

**Hydrogen Release Compound Primer (HRC Primer™)
MATERIAL SAFETY DATA SHEET (MSDS)**

Last Revised: August 17, 2005

Section 1 - Material Identification

Supplier:



REGENESIS

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Chemical Name: Propanoic acid, 2-[2-[2-(2-hydroxy-1-oxopropoxy)-1-oxopropoxy]-1-oxopropoxy]-1,2,3-propanetriyl ester

Chemical Family: Organic Chemical

Trade Name: HRC, Glycerol Polylactate Primer

Section 2 – Chemical Identification

<u>CAS#</u>	<u>Chemical</u>
201167-72-8	Glycerol Polylactate
50-21-5	Lactic Acid

Section 3 - Physical Data

Melting Point:	NA
Boiling Point:	ND
Flash Point:	ND
Density:	1.10 g/cc
Solubility:	Water, Acetone and DMSO
Appearance:	Yellow Liquid
Odor:	Not detectable

Section 4 - Fire and Explosion Hazard Data

Extinguishing Media: Carbon Dioxide, Dry Chemical Powder or Appropriate Foam.

Water may be used to keep exposed containers cool.

For large quantities involved in a fire, one should wear full protective clothing and a NIOSH approved self contained breathing apparatus with full face piece operated in the pressure demand or positive pressure mode as for a situation where lack of oxygen and excess heat are present.

Section 5 - Toxicological Information

Acute Effects: May be harmful by inhalation, ingestion, or skin absorption. May cause irritation. To the best of our knowledge, the chemical, physical, and toxicological properties of the glycerol tripoly lactate have not been investigated. Listed below are the toxicological information for glycerol and lactic acid.

RTECS#: MA8050000
Glycerol

Irritation data: SKN-RBT 500 MG/24H MLD BIOFX* 9-4/1970
85JCAE-,207,1986 85JCAE-,207,1986
EYE-RBT 126 MG MLD
EYE-RBT 500 MG/24H MLD

Toxicity data: ORL-MUS LD50:4090 MG/KG
FRZKAP (6),56,1977
SCU-RBT LD50:100 MG/KG NIIRDN 6,215,1982
ORL-RAT LD50:12600 MG/KG FEPR7 4,142,1945
IHL-
RATLC50:>570MG/M3/1HBIOFX*9- RCOCB8 56,125,1987
4/1970 IPR-RAT LD50: 4420 MG/KG ARZNAD
IVN-RAT LD50:5566 MG/KG 26,1581,1976
IPR-MUS LD50: 8700 MG/KG ARZNAD
SCU-MUS LD50: 91 MG/KG 26,1579,1978
IVN-MUS LD50: 4250 MG/KG NIIRDN 6,215,1982
ORL-RBT LD50: 27 GM/KG JAPMA8 39,583,1950
SKN-RBT LD50:>10GM/KG DMDJAP 31,276,1959
BIOFX* 9-4/1970
IVN-RBT LD50: 53 GM/KG NIIRDN 6,215,1982
JIHTAB 23,259,1941
ORL-GPG LD50: 7750 MG/KG

Section 5 - Toxicological Information (cont)

Target Organ data:	Behavioral (headache), gastrointestinal (nausea or vomiting), Paternal effects (spermatogenesis, testes, epididymis, sperm duct), effects of fertility (male fertility index, post-implantation mortality).	
Acute Effects:	May be harmful by inhalation, ingestion, or skin absorption. May cause irritation. To the best of our knowledge, the chemical, physical, and toxicological properties of the glycerol tripoly lactate have not been investigated. Listed below are the toxicological information for glycerol and lactic acid.	
RTECS#:	OD2800000 Lactic acid	
Irritation data:	SKN-RBT 5MG/24H SEV	85JCAE -,656,86
	EYE-RBT 750 UG SEV	AJOPAA 29,1363,46
	ORL-RAT LD50:3543 MG/KG	FMCHA2-,C252,91
	SKN-RBT LD50:>2 GM/KG	FMCHA2-,C252,91
	ORL-MUS LD50: 4875 MG/KG	FAONAU 40,144,67
		JIHTAB 23,259,41
Toxicity data:	ORL-GPG LD50: 1810 MG/KG	FMCHA2-,C252,91
	ORL-QAL LD50: >2250 MG/KG	

Only selected registry of toxic effects of chemical substances (RTECS) data is presented here. See actual entry in RTECS for complete information on lactic acid and glycerol.

Section 6 - Health Hazard Data

Handling: Avoid continued contact with skin. Avoid contact with eyes.

In any case of any exposure which elicits a response, a physician should be consulted immediately.

First Aid Procedures

Inhalation: Remove to fresh air. If not breathing give artificial respiration. In case of labored breathing give oxygen. Call a physician.

Ingestion: No effects expected. Do not give anything to an unconscious person. Call a physician immediately.

Section 6 - Health Hazard Data (cont)

Skin Contact: Flush with plenty of water. Contaminated clothing may be washed or dry cleaned normally.

Eye contact: Wash eyes with plenty of water for at least 15 minutes lifting both upper and lower lids. Call a physician.

Section 7 - Reactivity Data

Conditions to Avoid: Strong oxidizing agents, bases and acids

Hazardous Polymerization: None known

Further Information: Hydrolyses in water to form Lactic Acid and Glycerol.

Section 8 - Spill, Leak or Accident Procedures

After Spillage or Leakage: Neutralization is not required. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.

Disposal: Laws and regulations for disposal vary widely by locality. Observe all applicable regulations and laws. This material, may be disposed of in solid waste. Material is readily degradable and hydrolyses in several hours.

No requirement for a reportable quantity (CERCLA) of a spill is known.

Section 9 - Special Protection or Handling

Should be stored in plastic lined steel, plastic, glass, aluminum, stainless steel, or reinforced fiberglass containers.

Protective Gloves: Vinyl or Rubber

Eyes: Splash Goggles or Full Face Shield
Area should have approved means of washing eyes.

Ventilation: General exhaust.

Storage: Store in cool, dry, ventilated area. Protect from incompatible materials.

Section 10 - Other Information

This material will degrade in the environment by hydrolysis to lactic acid and glycerol. Materials containing reactive chemicals should be used only by personnel with appropriate chemical training.

The information contained in this document is the best available to the supplier as of the time of writing. Some possible hazards have been determined by analogy to similar classes of material. No separate tests have been performed on the toxicity of this material. The items in this document are subject to change and clarification as more information becomes available.