Section 1 - Chemical Product and Company Identification

MSDS Name: Citric acid, trisodium salt dihydrate

Catalog Numbers: 22713-0000, 22713-0010, 22713-0050, 22713-5000

Synonyms: Trisodium citrate dihydrate

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticaal 3a
2440 Geel, Belgium

Company Identification: (USA)
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

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
<th>EINECS#</th>
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<tr>
<td>6132-04-3</td>
<td>Citric acid, trisodium salt dihydrate</td>
<td>99%</td>
<td>200-675-3</td>
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</table>

Hazard Symbols: None listed
Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Not available

Potential Health Effects

Eye: Dust may cause mechanical irritation.

Skin: May cause skin irritation. No information regarding skin irritation and other potential effects was found.

Ingestion: Ingestion of large amounts may cause gastrointestinal irritation.

Inhalation: May cause respiratory tract irritation. Low hazard for usual industrial handling.

Chronic: No information found.

Section 4 - First Aid Measures

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:
Get medical aid. Wash mouth out with water.

### 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:

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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. 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.

#### 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.

#### Section 7 - Handling and Storage

**Handling:**
Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.

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

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

**Engineering Controls:**
Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**
CAS# 6132-04-3:

**Personal Protective Equipment**

**Eyes:**
Wear chemical splash goggles.

**Skin:**
Wear appropriate 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:** Crystals

**Color:** white

**Odor:** odorless

**pH:** 7.5-9.5 (5% aq. solution)

**Vapor Pressure:** Not available

**Viscosity:** Not available

**Boiling Point:** Not available

**Freezing/Melting Point:** > 300 deg C (> 572.00°F)

**Autoignition Temperature:** 345 deg C (653.00 deg F)

**Flash Point:** Not available

**Explosion Limits: Lower:** Not available
**Explosion Limits:** Upper: Not available

**Decomposition Temperature:**
Solubility in water: 720 g/l (25°C)

**Specific Gravity/Density:** 1.760

**Molecular Formula:** C6H5Na3O7.2H2O

**Molecular Weight:** 294.09

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**Section 10 - Stability and Reactivity**

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

**Conditions to Avoid:** Incompatible materials, excess heat.

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

**Hazardous Decomposition Products**
Carbon monoxide, carbon dioxide, sodium oxide.

**Hazardous Polymerization**
Will not occur.

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**Section 11 - Toxicological Information**

**RTECS#:** CAS# 6132-04-3: None listed

**LD50/LC50:** RTECS: Not available. Other: CAS 77-92-9, GE7350000: citric acid, anhydrous: Oral, rat: LD50 = 3 gm/kg Oral, mus: LD50 = 5040 mg/kg

**Carcinogenicity:** Citric acid, trisodium salt dihydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

**Other:** The toxicological properties have not been fully investigated.

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**Section 12 - Ecological Information**

**Ecotoxicity:** Not available

**Other:** Readily biodegradable.
Biodegradibility: >98% / 2d (OECD 302B)COD = 480 mg O2 / gBOD5 = 364 mg O2 / gThOD = 544 mg/g

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**Section 13 - Disposal Considerations**

Dispose of in a manner consistent with federal, state, and local regulations.

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**Section 14 - Transport Information**

<table>
<thead>
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<th>IMO</th>
<th>RID/ADR</th>
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</thead>
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<tr>
<td>Packing Group:</td>
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</tbody>
</table>

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**Section 15 - Regulatory Information**

**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# 6132-04-3: 0

Canada

**US Federal**
TSCA

CAS# 6132-04-3 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory (40CFR720.3(u)(2)).

Section 16 - Other Information

MSDS Creation Date: 7/16/1996
Revision #2 Date: 12/22/2004

Revisions were made in Sections: General revision.

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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