

## SAFETY DATA SHEET

Revision Date 14-Feb-2020

### 1. Identification

**Product Name** Nickel boride

**Cat No. :** 13109

**CAS-No** 12007-01-1  
**Synonyms** Dinickel boride

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**

Heeger Materials Inc.

230 Steele St Denver  
CO 80206  
United States

Email: sales@heegermaterials.com  
Tel: 925-385-8104

**Emergency Telephone Number**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.  
After normal business hours, call Carechem 24 at (866) 928-0789.

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|  |             |
|--|-------------|
| Skin Sensitization                                   | Category 1  |
| Carcinogenicity                                      | Category 1A |
| Specific target organ toxicity - (repeated exposure) | Category 1  |
| Target Organs - Lungs.                               |             |

**Label Elements**

**Signal Word**

Danger

**Hazard Statements**

May cause an allergic skin reaction  
May cause cancer by inhalation  
Causes damage to organs through prolonged or repeated exposure



### Precautionary Statements

#### Prevention

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Contaminated work clothing should not be allowed out of the workplace  
 Wear protective gloves  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product

#### Response

IF exposed or concerned: Get medical attention/advice

#### Skin

IF ON SKIN: Wash with plenty of soap and water  
 If skin irritation or rash occurs: Get medical advice/attention  
 Wash contaminated clothing before reuse

#### Storage

Store locked up

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects  
 WARNING. Cancer - <https://www.p65warnings.ca.gov/>.

### 3. Composition/Information on Ingredients

| Component                         | CAS-No     | Weight % |
|-----------------------------------|------------|----------|
| Nickel boride (Ni <sub>2</sub> B) | 12007-01-1 | >95      |

### 4. First-aid measures

|  |   |
|--|---|
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.   |
| <b>Skin Contact</b>                        | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention.  |
| <b>Inhalation</b>                          | Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.  |
| <b>Ingestion</b>                           | Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician immediately. If possible drink milk afterwards.  |
| <b>Most important symptoms and effects</b> | May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing |
| <b>Notes to Physician</b>                  | Treat symptomatically   |

### 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>     | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Unsuitable Extinguishing Media</b>   | No information available  |
| <b>Flash Point</b>                      | No information available  |
| <b>Method -</b>                         | No information available  |
| <b>Autoignition Temperature</b>         | No information available  |
| <b>Explosion Limits</b>                 |   |
| <b>Upper</b>                            | No data available   |
| <b>Lower</b>                            | No data available   |
| <b>Sensitivity to Mechanical Impact</b> | No information available  |
| <b>Sensitivity to Static Discharge</b>  | No information available  |

**Specific Hazards Arising from the Chemical**

Non-combustible. Do not allow run-off from fire-fighting to enter drains or water courses.

**Hazardous Combustion Products**

Oxides of boron. Burning produces obnoxious and toxic fumes.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

|               |                     |                    |                         |
|---------------|---------------------|--------------------|-------------------------|
| <b>Health</b> | <b>Flammability</b> | <b>Instability</b> | <b>Physical hazards</b> |
| 3             | 0                   | 0                  | N/A                     |

## 6. Accidental release measures

|                                  |   |
|----------------------------------|---|
| <b>Personal Precautions</b>      | Ensure adequate ventilation. Use personal protective equipment as required.   |
| <b>Environmental Precautions</b> | Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. |

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

|                 |   |
|-----------------|---|
| <b>Handling</b> | Do not breathe dust. Do not get in eyes, on skin, or on clothing. Handle product only in closed system or provide appropriate exhaust ventilation.  |
| <b>Storage</b>  | Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. Keep under nitrogen. |

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component                         | ACGIH TLV                  | OSHA PEL                           | NIOSH IDLH   | Mexico OEL (TWA)           |
|-----------------------------------|----------------------------|------------------------------------|--|----------------------------|
| Nickel boride (Ni <sub>2</sub> B) | TWA: 0.2 mg/m <sup>3</sup> | (Vacated) TWA: 1 mg/m <sup>3</sup> | IDLH: 10 mg/m <sup>3</sup><br>TWA: 0.015 mg/m <sup>3</sup> | TWA: 0.2 mg/m <sup>3</sup> |

