1 PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Heavy Equipment Detergent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision Date:</td>
<td>June 30, 2017</td>
</tr>
<tr>
<td>Version:</td>
<td>46-53D</td>
</tr>
<tr>
<td>SDS Number:</td>
<td>L698189</td>
</tr>
<tr>
<td>Manufactured for:</td>
<td>Kärcher North America</td>
</tr>
<tr>
<td></td>
<td>4555 Airport Way</td>
</tr>
<tr>
<td></td>
<td>Denver, CO 80239</td>
</tr>
<tr>
<td></td>
<td>Phone: 303-738-2400</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:info@karcherna.com">info@karcherna.com</a></td>
</tr>
<tr>
<td>Canadian Contact:</td>
<td>Kärcher North America</td>
</tr>
<tr>
<td></td>
<td>6535 Millcreek Drive, Unit 67</td>
</tr>
<tr>
<td></td>
<td>Mississauga, ON L5N 2M2</td>
</tr>
<tr>
<td></td>
<td>Phone: 905-672-8233</td>
</tr>
</tbody>
</table>

Emergency Information: INFOTRAC 1-800-535-5053 International 1-352-323-3500

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):
- Health, Acute toxicity, 4 Oral
- Health, Skin corrosion/irritation, 1 C
- Health, Serious Eye Damage/Eye Irritation, 1

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: DANGER

GHS Hazard Pictograms:

GHS Hazard Statements:
- H302 - Harmful if swallowed
- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage

GHS Precautionary Statements:
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 - Wash thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing, Rinse skin with water/shower.
- P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P363 - Wash contaminated clothing before reuse.

L698189
**Route of Entry:**
- Eyes, Skin, Inhalation:

**Target Organs:**
- Eyes; Skin; Respiratory system;

**Inhalation:**
- Can cause irritation and inflammation of the respiratory tract.

**Skin Contact:**
- Irritating to skin; may cause burns, blisters and itching.

**Eye Contact:**
- Irritating to eyes, eye damage may occur.

**Ingestion:**
- Irritating to intestinal tract; may cause burns, vomiting, stomach pain, and disorientation.

**NFPA:**
- Health = 2, Fire = 1, Reactivity = 0, Specific Hazard = n/a

**HMIS III:**
- Health = 2, Fire = 1, Physical Hazard = 0

**HMIS PPE:**
- C - Safety Glasses, Gloves, Apron

### COMPOSITION/INFORMATION OF INGREDIENTS

<table>
<thead>
<tr>
<th>Cas#</th>
<th>%</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>6834-92-0</td>
<td>4%</td>
<td>Sodium metasilicate</td>
</tr>
<tr>
<td>111-76-2</td>
<td>3%</td>
<td>Ethylene Glycol Butyl Ether</td>
</tr>
<tr>
<td>27176-87-0</td>
<td>2%</td>
<td>Sulfonic Acid DDBSA</td>
</tr>
</tbody>
</table>

**OSHA Regulatory Status:**

This SDS contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

### FIRST AID MEASURES

**Inhalation:**
- Remove from exposure and get fresh air. Keep warm and at rest. Get medical attention immediately if artificial respiration is required.

**Skin Contact:**
- Remove contaminated clothing, jewelry and shoes immediately. Flush affected area with large amounts of water, then use soap or mild detergent and large amounts of water for 15-20 minutes to cleanse area. If skin is severely irritated or burned, get medical attention immediately.

**Eye Contact:**
- Immediately flush eyes with large amounts of water occasionally lifting upper and lower lids for at least 15 minutes. Get immediate medical attention.

**Ingestion:**
- Rinse mouth with water. DO NOT INDUCE VOMITING unless instructed to by medical personnel. If vomiting occurs keep head lower than hips to help prevent aspiration. If person is unconscious, do not induce vomiting; turn their head to the side. Never make an unconscious person vomit or drink fluids. Get medical attention.
5 FIRE FIGHTING MEASURES

Flash Point: 100 °C / 212 °F
Flash Point Method: Closed Cup

Wear self-contained breathing apparatus and other protective clothing. Use any standard agent - choose the one most appropriate for type of surrounding fire.

6 ACCIDENTAL RELEASE MEASURES

Isolate area; keep unnecessary personnel away. Do not discharge into drains. Ventilate closed spaces before entering. Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. Wear appropriate protective equipment and clothing during cleanup. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

7 HANDLING AND STORAGE

Handling Precautions: Do not get in eyes, on skin, or on clothing. Do not breathe vapor. Keep container closed. Promptly clean up spills. Wash thoroughly after handling.

