1 Identification

· Product identifier
  · Trade name: Bar's Leaks® Head Gasket Sealant
  · Product code: 1100

· Recommended use and restriction on use
  · Recommended use: Sealant
  · Restrictions on use: No relevant information available.

· Details of the supplier of the Safety Data Sheet
  Manufacturer/Supplier:
  Bar's Products
  P.O. Box 187
  Holly, MI 48442 USA
  Phone: (810) 603-1321

· Emergency telephone number:
  ChemTel Inc.
  (800)255-3924, +1 (813)248-0585

2 Hazard(s) identification

· Classification of the substance or mixture
  The product is not classified as hazardous according to the Globally Harmonized System (GHS).

· Label elements
  · GHS label elements None.
  · Hazard pictograms: Not regulated.
  · Signal word: Not regulated.
  · Hazard statements: None.
  · Precautionary statements: Not regulated.

· Other hazards
  There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

<table>
<thead>
<tr>
<th>Components</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1344-09-8  silicic acid, sodium salt</td>
<td>10-25%</td>
</tr>
<tr>
<td>9004-34-6  Cellulose</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>7440-50-8  copper</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

· Additional information:
  For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
  For the wording of the listed Hazard Statements refer to section 16.

(Cont'd. on page 2)
4 First-aid measures

- **Description of first aid measures**
  - **After inhalation:** Supply fresh air; consult doctor in case of complaints.
  - **After skin contact:** Wash with soap and water. If skin irritation is experienced, consult a doctor.
  - **After eye contact:** Remove contact lenses if worn. Rinse opened eye for several minutes under running water. Then consult a doctor.
  - **After swallowing:** Rinse out mouth and then drink plenty of water. Do not induce vomiting; immediately call for medical help.

- **Most important symptoms and effects, both acute and delayed:** Slight irritant effect on eyes. Slight irritant effect on skin and mucous membranes. Gastric or intestinal disorders. Nausea in case of ingestion.

- **Indication of any immediate medical attention and special treatment needed:** No relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
  - **For safety reasons unsuitable extinguishing agents:** None.

- **Special hazards arising from the substance or mixture**
  Formation of toxic gases is possible during heating or in case of fire.

- **Advice for firefighters**
  - **Protective equipment:** Wear self-contained respiratory protective device. Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures:**
  Ensure adequate ventilation. Wear protective equipment. Keep unprotected persons away. Particular danger of slipping on leaked/spilled product. For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

- **Environmental precautions:**
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of the collected material according to regulations.
Trade name: Bar's Leaks® Head Gasket Sealant

7 Handling and storage

· Handling
  · Precautions for safe handling:
    Prevent formation of aerosols.
    Avoid splashes or spray in enclosed areas.
    Use only in well ventilated areas.
  · Information about protection against explosions and fires: No special measures required.

· Conditions for safe storage, including any incompatibilities
  · Storage
    · Requirements to be met by storerooms and receptacles:
      Avoid storage near extreme heat, ignition sources or open flame.
    · Information about storage in one common storage facility:
      Store away from foodstuffs.
      Do not store together with oxidizing and acidic materials.
    · Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.
  · Specific end use(s): No relevant information available.

8 Exposure controls/personal protection

· Control parameters

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>9004-34-6 Cellulose</td>
</tr>
<tr>
<td>PEL (USA) Long-term value: 15* 5** mg/m³</td>
</tr>
<tr>
<td>*total dust **respirable fraction</td>
</tr>
<tr>
<td>REL (USA) Long-term value: 10* 5** mg/m³</td>
</tr>
<tr>
<td>*total dust **respirable fraction</td>
</tr>
<tr>
<td>TLV (USA) Long-term value: 10 mg/m³</td>
</tr>
<tr>
<td>EL (Canada) Long-term value: 10* 3** mg/m³</td>
</tr>
<tr>
<td>*total dust, **respirable fraction</td>
</tr>
<tr>
<td>EV (Canada) Long-term value: 10 mg/m³ paper fibre, total dust</td>
</tr>
<tr>
<td>LMPE (Mexico) Long-term value: 10 mg/m³</td>
</tr>
</tbody>
</table>

| 7440-50-8 Copper                                              |
| PEL (USA) Long-term value: 1* 0.1** mg/m³ as Cu *dusts and mists **fume |

(Cont'd. of page 2)
Trade name: Bar's Leaks® Head Gasket Sealant

<table>
<thead>
<tr>
<th></th>
<th>REL (USA)</th>
<th>TLV (USA)</th>
<th>EL (Canada)</th>
<th>EV (Canada)</th>
<th>LMPE (Mexico)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term value: 1* 0.1** mg/m³ as Cu *dusts and mists **fume</td>
<td>Long-term value: 1* 0.2** mg/m³ *dusts and mists; **fume; as Cu</td>
<td>Long-term value: 1* 0.2** mg/m³ *dusts and mists; **fume, as Cu</td>
<td>Long-term value: 0.2* 1** mg/m³ as copper, *fume;**dust and mists</td>
<td>Long-term value: 0.2* 1** mg/m³ *humo (como Cu);**polvo y niebla (como Cu)</td>
</tr>
</tbody>
</table>

· Exposure controls
   · Personal protective equipment:
     · General protective and hygienic measures:
       The usual precautionary measures for handling chemicals should be followed.
       Keep away from foodstuffs, beverages and feed.
       Wash hands before breaks and at the end of work.
       Do not inhale gases / fumes / aerosols.
       Avoid contact with the eyes and skin.
     · Engineering controls: No relevant information available.
   · Breathing equipment:
     Not required under normal conditions of use.
     Use suitable respiratory protective device when aerosol or mist is formed.
     For spills, respiratory protection may be advisable.
   · Protection of hands:
     Wear protective gloves to handle contents of damaged or leaking units.
     Gloves are advised for repeated or prolonged contact.
     The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
   · Eye protection:
     Safety glasses
     · Body protection:
       Not required under normal conditions of use.
       Protection may be required for spills.

