



WEST BENGAL CHEMICAL INDUSTRIES LIMITED

145/1, Jessore Road, Lake Town,

Kolkata – 700 089, India.

Phone: +9133 4025 1700 Fax: +9133 2574 7410

Email: wbcil@wbcil.com

Website: www.wbcil.com

Section 1 - Chemical Product and Company Identification

1.1 MSDS Name: Boron Glycinate

1.2 Product Code: BBGNL12

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

Used in dietary supplements, food supplements, and other nutrition products.

1.4 Company Identification:

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Section 2 – Hazards Identification

2.1 Classification of the substance or mixture:

Physical hazards Combustible Dust - USH01

Health hazards Repr. 1B - H360FD

2.2 Signal word:

Danger

2.3 Hazard statements:

USH01 May form combustible dust concentrations in air.

H360FD May damage fertility. May damage the unborn child.

2.4 Precautionary statements:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P308+P313 If exposed or concerned: Get medical advice/ attention.





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P405 Store locked up.

P501 Dispose of contents/ container in accordance with national regulations.

Potential Acute Health Effects: No data available.

2.5 Potential Chronic Health Effects:

2.5.1 Carcinogenic effects

Not available.

2.5.2 Mutagenic effects

Not available.

2.5.3 Teratogenic effects

Not available.

2.5.4 Developmental toxicity

Not available.

2.5.5 Repeated or prolonged exposure

Not known to aggravate medical condition.

Section 3: Composition/Information on Ingredients

3.1 Ingredient Name: Boron Glycinate

3.2 Synonym: boron glycine complex, glycine boron complex, and bis(glycine) boron

3.3 Molecular formula: $C_2H_4BNO_2$

3.4 CAS No.- 2493271-83-1

3.5 Molecular Weight: 84.87 g/mol

3.6 % wt: 100%.





Section 4 - First Aid Measures

4.1 Description of first aid measures:

4.1.1 Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

4.1.2 Skin contact:

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

4.1.3 Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

4.1.4 Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed:

4.2.1 General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure. See Section 11 for additional information on health hazards.

4.2.2 Inhalation

Dust may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

4.2.3 Ingestion





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May cause discomfort if swallowed.

4.2.4 Skin contact

Prolonged contact may cause dryness of the skin.

4.2.5 Eye contact

Dust may cause slight irritation.

4.3 Indication of immediate medical attention and special treatment needed:

Notes for the doctor Treat symptomatically.

Section 5 - Fire-Fighting Measures

5.1 Flammability of the Product:

Not available.

5.2 Extinguishing media:

5.2.1 Suitable extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Use fire-extinguishing media suitable for the surrounding fire.

5.2.2 Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.3 Auto-Ignition Temperature:

Not available.

5.4 Flash Points:

Not available.

5.5 Flammable Limits:

Not available.

5.6 Products of Combustion:

Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors





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Section 5 - Fire-Fighting Measures

5.7 Specific Hazards arising from:

No data available.

5.8 Advice for firefighters:

5.8.1 Protective actions during firefighting

Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

5.8.2 Special protective equipment for firefighters:

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 Personal Protection:

Wear a self-contained breathing apparatus, rubber boots and gloves, and disposable coveralls. Dispose of coveralls after use. Keep unprotected persons away.

6.2 Environmental Protection:

Keep spills out of sewers and bodies of water. Dike and contain the spill with





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inert material. Absorb on sand, vermiculite or diatomite. Transfer material to a container for disposal or recovery. Ventilate area and wash spill site after material pickup is complete.

6.3 Methods and material for containment and cleaning up:

Wear protective clothing as described in Section 8 of this safety data sheet.

Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

6.4 Reference to other sections:

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

Section 7 - Handling and Storage

7.1 Precautions for safe handling:

Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Open and handle container with care. Keep ignition sources away.

7.1.1 Advice on general occupational hygiene:

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.





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Section 7 - Handling and Storage

7.2 Storage:

Store in a tightly closed container in a dry, well-ventilated place.

Section 8 - Exposure Controls / Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ Total Dust (Particulate Not Otherwise Regulated-PNOR)

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ Respirable Fraction (Particulate Not Otherwise Regulated-PNOR)

8.2 Appropriate engineering controls:

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure.

Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.

8.3 Eye/face protection:

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Unless the assessment indicates a higher degree of protection is required, the following





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protection should be worn: Tight-fitting safety glasses.