Storage Requirements: Store out of reach of children; keep container closed; store in a cool, well-ventilated place.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Normal room ventilation is satisfactory for limited use.

Personal Protective Equipment: HMIS PP, C | Safety Glasses, Gloves, Apron

Ethylene glycol butyl ether 111-76-2 OSHA PEL 50 ppm - 240 mg/m3

Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear kelly green
Physical State: Liquid
Spec Grav./Density: 8.84 lb/gallon
pH: 12.94 as is, 11.45 at 5% solution

Odor: Fresh scent
Solubility: Soluble

10 STABILITY AND REACTIVITY

Chemical Stability: Product is stable under normal conditions.
Conditions to Avoid: None known
Materials to Avoid: Strong oxidizing or acidic materials
Hazardous Decomposition: Exposure to fire may liberate carbon dioxide, carbon monoxide, organic acids, and other unidentified thermal decomposition products from this product or its packaging.
Hazardous Polymerization: Will not occur.
11  TOXICOLOGICAL INFORMATION

Sodium Metasilicate 6834-92-0
  Oral (LD 50): 1153 mg/kg - Rat
  Inhalation (LC 50): Not listed on RTECS
  Skin irritation: Severe
  Eye irritation: Severe
  Sensitation: Not considered an occupational sensitizer

Ethylene glycol butyl ether 111-76-2
  Oral (LD 50): 917 mg/kg - Rat
  Inhalation (LC 50): 2900 mg/m3/7H - Rat
  Skin irritation: Mild
  Eye irritation: Mild
  Sensitation: Not considered an occupational sensitizer

Sulfonic Acid DDBSA 27176-87-0
  Oral (LD 50): 650 mg/kg - Rat
  Inhalation (LC 50): Not listed on RTECS
  Skin irritation: Severe
  Eye irritation: Severe
  Sensitation: Not considered an occupational sensitizer

12  ECOLOGICAL INFORMATION

On the basis of available information, this material is not expected to produce any significant environmental effects when recommended use instructions are followed.

13  DISPOSAL CONSIDERATIONS

Recommendation: Consult with the disposal agency and the relevant authorities. Empty containers may be cleaned with water.

14  TRANSPORT INFORMATION

UN1760, Corrosive liquids, n.o.s., 8, PGIII, (Sodium metasilicate)

Ship in accordance with 49 CFR parts 100-185.
### 15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Codes</th>
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<tr>
<td>Sodium metasilicate (6834-92-0)</td>
<td>4%</td>
<td>TSCA, WHMIS</td>
</tr>
<tr>
<td>Ethylene Glycol Butyl Ether (111-76-2)</td>
<td>3%</td>
<td>MASS, OSHAWAC, PA, TSCA, TXAIR, WHMIS</td>
</tr>
<tr>
<td>Sulfonic Acid DDBSA (27176-87-0)</td>
<td>2%</td>
<td>CERCLA, CSWHS, MASS, PA, TSCA, WHMIS</td>
</tr>
</tbody>
</table>

Regulatory CODE Descriptions

- All components are listed on TSCA
- CERCLA = Superfund clean up substance
- CSWHS = Clean Water Act Hazardous substances
- MASS = MA Massachusetts Hazardous Substances List
- OSHAWAC = OSHA Workplace Air Contaminants
- PA = PA Right-To-Know List of Hazardous Substances
- TSCA = Toxic Substances Control Act
- TXAIR = TX Air Contaminants with Health Effects Screening Level
- WHMIS = Workplace Haz Mat Info Sys Canada

### 16 OTHER INFORMATION

This document is prepared in accordance with 29 CFR 1910.1200. The purpose of this section is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees.

All information appearing herein is based upon data obtained from the raw material manufacturer and/or recognized technical sources. While the information above is believed to be true and accurate, the author makes no representations as to its accuracy or sufficiency. Conditions of use are beyond the manufacturer's control; therefore the users are responsible to verify this data under their own particular conditions, applications and regulations to determine if the product is suitable for their particular purposes. The users assume all risks of product use, handling, disposal, reliance upon, publication or use of the information contained herein. This information applies only to the product designated above and does not necessarily apply to its use in combination with other materials, products, chemical compounds, structures or processes.

Prepared by: EHS Manager