

spectrum

chemicals & laboratory products

A Division of Spectrum Chemical Mfg. Corp.

Dear Customer,

This File Contains Both The ANSI Material Safety Data Sheet and The GHS Safety Data Sheet For The Same Product

Spectrum is currently transitioning all chemical product labeling from the ANSI¹ format to the GHS² format (see note below). In order to ensure that you receive complete labeling during the transition, we have included both the ANSI MSDS and the GHS SDS in a single file. The ANSI MSDS is given first, followed by the GHS SDS. Please use whichever matches the container label.

Why It Matters:

The complete precautionary labeling for this chemical consists of BOTH the label on the container AND the matching Material Safety Data Sheet (for ANSI labels) or Safety Data Sheet (for GHS labels). Both elements of the labeling [Label + (M)SDS] are written to be read and understood together, so as to provide complete precautionary information. It is intended for you to read and understood BOTH before handling or using the chemical.

Picking the Right One: 2 Easy Ways To Tell Whether Your Container Has an ANSI Label or a GHS Label

- 1) GHS labels: any pictogram displayed in the upper left-hand corner will be inside a red diamond. ANSI labels: pictograms, if present, will be inside individual black boxes.
- 2) GHS labels: on the bottom of the right-hand panel of the label, locate the Lot Number. Directly to the left will be a string of control characters, followed by a single letter. For GHS labels, the string of characters will end in "GHS:"

Label in ANSI Format

CAUTION!
MAY BE HARMFUL IF SWALLOWED
MAY CAUSE EYE AND SKIN IRRITATION
MAY AFFECT BEHAVIOR AND
METABOLISM

Do not taste or swallow. Avoid contact with eyes, skin and clothing. Avoid breathing mist or vapor. Avoid prolonged or repeated exposure. Use with adequate ventilation. Wash thoroughly after handling.

FIRST AID: In case of contact, flush affected area with plenty of water for at least 15 minutes. Remove contaminated clothing and/or jewelry. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If irritation persists, call a physician.

KEEP FROM CHILDREN


BE159 SIZ SY
Benzyl Benzoate
(Benzoic Acid Phenylmethyl Ester)
U.S.P.
CAS 120-51-4

$C_{11}H_{12}O_2$ F.W. 212.24

Assay 99.0-100.5%
Specific Gravity $\pm 25^{\circ}C$ 1.116-1.120
Congealing Temperature Min. 18.0°C
Refractive Index $\pm 20^{\circ}C$ 1.565-1.570
Acidity To pass test

MAXIMUM LIMITS
Aldehyde 0.05%
Residual Solvents To pass test

FLUSHED WITH NITROGEN

Lot No. XQ###

CAUTION: For manufacturing, processing or repacking. Read and understand the label and Material Safety Data Sheet (MSDS) prior to use.
For chemical emergency, call (800)424-9300.
www.SpectrumChemical.com

SPECTRUM CHEMICAL MFG. CORP. Gardena, CA 90248 • New Brunswick, NJ 08901

CORPORATE OFFICES

14422 South San Pedro Street

Gardena, California 90248

PHONE 310.516.8000

FAX 310.516.9843

Label in GHS Format

WARNING!

- May irritate if swallowed • May cause central nervous system effects based on animal data
- Do not use or handle • Wear protective gloves
- After handling
- **POISON AND IRRITANT!** Call a POISON CENTER or doctor/physician if you feel unwell. Avoid mouth.

KEEP FROM CHILDREN

SPECTRUM

BE159 SIZ SY

Benzyl Benzoate

(Benzoic Acid Phenylmethyl Ester)

U.S.P.

CAS 129-51-4

CAUTION: For industrial use only. Do not use for food or feed. Do not use for medical purposes. Do not use for cosmetic purposes. Do not use for pharmaceutical purposes. Do not use for food or feed. Do not use for medical purposes. Do not use for cosmetic purposes. Do not use for pharmaceutical purposes.

