1 Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier
  - Trade name: Bar’s Leaks® Head Gasket Repair
  - Article number: 1100

- 1.2 Relevant identified uses of the substance or mixture and uses advised against
  - No further relevant information available.

- Application of the substance / the preparation Sealant

- 1.3 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

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

2 Hazards identification

- 2.1 Classification of the substance or mixture
  - Classification according to Regulation (EC) No 1272/2008

  GHS05 corrosion

  Eye Dam. 1 H318 Causes serious eye damage.

  GHS07

  Skin Irrit. 2 H315 Causes skin irritation.
  STOT SE 3 H335 May cause respiratory irritation.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC
  - Xi; Irritant
  - R37/38-41: Irritating to respiratory system and skin. Risk of serious damage to eyes.

- Information concerning particular hazards for human and environment:
  - The product has to be labelled due to the calculation procedure of the “General Classification guideline for preparations of the EU” in the latest valid version.

- Classification system:
  - The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
  - The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

- 2.2 Label elements
  - Labelling according to Regulation (EC) No 1272/2008
    - The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)
Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Trade name: Bar's Leaks® Head Gasket Repair

- Hazard pictograms
  - GHS05
  - GHS07

- Signal word Danger

- Hazard-determining components of labelling:
  - Silicic acid, sodium salt

- Hazard statements
  - H315 Causes skin irritation.
  - H318 Causes serious eye damage.
  - H335 May cause respiratory irritation.

- Precautionary statements
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P280 Wear protective gloves and eye protection.
  - P264 Wash thoroughly after handling.
  - P261 Avoid breathing mist/vapours/spray.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  - P302+P352 IF ON SKIN: Wash with plenty of soap and water.
  - P403+P233 Store in a well-ventilated place. Keep container tightly closed.

- Hazard description:
- WHMIS-symbois:
  - D2B - Toxic material causing other toxic effects

- NFPA ratings (scale 0 - 4)
  - Health = 2
  - Fire = 0
  - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - HEALTH: Health = 2
  - FIRE: Fire = 0
  - REACTIVITY: Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

- HMIS Long Term Health Hazard Substances
  - None of the ingredients is listed.
Trade name: Bar's Leaks® Head Gasket Repair

(Contd. of page 2)

3 Composition/information on ingredients

- 3.2 Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components:

| CAS: 1344-09-8 | Silicic acid, sodium salt | 10-25% |
| EINECS: 215-687-4 | Xn R22; Xi R37/38-41 | |
| Eye Dam. 1, H318 | Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335 |

| CAS: 9004-34-6 | Cellulose | <10% |
| EINECS: 232-674-9 |

| CAS: 7440-50-8 | copper | <10% |
| EINECS: 231-159-6 |

- Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- 4.1 Description of first aid measures
- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact:
  Clean with water and soap.
  If skin irritation continues, 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; call for medical help immediately.

- 4.2 Most important symptoms and effects, both acute and delayed Gastric or intestinal disorders
- Hazards No further relevant information available.

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

5 Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- For safety reasons unsuitable extinguishing agents: None.

(Contd. on page 4)
Trade name: Bar's Leaks® Head Gasket Repair

(Contd. of page 3)

- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
  - Protective equipment:
    Wear self-contained respiratory protective device.
    Wear fully protective suit.
  - Additional information No further relevant information available.

6 Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  Ensure adequate ventilation
  Particular danger of slipping on leaked/spilled product.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Clean the affected area carefully; suitable cleaners are:
  Warm water and cleansing agent.
- 6.4 Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- 7.1 Precautions for safe handling
  Ensure good ventilation/exhaustion at the workplace.
  Open and handle receptacle with care.
  Prevent formation of aerosols.
- Information about fire - and explosion protection: No special measures required.
- 7.2 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:
  Protect from frost.
  Keep container tightly sealed.
- 7.3 Specific end use(s) No further relevant information available.

(Contd. on page 5)
8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace:
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - DNELs: No further relevant information available.
  - PNECs: No further relevant information available.
- Additional information: The lists valid during the making were used as basis.
- 8.2 Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing
    - Wash hands before breaks and at the end of work.
    - Store protective clothing separately.
    - Avoid contact with the eyes and skin.
  - Respiratory protection:
    - Not required under normal conditions of use.
    - Use suitable respiratory protective device in case of insufficient ventilation.
    - Use suitable respiratory protective device when aerosol or mist is formed.
- Protection of hands:
  - Protective gloves
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
  - Material of gloves
    - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - Penetration time of glove material
    - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - For the permanent contact gloves made of the following materials are suitable: Rubber gloves
  - Eye protection:
    - Contact lenses should not be worn.

- Safety glasses

(Contd. on page 6)
Trade name: Bar's Leaks® Head Gasket Repair

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**
  No further relevant information available.
- **Risk management measures**
  See Section 7 for additional information.
  No further relevant information available.

### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>9.1 Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
</tr>
<tr>
<td>Form: Suspension</td>
</tr>
<tr>
<td>Colour: Red-brown</td>
</tr>
<tr>
<td>Odour: Mild</td>
</tr>
<tr>
<td>Odour threshold: Not determined</td>
</tr>
<tr>
<td><strong>pH-value at 20 °C:</strong> &lt;11</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
</tr>
<tr>
<td>Melting point/Melting range: Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range: &gt;219 °F / &gt;104 °C</td>
</tr>
<tr>
<td><strong>Flash point:</strong> Not applicable.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous):</strong> Not applicable.</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Self-igniting:</strong> Product is not self-igniting.</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong> Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td><strong>Vapour pressure at 20 °C:</strong> 23 hPa</td>
</tr>
<tr>
<td><strong>Density at 20 °C:</strong> 1,37 g/cm³</td>
</tr>
<tr>
<td><strong>Relative density:</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Vapour density</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with water:</strong> Fully miscible.</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong> Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
</tr>
<tr>
<td>Dynamic: Not determined.</td>
</tr>
</tbody>
</table>

(Contd. on page 7)
### Trade name: Bar's Leaks® Head Gasket Repair

<table>
<thead>
<tr>
<th>Kinematic</th>
<th>Not determined.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Solvent content:</td>
<td></td>
</tr>
<tr>
<td>- Organic solvents:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>- Solids content:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>- 9.2 Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 10 Stability and reactivity

- 10.1 Reactivity
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:
  - No decomposition if used and stored according to specifications.
- 10.3 Possibility of hazardous reactions: Reacts with strong acids.
- 10.4 Conditions to avoid: No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products:
  - Toxic metal oxide smoke
  - Carbon monoxide and carbon dioxide

### 11 Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Strong irritant with the danger of severe eye injury.
- Sensitization: Sensitizing effect by skin contact is possible by prolonged exposure.
- Additional toxicological information:
  - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
    - Irritant
    - Repeated dose toxicity: Repeated exposures may result in skin and/or respiratory sensitivity.

### 12 Ecological information

- 12.1 Toxicity
- Aquatic toxicity: The product contains materials that are harmful to the environment.
- 12.2 Persistence and degradability
  - The organic portion of the product is biodegradable.
  - The product is partially biodegradable. Significant residuals remain.
- 12.3 Bioaccumulative potential: May be accumulated in organism
- 12.4 Mobility in soil: No further relevant information available.
Trade name: Bar's Leaks® Head Gasket Repair

- **Ecotoxic effects:**
- **Remark:** After neutralization a reduction of the harming action may be recognized
- **Additional ecological information:**
- **General notes:**
  This statement was deduced from the properties of the single components.
  Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
  The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
  Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.
  Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

<table>
<thead>
<tr>
<th>14.1 UN-Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.2 UN proper shipping name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.3 Transport hazard class(es)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.4 Packing group</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.5 Environmental hazards:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine pollutant:</td>
</tr>
</tbody>
</table>

(Contd. on page 9)
### Trade name: Bar's Leaks® Head Gasket Repair

<table>
<thead>
<tr>
<th>14.6 Special precautions for user</th>
<th>Not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>-</td>
</tr>
</tbody>
</table>

#### 15 Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

<table>
<thead>
<tr>
<th>Section 355 (extremely hazardous substances):</th>
<th>None of the ingredients is listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 313 (Specific toxic chemical listings):</td>
<td>7440-50-8 copper</td>
</tr>
<tr>
<td>TSCA (Toxic Substances Control Act):</td>
<td>All ingredients are listed.</td>
</tr>
</tbody>
</table>

- Proposition 65 (California):

  - Chemicals known to cause cancer:
    - None of the ingredients is listed.
  - Chemicals known to cause reproductive toxicity for females:
    - None of the ingredients is listed.
  - Chemicals known to cause reproductive toxicity for males:
    - None of the ingredients is listed.
  - Chemicals known to cause developmental toxicity:
    - None of the ingredients is listed.

- Carcinogenic Categories

  - EPA (Environmental Protection Agency)
    - 7440-50-8 copper D
  - IARC (International Agency for Research on Cancer)
    - None of the ingredients is listed.
  - TLV (Threshold Limit Value established by ACGIH)
    - None of the ingredients is listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    - None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    - None of the ingredients is listed.
Safety Data Sheet  
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 4/2/2013  
Revision: 4/2/2013

Trade name: Bar's Leaks® Head Gasket Repair  
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- Canada
  - Canadian Domestic Substances List (DSL)  
    All ingredients are listed.
  - Canadian Ingredient Disclosure list (limit 0.1%)  
    None of the ingredients is listed.
  - Canadian Ingredient Disclosure list (limit 1%)  
    None of the ingredients is listed.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

- Relevant phrases
  H302  Harmful if swallowed.
  H315  Causes skin irritation.
  H318  Causes serious eye damage.
  H335  May cause respiratory irritation.
  R22   Harmful if swallowed.
  R37/38 Irritating to respiratory system and skin.
  R41   Risk of serious damage to eyes.

- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  ACGIH: American Conference of Governmental Industrial Hygienists
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  WIMIS: Workplace Hazardous Materials Information System (Canada)
  DNEL: Derived No-Effect Level (REACH)
  PNEC: Predicted No-Effect Concentration (REACH)

- Sources
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