**Legend**

**ACGIH** - American Conference of Governmental Industrial Hygienists

**OSHA** - Occupational Safety and Health Administration

**NIOSH IDLH**: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures** Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|   |                          |
|---|--------------------------|
| <b>Physical State</b>                         | Powder Solid             |
| <b>Appearance</b>                             | Grey                     |
| <b>Odor</b>                                   | No information available |
| <b>Odor Threshold</b>                         | No information available |
| <b>pH</b>                                     | No information available |
| <b>Melting Point/Range</b>                    | No data available        |
| <b>Boiling Point/Range</b>                    | No information available |
| <b>Flash Point</b>                            | No information available |
| <b>Evaporation Rate</b>                       | Not applicable           |
| <b>Flammability (solid,gas)</b>               | No information available |
| <b>Flammability or explosive limits</b>       |                          |
| Upper   | No data available        |
| Lower   | No data available        |
| <b>Vapor Pressure</b>                         | No information available |
| <b>Vapor Density</b>                          | Not applicable           |
| <b>Specific Gravity</b>                       | No information available |
| <b>Solubility</b>                             | No information available |
| <b>Partition coefficient; n-octanol/water</b> | No data available        |
| <b>Autoignition Temperature</b>               | No information available |
| <b>Decomposition Temperature</b>              | No information available |
| <b>Viscosity</b>                              | Not applicable           |
| <b>Molecular Formula</b>                      | Ni <sub>2</sub> B        |
| <b>Molecular Weight</b>                       | 128.19                   |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactive Hazard</b>                  | None known, based on information available                  |
| <b>Stability</b>                        | Moisture sensitive.   |
| <b>Conditions to Avoid</b>              | Exposure to moist air or water.                             |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Strong bases                       |
| <b>Hazardous Decomposition Products</b> | Oxides of boron, Burning produces obnoxious and toxic fumes |
| <b>Hazardous Polymerization</b>         | No information available.                                   |
| <b>Hazardous Reactions</b>              | None under normal processing.                               |

## 11. Toxicological information

**Acute Toxicity**

**Product Information** No acute toxicity information is available for this product

**Component Information**

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** No information available

**Sensitization** May cause sensitization by skin contact

**Carcinogenicity** May cause cancer by inhalation. The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component                         | CAS-No     | IARC       | NTP   | ACGIH | OSHA       | Mexico |
|-----------------------------------|------------|------------|-------|-------|------------|--------|
| Nickel boride (Ni <sub>2</sub> B) | 12007-01-1 | Not listed | Known | A1    | Not listed | A1     |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** Lungs

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

**Persistence and Degradability** Insoluble in water

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Is not likely mobile in the environment due its low water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

|                       |                                   |
|-----------------------|-----------------------------------|
| <b>UN-No</b>          | UN3288                            |
| <b>Technical Name</b> | Nickel boride (Ni <sub>2</sub> B) |
| <b>Hazard Class</b>   | 6.1                               |
| <b>Packing Group</b>  | III                               |

### TDG

|                             |   |
|-----------------------------|---|
| <b>UN-No</b>                | UN3288  |
| <b>Hazard Class</b>         | 6.1   |
| <b>Packing Group</b>        | III   |
| <b>IATA</b>                 |   |
| <b>UN-No</b>                | UN3077  |
| <b>Proper Shipping Name</b> | Environmentally hazardous substances, solid, n.o.s. |
| <b>Hazard Class</b>         | 9   |
| <b>Packing Group</b>        | III   |
| <b>IMDG/IMO</b>             |   |
| <b>UN-No</b>                | UN3077  |
| <b>Proper Shipping Name</b> | Environmentally hazardous substances, solid, n.o.s. |
| <b>Hazard Class</b>         | 9   |
| <b>Packing Group</b>        | III   |

## 15. Regulatory information

### United States of America Inventory

| Component            | CAS-No     | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|----------------------|------------|------|---|-----------------------------|
| Nickel boride (Ni2B) | 12007-01-1 | X    | ACTIVE  | -                           |

#### Legend:

**TSCA** - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** - Notices of Export Not applicable

### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component            | CAS-No     | DSL | NDSL | EINECS    | PICCS | ENCS | AICS | IECSC | KECL     |
|----------------------|------------|-----|------|-----------|-------|------|------|-------|----------|
| Nickel boride (Ni2B) | 12007-01-1 | -   | X    | 234-494-6 | -     | X    | -    | -     | KE-11925 |

### U.S. Federal Regulations

#### SARA 313

| Component            | CAS-No     | Weight % | SARA 313 - Threshold Values % |
|----------------------|------------|----------|-------------------------------|
| Nickel boride (Ni2B) | 12007-01-1 | >95      | 0.1                           |

**SARA 311/312 Hazard Categories** See section 2 for more information

#### CWA (Clean Water Act)

| Component            | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|----------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Nickel boride (Ni2B) | -                          | -                           | X                      | -                         |

#### Clean Air Act

| Component            | HAPS Data | Class 1 Ozone Depleters | Class 2 Ozone Depleters |
|----------------------|-----------|-------------------------|-------------------------|
| Nickel boride (Ni2B) | X         |                         | -                       |

**OSHA** - Occupational Safety and Health Administration Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product contains the following Proposition 65 chemicals.

| Component                         | CAS-No     | California Prop. 65 | Prop 65 NSRL | Category   |
|-----------------------------------|------------|---------------------|--------------|------------|
| Nickel boride (Ni <sub>2</sub> B) | 12007-01-1 | Carcinogen          | -            | Carcinogen |

**U.S. State Right-to-Know Regulations**

| Component                         | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-----------------------------------|---------------|------------|--------------|----------|--------------|
| Nickel boride (Ni <sub>2</sub> B) | -             | X          | X            | X        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

**Revision Date** 14-Feb-2020  
**Print Date** 14-Feb-2020  
**Revision Summary** SDS authoring systems update, replaces ChemGes SDS No. 12007-01-1/2.

**Disclaimer**

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

**End of SDS**