Chemical Emergency: (800) 424-9086

www.SpectrumChemical.com

$C_{15}H_{14}O_2$ F.W. 212.24

Assay 99.0-100.5%

Specific Gravity @ 25°C 1.115-1.120

Freezing Temperature Min. 18.0°C

Refractive Index @ 20°C 1.568-1.570

Acidity To pass test

MAXIMUM LIMITS

Aldehyde 0.05%

Residual Solvents To pass test

LIGHT SENSITIVE: Keep tightly closed in light-resistant containers.

FLUSHED WITH NITROGEN

Lot No. XQ####

¹ American National Standards Institute

² Globally Harmonized System for Hazard Communication

Sincerely,

Regulatory Affairs

MATERIAL SAFETY DATA SHEET

| | | |
|------|------|-------------------------------|
| NFPA | HMIS | Personal Protective Equipment |
|------|------|-------------------------------|



| | |
|---------------|---|
| Health Hazard | 2 |
| Fire Hazard | 1 |
| Reactivity | 0 |



See Section 8.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| | |
|-----------------------------|--|
| Product code: | T1015 |
| Product Name: | TARTARIC ACID, CRYSTAL, REAGENT, ACS |
| Chemical Name: | No information available |
| Synonyms: | 2,3-Dihydroxybutanedioic acid; L-(+)-Tartaric Acid; Malic acid, 3-hydroxy-; Succinic acid, 2,3-dihydroxy |
| Recommended use: | No information available. |
| CAS #: | 87-69-4 |
| RTECS # | WW7875000 |
| CI#: | Not available |
| Formula: | C ₄ H ₆ O ₆ |
| Supplier: | Spectrum Chemicals and Laboratory Products, Inc. 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000 |
| Order Online At: | https://www.spectrumchemical.com |
| Emergency Telephone Number: | CHEMTREC: 1-800-424-9300 |
| Contact Person: | Ibad Tirmiz (East Coast) |
| Contact Person: | Martin LaBenz (West Coast) |

2. HAZARDS IDENTIFICATION

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! IRRITANT

Irritating to eyes

Irritating to skin

Irritating to respiratory system

Odor:
Odorless.

Physical state:
Solid.

Appearance:
Granular. Powder.

Color:
White.

OSHA Regulatory Status

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

POTENTIAL HEALTH EFFECTS

Principal Routes of Exposure:

Ingestion. Inhalation.

Acute Potential Health Effects:

Skin Contact:

Causes skin irritation.

Inhalation:

Causes respiratory tract and mucous membrane irritation.

Ingestion:

Causes digestive (gastrointestinal) tract irritation. Causes nausea. Causes vomiting. Causes diarrhea.

Eye Contact:

Causes serious eye irritation.

Chronic Potential Health Effects:

Component

L-Tartaric Acid
87-69-4 (100)

Carcinogen Status:

No information available

Target Organs:

No information available

Mutagenic Effects:

No information available

Teratogenic Effects:

No information available

Aggravated Medical Conditions: No information available

See Section 11 for additional Toxicological Information

POTENTIAL ENVIRONMENTAL EFFECTS

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|------------|---------|----------|
|------------|---------|----------|

Product code: T1015

Product name: TARTARIC ACID,
CRYSTAL, REAGENT, ACS

2 / 12

3. COMPOSITION/INFORMATION ON INGREDIENTS

| | | |
|-----------------|---------|-----|
| L-Tartaric Acid | 87-69-4 | 100 |
|-----------------|---------|-----|

4. FIRST AID MEASURES

| | |
|----------------------------|---|
| General Advice: | Poison information centres 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 skin irritation persists, call a physician. |
| Eye Contact: | Flush eye with water for 15 minutes. Get medical attention. |
| Inhalation: | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Ingestion: | Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention. |
| Notes to Physician: | Treat symptomatically |

