Material Safety Data Sheet

d-(-)-Tartaric acid (unnatural tartaric acid), 99%

ACC# 00086

<table>
<thead>
<tr>
<th>Section 1 - Chemical Product and Company Identification</th>
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<tbody>
<tr>
<td><strong>MSDS Name:</strong> d-(-)-Tartaric acid (unnatural tartaric acid), 99%</td>
</tr>
<tr>
<td><strong>Catalog Numbers:</strong> AC137860000, AC137860250, AC137861000, AC137862500</td>
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<tr>
<td><strong>Synonyms:</strong> D-(−)-Dihydroxysuccinic acid</td>
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<tr>
<td><strong>Company Identification:</strong></td>
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<tr>
<td>Acros Organics N.V.</td>
</tr>
<tr>
<td>One Reagent Lane</td>
</tr>
<tr>
<td>Fair Lawn, NJ 07410</td>
</tr>
<tr>
<td><strong>For information in North America, call:</strong> 800-ACROS-01</td>
</tr>
<tr>
<td><strong>For emergencies in the US, call CHEMTREC:</strong> 800-424-9300</td>
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<tr>
<th>Section 2 - Composition, Information on Ingredients</th>
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<tbody>
<tr>
<td><strong>CAS#</strong></td>
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<tr>
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<tr>
<td>147-71-7</td>
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<tr>
<th>Section 3 - Hazards Identification</th>
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<tbody>
<tr>
<td><strong>EMERGENCY OVERVIEW</strong></td>
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Appearance: white solid.
**Caution!** Causes eye and skin irritation. Causes digestive and respiratory tract irritation.
**Target Organs:** None.

**Potential Health Effects**

**Eye:** Causes eye irritation. Causes redness and pain.

**Skin:** Causes skin irritation.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

**Inhalation:** Dust is irritating to the respiratory tract.

**Chronic:** Not available.

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<th>Section 4 - First Aid Measures</th>
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**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. 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 victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid if irritation or symptoms occur.

**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 if cough or other symptoms appear.

**Notes to Physician:** Treat symptomatically and supportively.

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<tr>
<th>Section 5 - Fire Fighting Measures</th>
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**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH
(approved or equivalent), and full protective gear. 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 chemical foam.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** Not published.

### Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

**Storage:** Store in a cool, dry place. Store in a tightly closed container.

### 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>
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<tbody>
<tr>
<td>D-(-)-TARTARIC ACID</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
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</table>

**OSHA Vacated PELs:** D-(-)-TARTARIC ACID: 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 prevent skin exposure.

**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.

### Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** white

**Odor:** Not available.

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 172 - 174 deg C

**Decomposition Temperature:** Not available.

**Solubility:** 1366 G/L IN WATER (22°C)

**Specific Gravity/Density:** Not available.
Molecular Formula: C₄H₆O₆
Molecular Weight: 150.09

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials.
Incompatibilities with Other Materials: Bases, oxidizing agents, reducing agents, sliver.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: 
CAS# 147-71-7 unlisted.
LD₅₀/LC₅₀: 
Not available.

Carcinogenicity:
CAS# 147-71-7: 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. COD 425 mg O₂/gBOD 350 mg O₂/gBiodegradable: 95% after 3 days
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

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<tr>
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<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>No information available.</td>
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<tr>
<td>Hazard Class:</td>
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<tr>
<td>UN Number:</td>
<td></td>
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<tr>
<td>Packing Group:</td>
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Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 147-71-7 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# 147-71-7 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:
XI

Risk Phrases:
R 36/37/38 Irritating to eyes, respiratory system and skin.

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# 147-71-7: No information available.

Canada - DSL/NDSL
CAS# 147-71-7 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of D2B.
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:** 9/02/1997  
**Revision #3 Date:** 10/03/2005

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 Fisher 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 Fisher has been advised of the possibility of such damages.