· Limitation and supervision of exposure into the environment No special requirements.
· Risk management measures No special requirements.

9 Physical and chemical properties

· Information on basic physical and chemical properties
  · Appearance:
    · Form: Suspension
    · Color: Red-brown
    · Odor: Mild

(Cont'd. on page 5)
### 43.0 Odor threshold:
Not determined.

### 43.0 pH-value at 20 °C (68 °F):
<11

### 43.0 Melting point/Melting range:
Not determined.

### 43.0 Boiling point/Boiling range:
>104 °C (>219 °F)

### 43.0 Flash point:
Not applicable.

### 43.0 Flammability (solid, gaseous):
Not applicable.

### 43.0 Auto-ignition temperature:
Not determined.

### 43.0 Decomposition temperature:
Not determined.

### 43.0 Danger of explosion:
Product does not present an explosion hazard.

### 43.0 Explosion limits

| Lower: | Not determined. |
| Upper: | Not determined. |

### 43.0 Oxidizing properties:
Not determined.

### 43.0 Vapor pressure:
Not determined.

### 43.0 Density at 20 °C (68 °F):
1.37 g/cm³ (11.433 lbs/gal)

### 43.0 Relative density:
Not determined.

### 43.0 Vapor density:
Not determined.

### 43.0 Evaporation rate:
Not determined.

### 43.0 Solubility in / Miscibility with Water:
Fully miscible.

### 43.0 Partition coefficient (n-octanol/water):
Not determined.

### 43.0 Viscosity

| Dynamic: | Not determined. |
| Kinematic: | Not determined. |

### 43.0 Other information
No relevant information available.

### 10 Stability and reactivity

#### Reactivity:
No relevant information available.

#### Chemical stability:
Stable under normal temperatures and pressures.

#### Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.

#### Possibility of hazardous reactions:
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids and oxidizing agents.

#### Conditions to avoid:
Avoid acids.

#### Incompatible materials:
No relevant information available.

#### Hazardous decomposition products:
Carbon monoxide and carbon dioxide

(Cont'd. on page 6)
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification: None.
  - Primary irritant effect:
    - On the skin: Slight irritant effect on skin and mucous membranes.
    - On the eye: Slight irritant effect on eyes.
  - Sensitization: Based on available data, the classification criteria are not met.

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer):
    - None of the ingredients are listed.
  - NTP (National Toxicology Program):
    - None of the ingredients are listed.
  - OSHA-Ca (Occupational Safety & Health Administration):
    - None of the ingredients are listed.

- Probable route(s) of exposure:
  - Ingestion.
  - Inhalation.
  - Eye contact.
  - Skin contact.
  - Repeated dose toxicity: No relevant information available.

- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
  - Carcinogenicity: Based on available data, the classification criteria are not met.
  - Reproductive toxicity: Based on available data, the classification criteria are not met.
  - STOT-single exposure: Based on available data, the classification criteria are not met.
  - STOT-repeated exposure: Based on available data, the classification criteria are not met.
  - Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No relevant information available.

- Persistence and degradability: No relevant information available.

- Bioaccumulative potential: No relevant information available.

- Mobility in soil: No relevant information available.

- Additional ecological information
  - General notes:
    - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:** Smaller quantities can be disposed of with household waste. Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- **Uncleaned packagings**
  - **Recommendation:** Disposal must be made according to official regulations.
  - **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
  - **DOT, ADR, IMDG, IATA** Not regulated.

- **UN proper shipping name**
  - **DOT, ADR, IMDG, IATA** Not regulated.

- **Transport hazard class(es)**
  - **DOT, ADR, IMDG, IATA** Not regulated.
  - **Class** Not regulated.

- **Packing group**
  - **DOT, ADR, IMDG, IATA** Not regulated.

- **Environmental hazards**
  - **Marine pollutant:** No

- **Special precautions for user**
  - **Not applicable.**

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - **Not applicable.**
Trade name: Bar's Leaks® Head Gasket Sealant

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - United States (USA)
  - SARA
    - Section 302 (extremely hazardous substances):
      None of the ingredients are listed.
    - Section 304 (emergency release notification):
      None of the ingredients are listed.
    - Section 355 (extremely hazardous substances):
      None of the ingredients are listed.
    - Section 313 (Specific toxic chemical listings):
      None of the ingredients are listed.
  - TSCA (Toxic Substances Control Act)
    All ingredients are listed.
    - Proposition 65 (California)
      - Chemicals known to cause cancer:
        None of the ingredients are listed.
      - Chemicals known to cause reproductive toxicity for females:
        None of the ingredients are listed.
      - Chemicals known to cause reproductive toxicity for males:
        None of the ingredients are listed.
      - Chemicals known to cause developmental toxicity:
        None of the ingredients are listed.
    - Carcinogenic categories
      - EPA (Environmental Protection Agency):
        7440-50-8 copper D
      - IARC (International Agency for Research on Cancer):
        None of the ingredients are listed.
      - NIOSH-Ca (National Institute for Occupational Safety and Health):
        None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Date of preparation / last revision 07/28/2016 / -
- Abbreviations and acronyms:
  ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
  IMDG: International Maritime Code for Dangerous Goods
Trade name: Bar's Leaks® Head Gasket Sealant

DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
LDLo: Lowest Lethal Dose Observed
Met. Corr. 1: Corrosive to metals – Category 1
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Sources
Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Safety Data Sheets, Individual Manufacturers

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