2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Warning

May form combustible dust concentrations in air

Hazard not otherwise classified (HNOC)

Not Applicable

Other hazards
Precautionary Statements - Prevention
Keep away from heat/sparks/open flames/hot surfaces. — No smoking

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
<th>Trade Secret</th>
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<tbody>
<tr>
<td>Sodium Ascorbate</td>
<td>134-03-2</td>
<td>100</td>
<td>*</td>
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</table>

4. FIRST AID MEASURES

First aid measures
General Advice: Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. In case of shortness of breath, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed
Symptoms May cause eye/skin irritation. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Indication of any immediate medical attention and special treatment needed
Notes to Physician: Treat symptomatically

Protection of first-aiders
First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical
Hazardous Combustion Products: Carbon oxides, Metallic oxides

Product code: S1349  Product name: SODIUM ASCORBATE, POWDER, USP
Specific hazards:  May be combustible at high temperatures
Avoid generating dust
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard
When heated to decomposition it emits toxic fumes

Special Protective Actions for Firefighters

Specific Methods:  No information available.

Special Protective Equipment for Firefighters:  As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:  Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition. Avoid dust formation. Avoid dispersal of dust in the air. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Nonsparking tools should be used.

Environmental precautions  Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment  Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up  Sweep up and shovel into suitable containers for disposal. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:  Provide sufficient air exchange and/or exhaust in work rooms. Minimize dust generation and accumulation. Avoid dust formation. Dry powders can build static electricity charges when subjected to friction of transfer and mixing operations. All equipment used when handling the product must be grounded. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Safe Handling Advice:  Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not ingest. Do not breathe vapours/dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities


8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

**United States**

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<tr>
<th>Components</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WHEEL</th>
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**Canada**

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**Australia and Mexico**

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<tr>
<td>134-03-2</td>
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</table>

Appropriate engineering controls

**Engineering measures to reduce exposure:**
Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e. there is no leakage from the equipment). It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in the handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Individual protection measures, such as personal protective equipment

**Personal Protective Equipment**

- **Eye protection:** Goggles Safety glasses with side-shields
- **Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.
- **Respiratory protection:** Wear respirator with dust filter.
- **Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.

Granular powder.

Odor: Odorless.

Taste: No information available

Odor threshold (ppm): No information available

Flammability: No information available

Flash point (°C): No data available

Molecular/Formula weight: 198.11

Chemical stability
Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid:
Heat. Ignition sources. Incompatible materials. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Exposure to light.


Hazardous decomposition products: Carbon oxides. Metallic oxides.

10. STABILITY AND REACTIVITY

Reactivity
Reactive with acids
Reactive with oxidizing agents
Reactive with alkalis
Reacts with reducing agents
Sensitive to light. It gradually darkens on exposure to light
On prolonged storage, a yellow discoloration may occur through slow decomposition

Stability:
Stable under recommended storage conditions

Possibility of Hazardous Reactions:
Hazardous polymerization does not occur

Conditions to avoid:
Heat. Ignition sources. Incompatible materials. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Exposure to light.

Incompatible Materials:

Hazardous decomposition products:
Carbon oxides. Metallic oxides.

Product code: S1349
Product name: SODIUM ASCORBATE, POWDER, USP
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

Sodium Ascorbate - 134-03-2
LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rat = No information available
LD50/dermal/rabbit = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE-Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE-Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.
Inhalation  May cause irritation of respiratory tract.
Ingestion  May cause digestive (gastointestinal) tract irritation.
Aspiration hazard  No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity  No information available
Sensitization:  No information available
Mutagenic Effects:  No information available
Carcinogenic effects:  Not considered carcinogenic

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<th>ACGIH - Carcinogens</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
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</table>

Reproductive toxicity  No data is available
Reproductive Effects:  No information available
Developmental Effects:  No information available
Teratogenic Effects:  No information available

Specific Target Organ Toxicity
STOT - single exposure  No information available
STOT - repeated exposure  No information available
Target Organs:  No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity
Ecotoxicity effects:  No data available.
Persistence and degradability:  No information available
Bioaccumulative potential:  No information available
Mobility:  No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Product code: S1349  Product name: SODIUM ASCORBATE, POWDER, USP
Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

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14. TRANSPORT INFORMATION

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IMO / IMDG

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RID

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Product code: S1349  Product name: SODIUM ASCORBATE, POWDER, USP
### 14. TRANSPORT INFORMATION

| Classification Code: | No information available |
| Description:         | No information available |

**ICAO**

- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Description:** No information available

**IATA**

- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Description:** No information available

### 15. REGULATORY INFORMATION

#### International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
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#### U.S. Regulations

**Sodium Ascorbate**

- **FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 182.3731
- **FDA - 21 CFR - Total Food Additives:** 155.200 182.3731

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

- **Chemicals Known to the State of California to Cause Cancer:**
  This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

- **Chemicals Known to the State of California to Cause Reproductive Toxicity:**
  This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
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#### CERCLA/SARA

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<th>Section 313 - Chemical Category</th>
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#### U.S. TSCA

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<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
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Canada

WHMIS hazard class:
D2B  Toxic materials

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

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<th>Components</th>
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EU Classification

R-phrase(s)
not determined (not applicable)

S -phrase(s)
none

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The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
None.

16. OTHER INFORMATION
Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet