SECTION 1: Identification

1.1. Identification

Product form : Substance
Substance name : Power BOR 20.5
Chemical name : Sodium octaborate tetrahydrate
CAS No : 12008-41-2
Formula : B8Na2O13
Synonyms : BAYER 19639 / bora care / boracol 40 / boric acid (H2B8O13), disodium salt / boron sodium oxide (B8 Na2 O13) / boron sodium oxide (Na2B8O13) / disodium octaborate / disodium octaborate, anhydrous / disodiumborate / ethylthiodemeton() / impel / M-74(SU) / O,O-diethyl-S-2-ethylthioethylphosphorodithioate / polybor / sodium borate / sodium borate (Na2B8O13) / sodium borate(B8Na2O13) / sodium octaborate (Na2B8O13) / sodium octaborate, anhydrous / thiodemeton
BIG no : 12760

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

Use of the substance/mixture : Various agricultural applications
Use of the substance/mixture : Wood: preservative
Use of the substance/mixture : Chemical raw material
Use of the substance/mixture : Industrial use

1.3. Details of the supplier of the safety data sheet

MarVista Resources
745 North Ave.
Corcoran, Ca. 93212 - USA
T 559-992-4535

1.4. Emergency telephone number

Emergency number : 24 Hour Emergency HAZMAT Response: (800) 229-5252: EPA National Response Center: (800) 424-8802

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)
Not classified

2.2. Label elements

GHS-US labeling
No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power BOR 20.5</td>
<td>(CAS No) 12008-41-2</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable
SECTION 4: First aid measures

4.1. Description of first aid measures


First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Rinse with water. Take victim to a doctor if irritation persists. Wash skin with plenty of water.

First-aid measures after eye contact: Rinse with water. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.


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

Symptoms/injuries: May cause eye irritation. May produce skin irritation.

Symptoms/injuries after inhalation: No effects known.

Symptoms/injuries after skin contact: Dry skin.

Symptoms/injuries after eye contact: Not irritating.

Symptoms/injuries after ingestion: No effects known.

Chronic symptoms: No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Fire hazard: DIRECT FIRE HAZARD. Non combustible.

Explosion hazard: DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard.

Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions: Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.


SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel


Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection**.

6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers.
6.3. Methods and material for containment and cleaning up

For containment:
- Contain released substance, pump into suitable containers. Plug the leak, cut off the supply.
- Dam up the solid spill. Knock down/dilute dust cloud with water spray.

Methods for cleaning up:
- Recover mechanically the product. Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

Other information:
- Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection™.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling:
- Ensure good ventilation of the work station. Wear personal protective equipment. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid raising dust. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

Hygiene measures:
- Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:
- Store in a well-ventilated place. Keep cool.

Incompatible products:

Heat-ignition:
- KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on mixed storage:
- No data available.

Storage area:
- Keep container in a well-ventilated place. Meet the legal requirements.

Special rules on packaging:
- SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials:
- SUITABLE MATERIAL: No data available. MATERIAL TO AVOID: No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Power BOR 20.5 (12008-41-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
</tr>
<tr>
<td>ACGIH</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
- Ensure good ventilation of the work station.

Materials for protective clothing:
- GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: butyl rubber. nitrile rubber. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.

Hand protection:
- Gloves.

Eye protection:

Skin and body protection:
- Protective clothing.

Respiratory protection:

Environmental exposure controls:
- Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:
- Solid

Appearance:
- Crystalline solid. Powder.

Color:
- White
**Power BOR 20.5**

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt; 1000 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0 hPa (25 °C)</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>340.459 g/mol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water. Water: 22365 g/100ml (20 °C)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>-0.76 (Literature)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
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<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>9.2. Other information</td>
<td></td>
</tr>
<tr>
<td>VOC content</td>
<td>0 %</td>
</tr>
</tbody>
</table>

**SECTION 10: Stability and reactivity**

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Alkaloids. Metal salts. strong acids.

10.6. Hazardous decomposition products

Boric oxides.

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects

Acute toxicity: Not classified

**Power BOR 20.5 (12008-41-2)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>2550 mg/kg (Rat; FIFRA (40 CFR); Experimental value)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg body weight Rabbit; Experimental value; FIFRA (40 CFR)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 201 mg/l/4h (Rat; Experimental value)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>2550.000 mg/kg body weight</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
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Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified
Symptoms/injuries after inhalation: No effects known.
Symptoms/injuries after skin contact: Dry skin.
Symptoms/injuries after eye contact: Not irritating.
Symptoms/injuries after ingestion: No effects known.
Chronic symptoms: No effects known.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Classification concerning the environment: not applicable.
Ecology - water: Maximum concentration in drinking water: 1.0 mg/l (boron) (Directive 98/83/EC). Harmful to fishes. Slightly harmful to invertebrates (Daphnia). Harmful to algae.

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Power BOR 20.5 (12008-41-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
</tr>
<tr>
<td>ThOD</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Power BOR 20.5 (12008-41-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
</tr>
<tr>
<td>BCF other aquatic organisms 1</td>
</tr>
<tr>
<td>Log Pow</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized plant for the destruction, neutralization and elimination of hazardous waste.

Additional information: LWCA (the Netherlands): KGA category 05. Hazardous waste according to Directive 2008/98/EC.
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SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not regulated for transport

TDG
No additional information available

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Power BOR 20.5 (12008-41-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations
No additional information available

SECTION 16: Other information

Revision date : 08/24/2015

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

SDS US (GHS HazCom 2012)

All information contained in this Safety Data Sheet is furnished free of charge and is intended for your evaluation. In our opinion the information is, as of the date of this Safety Data Sheet, reliable, however, it is your responsibility to determine the suitability of the information for your use. You are advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional or variable conditions or circumstances exist or because of applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information gathered by you, and you must make independent determinations of the suitability and completeness of the information from all sources to assure both proper use of the material described herein and the safety and health of employees. Accordingly, no guarantee is expressed or implied as to the results to be obtained based upon your use of the information.