5. FIRE-FIGHTING MEASURES

Flammable Properties

| | |
|----------------------------|---------------------------|
| Flashpoint (°C/°F): | No information available. |
|----------------------------|---------------------------|

| |
|---|
| Flash Point Tested according to: Open cup |
|---|

| | |
|-----------------------------------|--------------------------|
| Lower Explosion Limit (%): | No information available |
|-----------------------------------|--------------------------|

| | |
|-----------------------------------|--------------------------|
| Upper Explosion Limit (%): | No information available |
|-----------------------------------|--------------------------|

| | |
|--|-------------|
| Autoignition Temperature (°C/°F): | 425°C/797°F |
|--|-------------|

| | |
|---|---|
| Suitable Extinguishing Media: | Carbon dioxide (CO ₂). Dry chemical. Water spray mist or foam. |
| Unsuitable Extinguishing Media: | No information available. |
| Hazardous Combustion Products: | Carbon oxides |
| Specific hazards: | May be combustible at high temperatures. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |
| 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 |
| Specific Methods: | No information available. |

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods for Cleaning Up:

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling**Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice:

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

Storage**Technical Measures/Storage Conditions:**

Hygroscopic. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Alkalis. Oxidizing agents. Reducing agents. Bases.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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.

Personal Protective Equipment

Eye protection: Goggles. Safety glasses with side-shields.

Skin and body protection: Long sleeved clothing. Chemical resistant apron. Gloves.

Respiratory protection: Effective dust mask. 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.

National occupational exposure limits**United States**

| Components | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|------------|------|-------|-------|------------|
|------------|------|-------|-------|------------|

| | | | | |
|---------------------------|------|------|------|------|
| L-Tartaric Acid - 87-69-4 | None | None | None | None |
|---------------------------|------|------|------|------|

Canada

| Components | Alberta | British Columbia | Ontario | Quebec |
|----------------------------|---------|------------------|---------|--------|
| L-Tartaric Acid 87-69-4 | None | None | None | None |

Australia and Mexico

| Components | Australia | Mexico |
|----------------------------|-----------|--------|
| L-Tartaric Acid 87-69-4 | None | None |

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|--|---|--|
| Physical state: Solid. | Appearance: Granular. Powder. | Color: White. |
| Odor: Odorless. | Taste Acid. | Molecular/Formula weight: 150.09 |
| Flash point (°C): No data available | Lower Explosion Limit (%): No information available | Upper Explosion Limit (%): No information available |
| Autoignition Temperature (°C/°F): 425°C/797°F | Boiling point/range(°C/°F): No information available | Melting point/range(°C/°F): 168°-172°C/334.4°-341.6°F |
| pH: No information available | Specific gravity: No information available | Decomposition temperature(°C/°F): No information available |
| Density (g/cm3): 1.76 | Bulk density: No information available | Vapor pressure @ 20°C (kPa): No information available |
| Evaporation rate: No information available | Vapor density: 5.18 | VOC content (g/L): No information available |
| Odor threshold (ppm): No information available | Partition coefficient (n-octanol/water): No information available | Miscibility: No information available |

Solubility:

Easily soluble in cold water
Easily soluble in hot water
Easily soluble in methanol
Insoluble in Chloroform
Soluble in diethyl ether
Soluble in Glycerol
Solubility in Ethanol: 1 g/3 ml
Solubility in Ether: 1 g/250 ml
Solubility in Methanol: 1 g/1.7 ml
Solubility in propanol: 1 g/10.5 ml
Solubility in Water:
1g/0.75 ml @ room temperature
1g/0.5 ml boiling water
115 g/100 ml @ 0°C
126 g/100 ml @ 10°C
139 g/100 ml @ 20°C
156 g/100 ml @ 30°C
176 g/100 ml @ 40°C
195 g/100 ml @ 50°C
217 g/100 ml @ 60°C
244 g/100 ml @ 70°C
273 g/100 ml @ 80°C
307 g/100 ml @ 90°C

10. STABILITY AND REACTIVITY

| | |
|-----------------------------|--|
| Stability: | Hygroscopic. Stable at normal conditions. |
| 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 moisture. |

| | |
|--|--|
| Incompatible Materials: | Alkalies. Oxidizing agents. Reducing agents. Bases. |
| Hazardous decomposition products: | Carbon oxides. |
| Possibility of Hazardous Reactions: | Aqueous solution of tartaric acid can liberate explosive hydrogen gas in contact with reactive metals (Iron, Zinc, Aluminum) |
| Polymerization: | Hazardous polymerization does not occur |
| Corrosivity: | No information available |
| Special Remarks on Corrosivity: | No information available |

