

Material Safety Data Sheet

Betaine Hydrochloride (95.0%)

Section 1 - Identification of the Substance of the Supplier

Product identifiers

Product Name: Betaine Hydrochloride
CAS NO.: 590-46-5

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Nutritional additives

Details of the supplier of the safety data sheet

Company Identification:

SUNWIN BIOTECH SHANDONG CO., LTD.
0199 Binhai Avenue, Lingang Industrial Park, Binhai Economic
Development Zone, Weifang, Shandong, China

Info Phone Number: 86-536-8869166

Info Fax Number: 86-536-8869188

E-mail address: sales@sunwincn.com

Emergency Phone Number: 86-13818603203

Section 2 - Hazards Identification

Classification of substance or mixture

According to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Eye irritation (Category 2)

According to EU Directives 67/548/EEC as amended

Irritating to eyes.

Label elements

According to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Hazard symbol(s)



Signal word

Warning

Hazard statement(s)

H319

Causes serious eye irritation.

Precautionary statement(s)

P264

Wash skin thoroughly after handling.

P280

Wear protective gloves/eye protection/face protection.

Response Statement(s)

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313

If eye irritation persists: Get medical advice/attention.

According to EU Directives 67/548/EEC as amended

Hazard symbol(s)



| | |
|--------------|---|
| Xi | Irritant |
| R-phrases(s) | |
| R36 | Irritating to eyes. |
| S-phrases(s) | |
| S26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| S39 | Wear eye/face protection. |

Section 3 – Composition/Information on Ingredients

Synonyms: Betaine hcl; Methanaminium,1-Carboxy-N,N,N-trimethyl-,chloride; (Carboxymethyl)trimethylammonium hydrochloride; Glycine betaine hydrochloride

Formula: C₅H₁₂ClNO₂

Molecular Weight: 153.61 g/mol

| CAS# | Chemical Name | Percent | EINECS/ELINCS |
|----------|-----------------------|-------------|---------------|
| 590-46-5 | Betaine hydrochloride | 95.0 UP (%) | 209-683-1 |

Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance: Not available

Section 4 – First-aid Measures

General advice

Consult a physician. Show this sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, remove from exposure to fresh air immediately. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Flash skin with soap and plenty of water at least 15 minutes while removing contaminated clothing and shoes. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Indication of any immediate medical attention and special treatment needed

not available

Section 5 – Fire-fighting Measures

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Hydrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Section 6 - Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7 - Handling and Storage**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Section 8 – Exposure Controls/Personal Protection

Contains no substances with occupational exposure limit values.

Appropriate engineering controls

Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Personal protective equipment**Eye/face protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Hand protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Other skin protection:

Wear appropriate protective clothing to prevent skin exposure.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other personal protection advice: not available

Section 9 - Physical and Chemical Properties

| | |
|--|-----------------------------------|
| Appearance: | White, crystalline powder |
| Odor: | Characteristic odor |
| Odour Threshold: | not available |
| pH: | 0.8-1.2 (25g/100ml aq.sol (25°C)) |
| Freezing/Melting Point: | 224-228 deg C (decompose) |
| Initial boiling point and boiling range: | not available |
| Flash point: | not available |
| Evaporation Rate: | not available |
| Flammability (solid, gas): | not available |
| Upper/lower flammability or explosive limits: | not available |
| Vapour pressure: | not available |
| Vapour density: | not available |
| Relative density: | not available |
| Water solubility: | 64.7 g/100 ml (25°C) |
| Partition coefficient: n-octanol/water | -4.93 |
| Autoignition temperature: | not available |
| Decomposition temperature: | not available |
| Viscosity: | not available |
| Explosive properties: | not available |
| Oxidizing properties: | not available |

Section 10 - Stability and Reactivity

Reactivity

not available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

not available

Conditions to avoid

not available

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Other decomposition products - not available

Section 11 - Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 subcutaneous - mouse - 10800 mg/kg

Skin corrosion/irritation

not available

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

not available

Germ cell mutagenicity

not available

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

not available

Specific target organ toxicity - single exposure

not available

Specific target organ toxicity - repeated exposure

not available

Aspiration hazard

not available

Potential health effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: Causes serious eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: BP3136000

Section 12 - Ecological Information

Toxicity

not available

Persistence and degradability

not available

Bioaccumulative potential

not available

Mobility in soil

not available

PBT and vPvB assessment

not available

Other adverse effects

not available

Section 13 - Disposal Considerations**Waste treatment methods****Product**

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

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information**UN number**

ADR/RID: None

IMDG: None

IATA: None

UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

Transport hazard class(es)

ADR/RID: None

IMDG: None

IATA: None

Packaging group

ADR/RID: None

IMDG: None

IATA: None

Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

Special precautions for user

not available

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not available

Section 15 - Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

US FEDERAL

TSCA

CAS# 590-46-5 is listed on the TSCA section 8(b) chemical inventory.

This material does not contain any Class 2 Ozone depleters.

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

Betaine hydrochloride, is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

California No Significant Risk Level:

None of the chemicals in this product are listed.

Canada

CAS# 590-46-5 is listed on Canada's DSL List.

CAS# 590-46-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

Chemical Safety Assessment

not available

Section 16 –Other Information

MSDS Creation Date: 3/09/2000

Revision Date: 2014-6-17

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.

Abbreviations and acronyms:

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association