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Material Safety Data Sheet

HYDROBORACITE

Section 1 - Product Identification

Product Name : Hydroboracite
CAS No. : 12046-12-7
Synonym : Hydrated Calcium Magnesium Borate
Company Identification : Tradeasia International Pte. Limited
Address :
133 Cecil Street # 12-03 Keck Seng Tower, Singapore
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Section 2 – Composition/Information on Ingredients

Substances

Name of substance	Hydroboracite
Identifiers	
CAS No	12046-12-7
Molecular formula	$CaMgB_8O_{11}•6(H_2O)$
Molar Mass	413.33 g/mol

Section 3 – Hazardous Ingredients & Occupational Exposure Limits

Classification of the substances or mixture
No data available

Label Elements
GHS Label elements, including precautionary statements
Hazard Pictogram(s): None
Signal Word:None
Hazard Statements:
H316: Causes mild skin irritation
H320: Causes eye irritation
Precautionary Statements
P103: Read label before use
P264: Wash hands thoroughly after handling
Supplemental Hazard Statements none

Hazards Not Otherwise Classified: None known

Section 4 – First-Aid Measures

Inhalation: Take the victim to have some fresh air. If the victim is not breathing, give mouth-to-mouth resuscitation. If breathing becomes difficult, give oxygen. Keep the victim warm and at rest. Call the doctor immediately

Eye contact: In case of eye contact, wash with water immediately for at least 5 minutes keeping the eyelids open. If irritation persists, call the doctor immediately

Skin Contact: No treatment is necessary as the product is not irritant.

Ingestion: The product when consumed in small amounts (teaspoon) is not harmful to healthy adults. In case of consuming higher doses, wash the mouth whenever the victim is conscious. Give great amounts of water or milk for the victim to have in order to dissolve the product. DO NOT INDUCE VOMITING (Perforation Risk). Do not provide any oral administration to an unconscious person. Call the doctor immediately.

Notes to physician: If a person consumed less than 7 gr of Hydroboracite, hen he should only be kept in observation. If more than 7 gr were consumed, keep the kidneys functions and administer liquids. Gastric lavage is advisable for symptomatic patients only. Hemodialysis should only be applied in case of massive ingestion or for patients suffering from kidney failure. Urine/blood tests on boron only show the degree of exposure, and they should not be used to evaluate the severity of intoxication or as a guideline for further treatment.

Section 5 – Employee Protection

Suitable extinguishing media: Use any means suitable for extinguishing fire.

Unsuitable extinguishing media: No data available.

Special hazards arising from the substance or mixture: Not considered to be a fire hazard, because Hydroboracite is not flammable, combustible or explosive. The product is itself a flame retardant.

Advice for firefighters: In the event of a fire, wear full protective clothing and NIOSHapproved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

Further information: None

Section 6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

Personal protection equipment: No personal protective equipment is needed to clean up land spills.

Emergency procedures: Unnecessary

Environmental Precautions: Prevent product from entering sewers and watercourses. Place containers to eliminate collected residues according to the existing regulations. Hydroboracite is a water-soluble white powder that may cause damage to trees or vegetation by root absorption.

Methods and Materials for Containment and Cleaning up:

Cleaning Collect with a vacuum, broom, or shovel and use a container which meets the local regulations when discarding. Avoid polluting adjacent water when undergoing cleaning and the elimination of ground spills.

Spilling in water: Prevent the solution from being consumed or from polluting water or effluents. Hydroboracite will cause localized contamination of surrounding waters depending on the quantity dissolved. At high concentrations some damage to local vegetation, fish and other aquatic life may be expected

Section 7 – Handling and Storage

Precautions for safe handling

Handle the product far away from sewers, surface and underground water and water sources for human consumption.

Conditions for safe storage, including any incompatibilities

Though Hydroboracite does not require any special precautions, it is sensitive to moisture and will cake. Therefore, the bags should be kept tightly sealed and be stored indoors in a dry environment. Also, the bags should be rotated on a “first-in first-out” basis. Good housekeeping procedures should be followed to minimize dust generation and accumulation.