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

L-Tartaric Acid - 87-69-4

LD50/oral/rat = 7500 mg/kg (LDLo)
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 = 5000 mg/kg, LDLo oral, dog
5000 mg/kg, LDLo oral, rabbit
485 mg/kg, LD50 intravenous, mouse

Product Information

LC50/inhalation/rat No information available
LC50/inhalation/mouse No information available
LD50/dermal/rabbit No information available
LD50/dermal/rat No information available
LD50/oral/mouse = No information available
LD50/oral/rat = No information available

Local Effects

| | |
|-------------------------|---|
| Skin irritation: | Causes skin irritation. |
| Eye irritation: | Causes serious eye irritation. |
| Inhalation: | May cause irritation of respiratory tract. |
| Ingestion: | Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May affect behavior/central nervous system (convulsions, somnolence), and respiration |
| Sensitization: | No information available |

Chronic Toxicity

Chronic Toxicity

Repeated or prolonged ingestion may cause lesions of the mouth, gastric ulcers, gastrointestinal hyperacidity, and symptoms similar to those of metal fume fever - flu-like condition with fever, chills, sweats, nausea, vomiting, muscle aches, pains, and weakness. It may also affect the kidneys
Skin: Repeated or prolonged skin contact may cause skin ulcerations or lesions..

Carcinogenic effects: Not considered carcinogenic

| Components | NTP | IARC | OSHA HCS - Carcinogens | ACGIH - Carcinogens | Australia - Prohibited Carcinogenic Substances | Australia - Notifiable Carcinogenic Substances |
|-----------------|------------|------------|------------------------|---------------------|--|--|
| L-Tartaric Acid | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects: No information available

Reproductive Effects: No information available

Teratogenic Effects: No information available

Target Organs: No information available

12. ECOLOGICAL INFORMATION**ECOTOXICITY**

Toxicity to terrestrial and aquatic plants and animals: No information available

Ecotoxicity effects: No data available.

Aquatic toxicity:

Mobility: No information available

Persistence and degradability: No information available

Bioaccumulative potential: No information available

13. DISPOSAL CONSIDERATIONS**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Components | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|-----------------|------------------------|------------------------|------------------------|------------------------|
| L-Tartaric Acid | None | None | None | None |

14. TRANSPORT INFORMATION**DOT**

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: None
Subsidiary Risk: Not applicable
Marine Pollutant: No data available

| | |
|------------------------------|--------------------------|
| ERG No: | No information available |
| DOT RQ (lbs): | No information available |
| TDG (Canada) | |
| UN-No: | Not Regulated |
| Proper Shipping Name: | No information available |
| Hazard Class: | No information available |
| Packing Group: | No information available |
| Subsidiary Risk: | No information available |
| Description: | No information available |
| ADR | |
| UN-No: | No information available |
| Proper Shipping Name: | No information available |
| Hazard Class: | No information available |
| Packing Group: | No information available |
| Subsidiary Risk: | No information available |
| Classification Code: | No information available |
| Description: | No information available |
| CEFIC Tremcard No: | No information available |
| IMO / IMDG | |
| UN-No: | Not Regulated |
| Proper Shipping Name: | No information available |
| Hazard Class: | No information available |
| Packing Group: | No information available |
| Subsidiary Risk: | No information available |
| Description: | No information available |
| IMDG Page: | No information available |
| Marine Pollutant | No information available |
| MFAG: | No information available |
| Maximum Quantity: | No information available |
| RID | |
| UN-No: | No information available |
| Proper Shipping Name: | No information available |
| Hazard Class: | No information available |
| Packing Group: | No information available |
| Subsidiary Risk: | No information available |
| Classification Code: | No information available |
| Description: | No information available |
| ICAO | |
| UN-No: | No information available |
| Proper Shipping Name: | No information available |
| Hazard Class: | No information available |
| Packing Group: | No information available |
| Subsidiary Risk: | No information available |
| Description: | No information available |
| IATA | |
| UN-No: | Not Regulated |
| Proper Shipping Name: | No information available |
| Hazard Class: | No information available |
| Packing Group: | No information available |
| Subsidiary Risk: | No information available |
| Description: | No information available |

