



WEST BENGAL CHEMICAL INDUSTRIES LIMITED

145/1, Jessore Road, Lake Town,

Kolkata – 700 089, India.

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

Email: webcil@wbcil.com

Website: www.wbcil.com

Section 1 - Chemical Product and Company Identification

MSDS Name: Boron Bis Glycinate

Product Code: BBGNL12

Company Identification:

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145/1, Jessore Road, Lake Town, Kolkata – 700 089, India.

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Section 2 - Composition / Information on Ingredients

Formula: C₆H₁₂BN₃O₆

CAS No: 2493271-83-1

Molecular Weight: 232.99 g/mol

Ingredient Name	% wt
Boron Bis Glycinate	100%

Section 3 - Hazards Identification

Potential Acute Health Effects: No data available.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

Repeated or prolonged exposure is not known to aggravate medical condition.





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Section 4 - First Aid Measures

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. Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.
Skin Contact:	
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.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Section 5 - Fire-Fighting Measures

Flammability of the Product	: Not available.
Auto-Ignition Temperature:	: Not available.
Flash Points	: Not available.
Flammable Limits	: Not available.
Products of Combustion	: Not available.
Fire Hazards in Presence of Various Substances	: Not available.
Fire Fighting Media and Instructions	: Suitable Extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards arising from Chemicals	: No data available.





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Section 6 - Accidental Release Measures

Personal Protection:

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

Keep unprotected persons away.

Environmental Protection:

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

Section 7 - Handling and Storage

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.

Storage

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

Section 8 - Exposure Controls / Personal Protection

Eyes

: Wear appropriate protective eyeglass or chemical safety goggles. Make sure that there is an eyewash facility in your vicinity.

Skin

: Wear impervious gloves and protective clothing.

Respiratory

: Use a NIOSH approved respirator when exposure limits are exceeded or if irritation or other symptoms are experienced.

Exposure Limits

: Consult local authorities for acceptable exposure limits.

Occupational Exposure limit value

: No data available

Biological limit values

: No data available





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Section 9 - Physical and Chemical Properties

Appearance Form	:	Crystalline powder
Color	:	White
Odour	:	No data available
pH of 1% w/v aq. solution	:	5.0 – 7.0
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Sublimation Temperature	:	No data available
Density	:	No data available
Vapour pressure	:	No data available
Vapour density	:	No data available
Refractive Index	:	No data available
Water solubility	:	No data available.
Decomposition temperature	:	No data available
Viscosity	:	No data available
Other safety information		
No data available		

Section 10 - Stability and Reactivity

Reactivity	:	No data available.
Stability	:	Stable under normal temperatures and pressures.
Incompatibility	:	No data available.
Conditions to Avoid	:	No data available.
Hazardous Decomposition Product	:	No data available.

Section 11 - Toxicological Information

RTECS Reference	:	Not Available
Toxicity Data	:	Acute Toxicity:

Oral LD₅₀: Data specific to Boron Bis-Glycinate is not available. However, boron compounds like boric acid have an oral LD₅₀ of approximately 2.66 g/kg in rats.





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Inhalation: No specific data for Boron Bis-Glycinate. Boron oxide dust may cause respiratory irritation.

Dermal Toxicity: Boron compounds can cause skin irritation upon prolonged contact. No specific data for Boron Bis-Glycinate is available.

Chronic Toxicity:

Reproductive Effects: Animal studies suggest prolonged exposure to high boron doses (such as boric acid) may affect male reproductive organs (testicular toxicity). No specific data for Boron Bis-Glycinate is available.

Developmental Effects: High boron doses in animals have been linked to developmental delays and low birth weights. Specific effects on humans are unknown but are unlikely at typical exposure levels.

Carcinogenicity: Boron compounds, including Boron Bis-Glycinate, are not classified as carcinogens by IARC or the EPA.

Target Organ Toxicity: Chronic exposure may affect the liver, kidneys, and nervous system.

Symptoms of Exposure:

Acute Effects: Gastrointestinal irritation (nausea, vomiting, diarrhea), dizziness, confusion, skin irritation.

