

SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2022

Date Updated: December 31, 2022

SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION -----

| | |
|------------------------|---|
| Product Name | Bolton Broth Base |
| Product Code(s) | SG7377 |
| Recommended Use | For Laboratory Research Use Only Not for Human or Animal Drug Use |
| Supplier | Bio Basic Asia Pacific Pte Ltd. |
| Address | 2 International Business Park Road Strategy #01-04, Singapore 609930 |
| Telephone | (+65) 6954 2519 (+65) 6491 5938 |
| Email | sg@biobasic-asia.com |

SECTION 2. ----- HAZARDS IDENTIFICATION -----

Classification of the substance or mixture
Serious eye damage/eye irritation: Category 1
Skin sensitization: Category 1

GHS Label elements, including precautionary statements

Hazard pictograms:



Signal Word: Danger

Hazard Statements: H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

Precautionary Statements

Prevention: P261 Avoid breathing dust.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/ eye protection/ face protection.

Response: P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal: P501 Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS – None.

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SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

**Mixtures - Mixture
Components**

| Chemical Name | CAS-No. |
|--------------------------|-----------|
| 2-Oxoglutaric Acid | 328-50-7 |
| Sodium Carbonate | 497-19-8 |
| Pyruvic Acid Sodium Salt | 113-24-6 |
| Sodium Metabisulphite | 7681-57-4 |

SECTION 4. ----- FIRST-AID MEASURES -----

Description of first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move the person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Immediately remove all contaminated clothing. Wash off with soap and plenty of water for several minutes. Consult a physician.

In case of eye contact

Rinse out with plenty of water for at least 15 minutes. Remove contact lenses.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data 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

Iron oxides, Sulfur oxides, Hydrogen Chloride Gas, Sodium Oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting in the event of fire.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES -----

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

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Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Reference to other sections

See section 12 and 13 for more information.

SECTION 7. ----- HANDLING AND STORAGE-----

Precautions for safe handling

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry, cool and well-ventilated place. Hygroscopic, moisture sensitive. Do not store near acids.

Storage class 11: Combustible Solids

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

Control parameters

Ingredients with workplace control parameters

| Chemical Name | CAS-No. | Value Type (Form of Exposure) | Permissible Concentrations |
|-----------------------|-----------|-------------------------------|----------------------------|
| Sodium Metabisulphite | 7681-57-4 | PEL (Long Term); TWA | 5 mg/m ³ |

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Ensure adequate ventilation, especially in confined areas.

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

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. contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Wash and dry hands.

Body protection

Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

No special environmental precautions are required.

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SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

Information on basic physical and chemical properties

| | |
|--|-------------------|
| Appearance | Form: solid |
| Odour | No data available |
| Odour Threshold | No data available |
| pH | No data available |
| Melting point/freezing point | No data available |
| Initial boiling point and boiling range | No data available |
| Flash point | No data available |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/lower flammability or explosive limits | No data available |
| Vapour pressure | No data available |
| Vapour density | No data available |
| Water solubility | No data available |
| Partition coefficient: n-octanol/water | No data available |
| Auto-ignition temperature | No data available |
| Decomposition temperature | No data available |
| Viscosity | No data available |
| Explosive properties | No data available |
| Oxidizing properties | No data available |

Other safety information

No data available

SECTION 10. ----- STABILITY AND REACTIVITY -----

Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. Contact with acids liberates toxic gas.

Chemical stability

Stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions

Generates dangerous gases or fumes in contact with: Acids

Conditions to avoid

No data available

Incompatible materials

Strong oxidizing agents

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Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Sodium oxides
In the event of fire: see section 5

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

Mixture

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-----------------------|------------------------------|------------------------|--------------------------------|
| 2-Oxoglutaric Acid | > 5,000 - 10,000 mg/kg (Rat) | No data available | No data available |
| Sodium Carbonate | 2,800 mg/kg (Rat) | > 2,000 mg/kg (Rabbit) | No data available |
| Sodium Metabisulphite | 1,540 mg/kg (Rat) | > 2,000 mg/kg (Rat) | > 5.5 mg/l, 4h, aerosol, (Rat) |

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Mixture causes serious eye damage

Respiratory or skin sensitization

Mixture may cause an allergic skin reaction

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

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SECTION 12. ----- ECOLOGICAL INFORMATION -----

Mixture

Toxicity

No Data Available

| Chemical Name | Fish | Daphnia and Other Aquatic Invertebrates | Algae/Aquatic Plants | Microorganisms |
|--------------------------|---|--|--|---|
| 2-Oxoglutaric Acid | No data available | EC50 (Daphnia magna (Water flea)): > 100 mg/l, 48h | ErC50 (Pseudokirchneriella subcapitata): > 102 mg/l, 72h; NOEC (Pseudokirchneriella subcapitata): 16.7 mg/l, 72h | No data available |
| Sodium Carbonate | LC50 (Lepomis macrochirus (Bluegill sunfish)): 300 mg/l, 96h | EC50 (Ceriodaphnia (water flea)): 220 - 227 mg/l, 48h | No data available | No data available |
| Pyruvic Acid Sodium Salt | No data available | EC50 (Daphnia magna (Water flea)): > 100 mg/l, 48h | ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 3.02 mg/l, 72h | No data available |
| Sodium Metabisulphite | LC50 (Leuciscus idus (Golden orfe)): 316 mg/l, 96h; NOEC (Danio rerio (zebra fish)): >= 316 mg/l, 34d | EC50 (Daphnia magna (Water flea)): 89 mg/l, 48h; NOEC (Daphnia magna (Water flea)): > 10 mg/l, 21d | ErC50 (Desmodesmus subspicatus (green algae)): 43.8 mg/l, 72h | EC50 (activated sludge): > 1,000 mg/l, 3h |

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

No data available

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product in accordance with the national and local regulations.

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SECTION 14. ----- TRANSPORT INFORMATION -----

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15. ----- REGULATORY INFORMATION -----

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

SECTION 16. ----- OTHER INFORMATION -----

Further information: no limited for paper copy, just for internal uses.
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Issuing Date: 31-Dec-2022

End of SDS