15. REGULATORY INFORMATION

International Inventories

| Components | U.S. TSCA | Philippines (PICCS) | KOREA KECL | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|------------------------|-----------|---------------------|------------------|------------------|-----------------|------------------|-------------------|
| <i>L-Tartaric Acid</i> | Present | Present | Present KE-10801 | Present (2)-1456 | Present [21192] | Present | Present 201-766-0 |

U.S. Regulations

L-Tartaric Acid

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1099

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)

| Components | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|------------------------|------------|------------------------|----------------------------|-------------------------------|
| <i>L-Tartaric Acid</i> | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Components | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting <i>de minimis</i> |
|------------------------|---|---|--|---------------------------------|---|
| <i>L-Tartaric Acid</i> | None | None | None | None | None |

U.S. TSCA

| Components | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|------------------------|---|--|
| <i>L-Tartaric Acid</i> | Not Applicable | Not Applicable |

Canada

WHMIS hazard class:

E Corrosive material

L-Tartaric Acid

E

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

| Components | Canada (DSL) | Canada (NDSL) |
|------------------------|--------------|---------------|
| <i>L-Tartaric Acid</i> | Present | Not Listed |

| Components | CEPA Schedule I - Toxic Substances | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
|-----------------|------------------------------------|---|
| L-Tartaric Acid | Not listed | Not listed |

EU Classification

R-phrase(s)

R36 - Irritating to eyes.

R37 - Irritating to respiratory system.

R38 - Irritating to skin.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 - Wear suitable protective clothing.

S37 - Wear suitable gloves.

S39 - Wear eye/face protection.

| Components | Classification | Concentration Limits: | Safety Phrases |
|-----------------|----------------|-----------------------|----------------|
| L-Tartaric Acid | | No information | |

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

Indication of danger:

Xi - Irritant.

16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1/Z129.1-2010 standards.

Preparation Date: 09-Feb-2015

Reason for revision: Not applicable

Prepared by: Sonia Owen

Literature reference: No information available

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. The physical properties reported in this MSDS 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 MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

SAFETY DATA SHEET

Preparation Date: 01/26/2015

Revision Date: Not Applicable

Revision Number: Not Applicable

Product identifier

Product code: T1015
Product Name: TARTARIC ACID, CRYSTAL, REAGENT, ACS

Other means of identification

Synonyms: 2,3-Dihydroxybutanedioic acid; L-(+)-Tartaric Acid; Malic acid, 3-hydroxy-; Succinic acid, 2,3-dihydroxy
CAS #: 87-69-4
RTECS # WW7875000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemicals and Laboratory Products, Inc.
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

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

| | |
|--|-------------|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2A |
| Specific target organ toxicity (single exposure) | Category 3 |

Label elements

Warning

Hazard statements

Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear eye/face protection
Wear protective gloves

Precautionary Statements - Response

Specific treatment (see .? on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % | Trade Secret |
|----------------------------|---------|----------|--------------|
| L-Tartaric Acid 87-69-4 | 87-69-4 | 100 | * |

4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126)

4. FIRST AID MEASURES

| | |
|----------------------|---|
| Skin Contact: | Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician. |
| Eye Contact: | Flush eye with water for 15 minutes. Get medical attention. |
| Inhalation: | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Ingestion: | Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention. |

Most important symptoms and effects, both acute and delayed

| | |
|-----------------|--|
| Symptoms | Causes eye irritation. Eye contact may result in redness or pain. Causes skin irritation. Skin contact may result in redness, pain, inflammation, itching, scaling. May cause irritation of respiratory tract. |
|-----------------|--|

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 (CO ₂). Dry chemical. Water spray mist or foam. |
|--------------------------------------|--|

| | |
|--|---------------------------|
| Unsuitable Extinguishing Media: | No information available. |
|--|---------------------------|