8.4 Hand protection:

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

8.5 Other skin and body protection:

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

8.6 Hygiene measures:

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

8.7 Respiratory protection:

Respiratory protection complying with an approved standard should be





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worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

8.8 Environmental exposure controls:

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance:	Crystalline powder
Color:	White.
Odor:	Characteristic.
Odor threshold:	Not available.
pH of 1% w/v aq. solution:	5.0 – 7.0
Melting point:	Not available.
Initial boiling point and range:	Not available.
Flash point:	Not applicable.





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Section 9 - Physical and Chemical Properties

Evaporation rate: Not applicable.

Evaporation factor: Not applicable.

Flammability (solid, gas): Not available.

Upper/lower flammability or explosive limits: Not available.

Other flammability: Not available.

Vapor pressure: Not applicable.

Vapor density: Not applicable.

Relative density: Not available.

Bulk density: 0.0-5.0 g/ml

Solubility(ies): Not available.

Partition coefficient: Not available.

Auto-ignition temperature: Not available.

Decomposition Temperature: Not available.

Viscosity: Not applicable.

Explosive properties: Not available.

Explosive under the influence of a flame: Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

Oxidizing properties:

Not applicable.





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Section 10 - Stability and Reactivity

10.1 Reactivity:

No data available.

10.2 Stability:

Stable under normal temperatures and pressures.

10.3 Incompatibility:

No data available.

10.4 Conditions to Avoid:

Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

10.5 Materials to avoid:

Oxidizing materials

10.6 Hazardous Decomposition Products:

Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances:
Harmful gases or vapors.

Section 11 - Toxicological Information

11.1 RTECS Reference:

Not Available

11.2 Toxicity Data:

Not Available

11.3 Target Organs:

Not Available

11.4 Skin corrosion/irritation:

Not Available

11.5 Serious eye damage/irritation:





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Section 11 - Toxicological Information

Not Available

11.6 Carcinogenicity:

Not Available.

Section 12 - Ecological Information

12.1 Toxicity:

Not Available

12.2 Persistence and degradability:

Not Available

12.3 Bioaccumulative potential:

Not Available

12.4 Mobility in soil:

Not Available

12.5 PBT and vPvB assessment:

Not Available

12.6 Other adverse effects:

Not Available

Section 13 - Disposal Considerations





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Contact a licensed professional waste disposal service. Dispose in a manner consistent with federal, state and local environmental regulations.

Section 14 - Transport Information

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number: UN No. (International) Not

applicable. UN No. (DOT) Not applicable.

UN proper shipping name

Proper shipping name (International): Not

applicable. Proper shipping name (DOT): Not

applicable.

Transport hazard class(es)

Transport Labels (International): No transport warning sign

required. DOT transport labels: No transport warning sign

required.

Packing group

Packing group (International): Not





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applicable. DOT packing group: Not

applicable.

Environmental hazards

Environmentally Hazardous Substance:

No. **Special precautions for user:** Not

applicable. DOT reportable quantity Not

applicable.

DOT TIH Zone Not applicable.

Section 15 - Regulatory Information

Regulatory References OSHA Hazard Communication Standard 29 CFR

§1910.1200 US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities

(EPA) None of the ingredients are listed.

SARA None Extremely Hazardous Substances EPCRA Reportable

Quantities of the ingredients are listed.

SARA 313 Emission Reporting

None of the ingredients are

listed. CAA Accidental Release





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Prevention None of the ingredients are listed. FDA -

Essential Chemical

None of the ingredients are listed or exempt. FDA - Precursor Chemical

None of the ingredients are listed or exempt. SARA (311/312) Hazard

Categories Combustible Dust

Reproductive toxicity

OSHA Highly Hazardous

Chemicals None of the

ingredients are listed. US State

Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)

None of the ingredients are listed.

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed.

California Directors List of Hazardous

Substances The following ingredients are listed:

Sodium Borate (B 14.8%)

Massachusetts "Right To Know"

List The following ingredients

are listed: Sodium Borate (B

14.8%)

Rhode Island "Right To Know"





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List None of the ingredients are listed. Minnesota "Right To Know" List None of the ingredients are listed. New Jersey "Right To Know" List None of the ingredients are listed. Pennsylvania "Right To Know" List None of the ingredients are listed. Inventories US - TSCA All the ingredients are listed or exempt. GLYCINE USP OR FCC, KOSHER US - TSCA 12(b) Export Notification None of the ingredients are listed or exempt

Section 16 - Other Information

Disclaimer: This material safety data sheet is provided as an information resource only. WEST BENGAL CHEMICAL INDUSTRIES LIMITED believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.

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