

MATERIAL SAFETY DATA SHEET



Product Trade Name: GreenZyme®

Substance Identification: Biological Liquid Enzymes (DNA proteins), H₂O, and Stabilizers.

Physical Data : Description: Semi-clear yellow with a slight fermentation odor. **vv**
Evaporation rate: not applicable
pH : 3.5 - 5 (in concentrated form); Injection form, pH : 5 to 7.
Boiling point: 212°F. or 100°C. : Specific gravity : 1
Solubility in water: Complete, 100% dispersible. Flash point: none
Vapor pressure: 17.5 mmHg - 20°C.

Health Effects and First Aid : Inhalation: Non-hazardous. Remove to fresh air. Treat symptomatically.
Skin contact: Thoroughly rinse solution off the skin with soap and water.
If an itching sensation or redness occurs, contact a physician.
Eye contact: May cause minor irritation, flush eyes with water. If a burning or itching sensation develops, contact a physician.
Ingestion: Relatively harmless. If swallowed, drink one or two glasses of water. If intestinal symptoms occur, contact a physician.

Reactivity Data : Reactivity: Stable under all normal conditions.
Incompatibilities: none
Hazardous polymerization: Will not occur.

Fire and Explosion Data : Primarily water based solution, non-fire hazardous, non-explosive.

Safeguard Measures: Ventilation: Provide adequate ventilation.
Eye protection: Avoid contact with eyes. Contact lenses are not recommended.
Protective clothing: Avoid skin contact with solution for long periods of time.

Spill of Leak Information : Wash and flush down the area of the spill with liberal amount water.

Transportation Data: DOT Proper shipping name: None. DOT Hazard class: 1
DOT I.D. Number: N/A. DOT Label / Placard: None (0 /0 /0 /0)

General Use Area : For Enhanced Oil Recovery (i.e. EOR) and environmental clean-up uses.

Storage and Disposal: Enzyme solution may be stored in most any area, but should be kept away from direct heat or in an area where temperatures can reach over 160°F for prolong period of time. Shell life: over 3 years, use within 3 years.

Disposal: If necessary, dispose of any unused dilute and/or concentrated solution in non-hazardous waste facility.

Occupational exposure: Avoid inhalation and direct contact with skin and eyes. • Control Measures: Provide adequate mechanical ventilation. Methods include process or personnel enclosure, mechanical ventilation. If engineering control and work practices are not effective in preventing and controlling exposure then suitable protective equipment which is known to perform satisfactorily should be used. Use of the basic principles of hygiene will enable this material to be used safely. • Eye protection: Wear chemicals resistant goggles. Avoid contact with eyes. Contact lenses are not recommended while working with any solutions • Protective clothing: Avoid skin contact. Use rubber gloves for handling this material when prolonged or frequently repeated contact could occur. Prevent skin exposure to solution concentrate for any extended period of time. If hands are cut or scratched, use rubber gloves, even for brief exposures. Normal work wear should be overalls and/or apron. • Respiratory Protection: Maintain adequate ventilation. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Use respirators with cartridges for alcohols.

Harmony code: 3507.90.0000 - Made in USA.
GreenZyme® is a registered trademark of Apollo Separation Technologies Inc.
www.btprocessing.com