

4-13-06

**MATERIAL SAFETY DATA SHEET**  
**GENIUM PUBLISHING CORPORATION**  
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MSDS # 546  
 Lactic Acid  
 Issued: July 1985  
 Revised:

From Genium's MSDS Collection, to be used as a reference.

**SECTION 1. MATERIAL IDENTIFICATION**

**MATERIAL NAME:** LACTIC ACID  
**OTHER DESIGNATIONS:** Acetic acid, DL-Lactic acid, Ethylidenlactic acid, 1-Hydroxyethanecarboxylic acid, 2-Hydroxypropanoic Acid, 2-Hydroxypropionic Acid, alpha-Hydroxypropionic Acid, C<sub>3</sub>H<sub>5</sub>O<sub>3</sub>; CAS # 000 050 215,  
**Manufacturer:** Monsanto Company, 800 N. Lindbergh Blvd., St. Louis, MO 63167; Emergency phone number: (314) 694-1000.

**SECTION 2. INGREDIENTS AND HAZARDS**

	%	HAZARD DATA
Lactic Acid	88 or 50	No TLV established. Rat, oral LD50:
Water	12 or 50	3,730 mg/kg Rabbit, Dermal LD50: >7,940 mg/kg (Based on 88% Lactic Acid)
Manufacturer produces various concentrations of Lactic Acid ranging from 88% - 50%.		Rabbit, eye irritation: 750 mg. Severely irr. Rabbit, skin irritation; 500 mg/24 hrs. severely irritating.

**SECTION 3. PHYSICAL DATA**

Boiling point, 14-15 mmHg, deg F (C) ... 251.6 (122)  
 Solubility in water ..... Complete  
 Specific gravity ..... 1.20-1.22  
 Melting point, deg F(C) ..... 62.2 (16.8)  
 Molecular weight ..... 90.08  
**APPEARANCE & ODOR:** Colorless or slightly yellow, odorless hygroscopic syrupy liquid.

**SECTION 4. FIRE AND EXPLOSION DATA**

			Lower	Upper
Flash Point and Method	Autoignition Temp.	Flammability Limits in Air		
Non-combustible	N/A	N/A		

**EXTINGUISHING MEDIA:** Carbon dioxide, dry chemical, foam. Use water spray to cool tank/container.  
 Material is not considered flammable, but the residue may burn in the presence of a strong ignition source after the water has evaporated. It emits acrid fumes and smoke when heated to decomposition.  
 Firefighters should wear self-contained breathing apparatus and full protective clothing.

**SECTION 5. REACTIVITY DATA**

Lactic acid is stable under normal storage and handling conditions. It does not undergo hazardous polymerization. This material is incompatible with nitric acid and hydrofluoric acid. Metal polishing solutions composed of lactic acid, nitric acid and hydrofluoric acid are unstable and should not be stored. Solutions should be made freshly and discarded immediately after use.  
 Thermal decomposition or burning may produce carbon dioxide, carbon monoxide, soot and smoke.

<b>SECTION 6. HEALTH HAZARD INFORMATION</b>	TLV None established.
<p>Exposure to lactic acid mist may cause coughing, irritation to the mucous membranes and eyes. The liquid is irritating to the skin and eyes and may cause severe burns. Local contact may cause corneal necrosis, dental erosion and eczema. If ingested, lactic acid will burn the mouth, throat, and stomach and may cause nausea, vomiting, sweating, shortness of breath, cyanosis, audosis and vascular collapse.</p> <p><b>FIRST AID:</b>  <b>EYE CONTACT:</b> Promptly flush eyes including under eyelids, with large amounts of running water for at least 15 minutes. If irritation persists or damage is observed, cover eyes with a dry bandage and transport to a medical facility that treats eye injuries.  <b>SKIN CONTACT:</b> Promptly flush skin for at least 15 minutes while removing contaminated clothing. If skin is burned, cover with a dry, sterile bandage and get medical attention.  <b>INHALATION:</b> Remove victim to fresh air. Restore and/or support breathing if needed. Get medical attention (Inplant, paramedic, community).  <b>INGESTION:</b> Give victim water or milk as quickly as possible. Call a physician or Poison Control Center. Do not induce vomiting unless instructed to do so. Transport victim to a medical facility. Never give anything by mouth to a person who is unconscious or is having convulsions.</p>	
<b>SECTION 7. SPILL, LEAK AND DISPOSAL PROCEDURES</b>	
<p>Notify safety personnel of large spills or leaks. Evacuate the area if necessary. Dike spill area to contain liquid.</p> <p>Cover spill with sodium bicarbonate or soda ash. Mix and add water if necessary to form a slurry. Scoop slurry into a suitable container and neutralize with 6M NH<sub>4</sub>OH or 6M HCl as required. Flush neutralized waste down drain with large amount of water. Wash spill area with soda ash solution and flush with water. Clean up personnel should wear gloves, an approved respirator and impervious clothing.</p> <p><b>DISPOSAL:</b> Place in suitable container for disposal by licensed contractor or dissolve in a flammable solvent and burn in an approved incinerator. Follow all federal, state and local regulations.</p>	
<b>SECTION 8. SPECIAL PROTECTION INFORMATION</b>	
<p>Provide general and local ventilation to minimize vapor concentration. Especially consider ventilation when material is heated. For emergency or non-routine exposures, wear an appropriate NIOSH approved respirator. Wear impervious gloves and protective clothing to prevent skin contact. Wear safety goggles, face shield, and apron when splashing is likely or large amounts are being handled. Do not wear contaminated clothing until it has been properly laundered.</p> <p>Eye wash stations and safety showers should be accessible to use and handling areas.</p> <p>Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants</p>	
<b>SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS</b>	
<p>Store in a cool, dry, well-ventilated area away from nitric acid, hydrofluoric acid, heat and ignition sources. Protect container from physical damage and keep tightly closed.</p> <p>Use only with adequate ventilation. Do not get on eyes, skin, or clothing. Avoid breathing vapors. Wash thoroughly after handling.</p> <p>Do not mix with acid wastes until compatibility is established, i.e. mixing small batches.</p> <p><b>DOT CLASSIFICATION:</b> Corrosive liquid, N.O.S., NA1760.</p> <p>DATA SOURCE(S) CODE (See Glossary) 1, 2, 4-9, 11, 12, 23, 25, 34, 37, 60, 63, 75, 78.</p>	
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