Material Safety Data Sheet
DL-Lactic acid

MSDS# 00827

Section 1 - Chemical Product and Company Identification

MSDS Name: DL-Lactic acid
Catalog Numbers: AC125060000, AC125060010, AC125060025, AC125060100, AC125060250, AC412960000, AC412960000, AC412965000, 12506-5000, A159-500, A162-1, A162-500, S80046
Synonyms: 2-Hydroxypropanoic acid.

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticalaan 3a
2440 Geel, Belgium
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

Risk Phrases:
CAS#: 50-21-5
Chemical Name: DL-Lactic acid
%: 85+
EINECS#: 200-018-0

Hazard Symbols:

Risk Phrases:
CAS#: 7732-18-5
Chemical Name: Water
%: < 15
EINECS#: 231-791-2

Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: XI
Risk Phrases: 37/38 41

Section 3 - Hazards Identification
EMERGENCY OVERVIEW

Warning! Eye contact may result in permanent eye damage. Corrosive to metal. Causes eye, skin, and respiratory tract irritation. Target Organs: Blood, kidneys, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation. Risk of serious damage to eyes.

Skin: Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.

Inhalation: Causes respiratory tract irritation. May be harmful if inhaled.

Chronic: Adverse reproductive effects have been reported in animals. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects. May cause kidney damage.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature: Not applicable.

Flash Point: > 110 deg C (> 230.00 deg F)

Explosion Limits: Not available

Explosion Limits: Not available

NFPA Rating: health: 2; flammability: 1; instability: 1;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Storage: Store in a cool, dry place. Store in a tightly closed container. Corrosives area. Do not store in metal containers.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL-Lactic acid</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: DL-Lactic acid: None listed Water: None listed

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Viscous liquid
Color: Not available
Odor: acrid odor
pH: 2.8 (10g/L aq.sol.)
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 122 deg C @ 15 mmHg (251.60°F)
Freezing/Melting Point: 18 deg C (64.40°F)
Decomposition Temperature: Not available
Solubility in water: Soluble
Specific Gravity/Density: 1.200
Molecular Formula: C3H6O3
Molecular Weight: 90.08

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, excess heat, temperatures above 200°C, exposure to moist air or water.
Incompatibilities with Other Materials: Metals, strong oxidizing agents, strong reducing agents, strong bases, nitric acid, iodides.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 50-21-5: OD2800000
CAS# 7732-18-5: ZC0110000

RTECS:
CAS# 50-21-5: Draize test, rabbit, eye: 750 ug Severe;
Draize test, rabbit, skin: 5 mg/24H Severe;
Draize test, rabbit, skin: 100 mg/24H Moderate;
Oral, mouse: LD50 = 4875 mg/kg;
LD50/LC50: Oral, rat: LD50 = 3543 mg/kg;
Skin, rabbit: LD50 = >2 gm/kg;

RTECS:
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;

Carcinogenicity: DL-Lactic acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information
Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Hazard Class: 8
UN Number: UN3265
Packing Group: III

Canada TDG
Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC,
Hazard Class: 8
UN Number: UN3265
Packing Group: III

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XI
Risk Phrases:
  R 37/38 Irritating to respiratory system and skin.
  R 41 Risk of serious damage to eyes.
Safety Phrases:
  S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)
CAS# 50-21-5: 0
CAS# 7732-18-5: Not available

Canada
CAS# 50-21-5 is listed on Canada's DSL List
CAS# 7732-18-5 is listed on Canada's DSL List
Canadian WHMIS Classifications: E
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 50-21-5 is listed on Canada's Ingredient Disclosure List
CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US Federal
TSCA
CAS# 50-21-5 is listed on the TSCA Inventory.
CAS# 7732-18-5 is listed on the TSCA Inventory.

Section 16 - Other Information
MSDS Creation Date: 10/07/1997
Revision #12 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied,
with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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