Specific hazards arising from the chemical

| | |
|---------------------------------------|---------------|
| Hazardous Combustion Products: | Carbon oxides |
|---------------------------------------|---------------|

| | |
|--------------------------|---|
| Specific hazards: | May be combustible at high temperatures. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |
|--------------------------|---|

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. Avoid dust formation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

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. 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. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice:

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

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Hygroscopic. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Alkalis. Oxidizing agents. Reducing agents. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Components | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|---------------------------|------|-------|-------|------------|
| L-Tartaric Acid - 87-69-4 | None | None | None | None |

Canada

| Components | Alberta | British Columbia | Ontario | Quebec |
|---------------------------|---------|------------------|---------|--------|
| L-Tartaric Acid - 87-69-4 | None | None | None | None |

Australia and Mexico

| Components | Australia | Mexico |
|------------|-----------|--------|
|------------|-----------|--------|

| | | |
|----------------------------|------|------|
| L-Tartaric Acid 87-69-4 | None | None |
|----------------------------|------|------|

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.

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: Effective dust mask. 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. | Appearance: Granular. Powder. | Color: White. |
| Odor: Odorless. | Taste Acid. | Formula: C ₄ H ₆ O ₆ |
| Molecular/Formula weight: 150.09 | Flash point (°C): No data available | Flashpoint (°C/°F): 210°C/410°F |
| Flash Point Tested according to: Open cup | Lower Explosion Limit (%): No information available | Upper Explosion Limit (%): No information available |
| Autoignition Temperature (°C/°F): 425°C/797°F | pH: No information available | Melting point/range(°C/°F): 168°-172°C/334.4°-341.6°F |
| Boiling point/range(°C/°F): No information available | Decomposition temperature(°C/°F): No information available | Specific gravity: No information available |
| Density (g/cm³): 1.76 | Bulk density: No information available | Vapor pressure @ 20°C (kPa): No information available |
| Evaporation rate: No information available | Vapor density: 5.18 | VOC content (g/L): No information available |
| Odor threshold (ppm): No information available | Partition coefficient (n-octanol/water): No information available | Viscosity: No information available |
| Miscibility: No information available | Solubility: Easily soluble in cold water Easily soluble in hot water Easily soluble in methanol Insoluble in Chloroform Soluble in diethyl ether Soluble in Glycerol Solubility in Ethanol: 1 g/3 ml Solubility in Ether: 1 g/250 ml Solubility in Methanol: 1 g/1.7 ml Solubility in propanol: 1 g/10.5 ml Solubility in Water: 1g/0.75 ml @ room temperature 1g/0.5 ml boiling water 115 g/100 ml @ 0°C 126 g/100 ml @ 10°C 139 g/100 ml @ 20°C 156 g/100 ml @ 30°C 176 g/100 ml @ 40°C 195 g/100 ml @ 50°C 217 g/100 ml @ 60°C 244 g/100 ml @ 70°C 273 g/100 ml @ 80°C 307 g/100 ml @ 90°C | |

10. STABILITY AND REACTIVITY

Reactivity

10. STABILITY AND REACTIVITY

Reacts with alkalis
Reactive with oxidizing agents
Reacts with bases
Reacts with reducing agents
Tartaric acid. Aqueous solution of tartaric acid can liberate explosive hydrogen gas in contact with reactive metals (Iron, Zinc, Aluminum)

Chemical stability

Stability: Hygroscopic. Stable at normal 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 moisture.

Incompatible Materials: Alkalis. Oxidizing agents. Reducing agents. Bases.

Hazardous decomposition products: Carbon oxides.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

L-Tartaric Acid - 87-69-4

LD50/oral/rat = 7500 mg/kg (LDLo)

LD50/oral/mouse = No information available

LD50/dermal/rabbit = No information available

LD50/dermal/rat = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = 5000 mg/kg, LDLo oral, dog

5000 mg/kg, LDLo oral, rabbit

485 mg/kg, LD50 intravenous, mouse

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =

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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: Causes skin irritation.