Section 8 – Exposure Controls/Personal Protection (later)

Exposure Limits/Guidelines:

Hydroboracite is listed/regulated by OSHA, Cal OSHA and ACGIH as “Particulate Not Otherwise Classified” or “Nuisance Dust.”

OSHA:PEL -15 mg/m3 total dust -5 mg/m3 respirable dust

ACGIH:TIV -10 mg/m3 • Cal OSHA:PEL -10 mg/m3

PEL= “Permissible Exposure Limit”

TLV= “Threshold Limit Value

Engineering controls: Use local exhaust ventilation to keep airborne concentrations of Hydroboracite dust below permissible exposure levels.

Personal Protective Equipment

Where airborne concentrations are expected to exceed exposure limits, NIOSH/MSHA certified respirators must be used. Eye goggles and gloves are not required for normal industrial exposures, but may be warranted if environment is excessively dusty.

Section 9 – Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance: grey, crystalline solid

Odor: Odorless.

Solubility: 0.46% by wt. (25o C)

Bulk Density: 60 lbs/ft3

Specific Gravity: 2.4

Other data

No data available

Section 10 – Stability and Reactivity

Reactivity: No data available

Chemical Stability: Hydroboracite is a stable product, but when heated it loses water, first forming Metaboric Acid (H_3BO_2), and on further heating it is converted into Boric Oxide (B_2O_3).

Possibility of hazardous reaction: No data available

Conditions to Avoid: No data available

Incompatible Materials: Hydroboracite reacts as a weak acid which may cause corrosion of base metals. Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard.

Hazardous Decomposition Products: No data available

Hazardous polymerization: No data available

Section 11 – Toxicological Information

Acute toxicity: Oral and Dermal

Skin corrosion/irritation: Can cause redness or peeling

Serious eye damage/irritation: Can cause redness and blurred vision

Carcinogenicity: Shall not be classified as carcinogenic.

Reproductive toxicity: Shall not be classified as a reproductive toxicant.

Specific target organ toxicity following single exposure: Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity following repeated exposure: Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard: Shall not be classified as presenting an aspiration hazard.

Information on likely routes of exposure
Ingestion: May cause gastrointestinal disturbances, nausea, vomiting, diarrhea
Inhalation: Dust may irritate upper respiratory tract (nose, throat)
Skin contact: May cause skin redness or peeling with prolonged or repeated contact. Hydroboracite is not absorbed through intact skin.
Eye contact: Abrasive effects of dust may cause redness and blurred vision.

Interaction with Other Chemicals Which Enhance Toxicity: None known.

Additional Information: No data available

Section 12 – Ecological Information

Toxicity: Although boron is an essential micronutrient for healthy growth of plants, it can be harmful to boron-sensitive plants in higher quantities. Care should be taken to minimize the amount of Hydroboracite released to the environment.
Persistence and degradability: Boron is naturally occurring and ubiquitous in the environment..
Bioaccumulative potential: No data available
Mobility in soil: : Hydroboracite is soluble in water and is leachable through normal soil.
Results of PBT and vPvB assessment: No data available
Other adverse effects: No data available

Section 13 – Disposal Considerations

Methods of disposal: Small quantities of Hydroboracite can usually be disposed of at Municipal Landfill sites. No special disposal treatment is required, but refer to state and local regulations for applicable site-specific requirements. Tonnage quantities of product are not recommended to be sent to landfills. Such products should be re-used for an appropriate application. RCRA (40 CFR 261): Hydroboracite is not listed under any sections of the Federal Resource Conservation and Recovery Act (RCRA).

Section 14 – Transport Information

In accordance with DOT/IMDG/IATA/ADR
Not regulated

Additional Information:
No data available

Section 15 – Regulatory Information

1. US Federal regulations

TSCA: Not listed
SARA Codes: Not listed
Section 313: Not listed
OSHA: Not listed

Clean Air Act: Not listed
Clean Water Act: Not listed

2. International regulations

No data available

3. National regulations

No data available

4. US State regulations

HYDROBORACITE

State or local regulations	No data available

Section 16 - Additional Information

References: Not available.
Other Special Considerations: Not available.

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