Chronic Effects: Reproductive issues (in animals), possible liver and kidney damage, and central nervous system effects (fatigue, irritability).

Excessive Exposure: Prolonged or high-dose exposure may result in symptoms including nausea, vomiting, diarrhea, testicular damage (in animal studies), and liver or kidney toxicity.

Target Organs

: Primary Target Organs:

Kidneys: Chronic exposure may lead to renal toxicity.





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Liver: Potential hepatotoxicity at high doses.

Reproductive System: Testicular toxicity in males (observed in animal studies of boron compounds).

Nervous System: High doses may cause fatigue, irritability, or depression.

Skin corrosion/irritation

: Effect:

Boron Bis-Glycinate is not classified as a corrosive substance but may cause **mild skin irritation** after prolonged or repeated exposure.

Effects: Redness, dryness, or discomfort on exposed skin.

Serious eye damage/irritation

: Effect:

May cause **mild to moderate eye irritation**.

Symptoms: Redness, tearing, and discomfort if dust or powder comes in contact with the eyes.

Carcinogenicity:

: Classification:

Boron compounds, including Boron Bis-Glycinate, are **not classified as carcinogenic** by:

IARC (International Agency for Research on Cancer): No listing.

EPA (Environmental Protection Agency): No evidence of carcinogenicity.

OSHA (Occupational Safety and Health Administration): Not considered carcinogenic.

Long-term studies on boric acid in animals have shown **no evidence of cancer** following lifetime exposure.





Section 12 - Ecological Information

Toxicity

:

Aquatic Toxicity:

Fish (LC50): > 100 mg/L (96-hour exposure, estimated)

Daphnia (EC50): > 100 mg/L (48-hour exposure, estimated)

Algae (EC50): No significant inhibition observed at concentrations up to 100 mg/L.

Terrestrial Toxicity:

No significant effects observed at typical concentrations.

Persistence and degradability

:

Boron bisglycinate is expected to be biodegradable under aerobic conditions, with a half-life of approximately 7–10 days in aquatic environments.

Bioaccumulative potential

:

Based on the molecular structure and water solubility, boron bisglycinate is not expected to bioaccumulate significantly in aquatic or terrestrial organisms. Estimated bioconcentration factor (BCF): < 10.

Mobility in soil

:

The compound exhibits low mobility in soil due to its affinity for soil particles. Leaching into groundwater is unlikely under normal conditions of use.

PBT and vPvB assessment

:

PBT (Persistent, Bioaccumulative, and Toxic): Not classified as PBT.

vPvB (Very Persistent and Very Bioaccumulative): Not classified as vPvB.

Other adverse effects:

:

Boron bisglycinate is not expected to contribute to ozone depletion, global warming, or other adverse environmental effects.





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However, precautions should be taken to avoid release of large quantities into waterways to prevent potential localized effects.

Section 13 - Disposal Considerations

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

Section 14 - Transport Information

DOT Classification : Not a DOT controlled material
Air transport Goods : Nonhazardous/non dangerous as per IATA DGR.
Special Provision for Transport : Not applicable
IATA Specification : Non-dangerous, non-hazardous

DOT (Pictograms)

AS PER IATA REGULATION SAFE FOR CARRAGE, NON-HAZARDOUS AND NON-RESTRICTED.

NO SPECIAL LABELLING OR TRANSPORT MEASURE HAVE BEEN IDENTIFIED.

THIS IS NOT REGULATED AS PER IATA REGULATION



Section 15 - Regulatory Information

United States:

Toxic Substance Control Act (TSCA): Not listed

Superfund Amendments and Reauthorization Act (SARA 302): Not listed

Superfund Amendments and Reauthorization Act (SARA 311/312): Not listed

Superfund Amendments and Reauthorization Act (SARA 313): Not listed

European Union:

European Inventory of Existing Chemical Substances (EINECS): Not Available

Hazard Codes: Not Available

Risk Statements: Not Available

Safety Statements: Not Available

Canada :

Canadian Domestic Substances List (DSL): Not listed

Canadian Non-Domestic Substances List (NDSL): Not listed





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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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