Eye Contact: Causes serious eye irritation.

Inhalation May cause irritation of respiratory tract.
Ingestion Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea.
May affect behavior/central nervous system (convulsions, somnolence), and respiration

Aspiration hazard No information available

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

Chronic Toxicity Repeated or prolonged ingestion may cause lesions of the mouth, gastric ulcers, gastrointestinal hyperacidity, and symptoms similar to those of metal fume fever - flu-like condition with fever, chills, sweats, nausea, vomiting, muscle aches, pains, and weakness. It may also affect the kidneys

Sensitization: Skin: Repeated or prolonged skin contact may cause skin ulcerations or lesions.
No information available

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic

| Components | ACGIH - Carcinogens | IARC | NTP | OSHA HCS - Carcinogens | Australia - Prohibited Carcinogenic Substances | Australia - Notifiable Carcinogenic Substances |
|-----------------|---------------------|------------|------------|------------------------|--|--|
| L-Tartaric Acid | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

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.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Components | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|-----------------|------------------------|------------------------|------------------------|------------------------|
| L-Tartaric Acid | None | None | None | None |

14. TRANSPORT INFORMATION

DOT

| | |
|-----------------------|--------------------------|
| UN-No: | Not Regulated |
| Proper Shipping Name: | No information available |
| Hazard Class: | No information available |
| Subsidiary Risk: | Not applicable |
| Packing Group: | None |
| ERG No: | No information available |
| Marine Pollutant | No data available |
| DOT RQ (lbs): | No information available |

TDG (Canada)

| | |
|-----------------------|--------------------------|
| 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 |

ADR

| | |
|--------|---------------|
| UN-No: | Not Regulated |
|--------|---------------|

Product code: T1015

Product name: TARTARIC ACID,
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14. TRANSPORT INFORMATION

Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

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
IMDG Page: No information available
Marine Pollutant No information available
MFAG: No information available
Maximum Quantity: No information available

RID

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
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

| Components | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|------------------------|-----------|------------------|---------------------|------------------|-----------------|------------------|-------------------|
| <i>L-Tartaric Acid</i> | Present | Present KE-10801 | Present | Present (2)-1456 | Present [21192] | Present | Present 201-766-0 |

U.S. Regulations

Product code: T1015

Product name: TARTARIC ACID,
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L-Tartaric Acid

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1099

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)

| Components | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|-----------------|------------|------------------------|----------------------------|-------------------------------|
| L-Tartaric Acid | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Components | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting <i>de minimis</i> |
|-----------------|---|---|--|---------------------------------|---|
| L-Tartaric Acid | None | None | None | None | None |

U.S. TSCA

| Components | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|-----------------|---|--|
| L-Tartaric Acid | Not Applicable | Not Applicable |

Canada

WHMIS hazard class:

E Corrosive material

L-Tartaric Acid

E

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

| Components | Canada (DSL) | Canada (NDSL) |
|-----------------|--------------|---------------|
| L-Tartaric Acid | Present | Not Listed |

| Components | CEPA Schedule I - Toxic Substances | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
|-----------------|------------------------------------|---|
| L-Tartaric Acid | Not listed | Not listed |

EU Classification

R-phrases)

R36 - Irritating to eyes.

R37 - Irritating to respiratory system.

R38 - Irritating to skin.

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S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 - Wear suitable protective clothing.

S37 - Wear suitable gloves.

S39 - Wear eye/face protection.

| Components | Classification | Concentration Limits: | Safety Phrases |
|-----------------|----------------|-----------------------|----------------|
| L-Tartaric Acid | | No information | |

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

Indication of danger:

Xi - Irritant.

16. OTHER INFORMATION

16. OTHER INFORMATION

| NFPA | HMIS | Personal Protective Equipment |
|------|------|-------------------------------|
|------|------|-------------------------------|



| | |
|---------------|---|
| Health Hazard | 2 |
| Fire Hazard | 1 |
| Reactivity | 0 |



Preparation Date: 01/26/2015
Revision Date: Not Applicable
Prepared by: Sonia Owen

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