritation and redness.

IF ON SKIN: Irritation, defatting of skin with prolonged exposure. Bacterial infection may occur through open wounds or broken skin.

IF SWALLOWED: Nausea, cramps, diarrhea. Aspiration of this product may occur.

IF INHALED: None known under normal use.

EMERGENCY AND FIRST AID PROCEDURES

IF IN EYES: Flush eyes and under eyelids with plenty of cool water for at least 15 minutes. If irritation persists, obtain medical attention.

IF ON SKIN: Wash with water. In case of contact with open wounds or broken skin wash affected area with soap & water and apply a topical antiseptic agent.

IF SWALLOWED: Contact physician or poison control center immediately. Give affected person 1 to 2 glasses of water. Never give anything to an unconscious person.

IF INHALED: Remove person to fresh air.

VII - Spill or Leak Protection

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spill. Soak up spilled material with inert absorbent material and place in a properly marked closed container for proper disposal or recover for reuse. Rinse remaining residue with water.

WASTE DISPOSAL METHOD: Consult local environmental authorities.

VIII - Special Protection Information

RESPIRATORY PROTECTION: Use with adequate ventilation.

VENTILATION

LOCAL: Not required

MECHANICAL: Not required

PROTECTIVE GLOVES: Chemical resistant.

EYE PROTECTION: Safety glasses.

OTHER PROTECTIVE EQUIPMENT: None.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry place. Keep container tightly closed when not in use.

OTHER PRECAUTIONS: Keep out of reach of children.

IX - Transportation Information (ground transportation only)

DOT PROPER SHIPPING NAME: None

DOT CLASS: None

DOT ID NUMBER: None

DOT PACKING GROUP: None

The shipping information listed above applies only to non-bulk (< 119 gallons) containers of this product. This product may have more than one proper shipping name depending on packaging, product properties, & mode of shipment. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may apply.

REVISION DATE: October 4, 2006

Prepared by: Technical Dept.

DATE OF ISSUE: October 5, 2006

This information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Total Solutions assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material such vendees or users assume all risks associated with the use of this material.