Material Safety Data Sheet
DL-Alanine, 99%

ACC# 51357

Section 1 - Chemical Product and Company Identification

**MSDS Name:** DL-Alanine, 99%
**Catalog Numbers:** AC159090000, AC159091000, AC159095000
**Synonyms:** (+)-2-Aminopropionic acid; (R,S)-Alanine; dl-2-Aminopropionic acid; DL-alpha-Alanine. L-Alanine is non-essential amino acid for human development.
**Company Identification:**
Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410
For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>302-72-7</td>
<td>DL-Alanine</td>
<td>99</td>
<td>206-126-4</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**
Appearance: white crystalline powder.
**Caution!** May cause eye, skin, and respiratory tract irritation. This is expected to be a low hazard for usual industrial handling.
**Target Organs:** None.

**Potential Health Effects**
**Eye:** May cause eye irritation. Dust may cause mechanical irritation.
**Skin:** May cause skin irritation.
**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea.
**Inhalation:** Inhalation of dust may cause respiratory tract irritation.
**Chronic:** No information found.

Section 4 - First Aid Measures

**Eyes:** Gently lift eyelids and flush continuously with water. If irritation develops, get medical aid.
**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and
shoes. Get medical aid if irritation develops or persists.  
**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.  
**Inhalation:** Remove from exposure and move to fresh air immediately. Get medical aid if cough or other symptoms appear.  
**Notes to Physician:** Treat symptomatically and supportively.

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**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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.  
**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.  
**Flash Point:** Not applicable.  
**Autoignition Temperature:** Not available.  
**Explosion Limits, Lower:** Not available.  
**Upper:** Not available.  
**NFPA Rating:** (estimated) Health: 0; Flammability: 1; Instability: 0

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**Section 6 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.  
**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

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**Section 7 - Handling and Storage**

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.  
**Storage:** Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Dark room.

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**Section 8 - Exposure Controls, Personal Protection**

**Engineering Controls:** Good general ventilation should be sufficient to control airborne levels.  
**Exposure Limits**

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

**OSHA Vacated PELs:** DL-Alanine: No OSHA Vacated PELs are listed for this chemical.
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 minimize contact with skin.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

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Section 9 - Physical and Chemical Properties

**Physical State:** Crystalline powder

**Appearance:** white

**Odor:** odorless

**pH:** 5.5-7 (2.5% soln)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** Sublimes above 200 deg C

**Decomposition Temperature:** 264-296 deg C

**Solubility:** 167 g/l @ 25°C

**Specific Gravity/Density:** 1.424

**Molecular Formula:** C3H7NO2

**Molecular Weight:** 89.09

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Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Light, dust generation, moisture.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

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Section 11 - Toxicological Information

**RTECS#:**

**CAS# 302-72-7:** AY2980000

**LD50/LC50:**

Not available.

**Carcinogenicity:**

**CAS# 302-72-7:** Not listed by ACGIH, IARC, NTP, or CA Prop 65.
Epidemiology: No data available.
Teratogenicity: No data available.
Reproductive Effects: No data available.
Mutagenicity: No data available.
Neurotoxicity: No data available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. Structure of the product is closely related to the natural amino acid L-alanine and may therefore be degraded microbiologically.
Environmental: No information available.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

<table>
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<tr>
<th></th>
<th>US DOT</th>
<th>Canada TDG</th>
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<tbody>
<tr>
<td>Shipping Name:</td>
<td>Not regulated as a hazardous material</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Hazard Class:</td>
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</tr>
<tr>
<td>UN Number:</td>
<td></td>
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<tr>
<td>Packing Group:</td>
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</tr>
<tr>
<td>Additional Info:</td>
<td></td>
<td>OXALIC ACID</td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

US FEDERAL

TSCA
   CAS# 302-72-7 is listed on the TSCA inventory.
Health & Safety Reporting List
   None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
   None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.

Section 313
No chemicals are reportable under Section 313.

Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
CAS# 302-72-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:
Not available.

Risk Phrases:

Safety Phrases:
S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)
CAS# 302-72-7: 0

Canada - DSL/NDSL
CAS# 302-72-7 is listed on Canada's DSL List.

Canada - WHMIS
WHMIS: Not available.

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.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 4/14/1998
Revision #5 Date: 3/16/2007

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.
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