Section 1. Chemical Product and Company Identification

Product name: Zep 45 Dual Force
Product use: Aerosol Lubricant and Penetrant
Product code: 3743
Date of issue: 10/21/13
Supersedes: Not available.

Emergency Telephone Numbers

For MSDS Information:
Compliance Services 1-877-I-BUY-ZEP (428-9937)

For Medical Emergency
(877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Prepared By
Compliance Services
1259 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

DANGER!
FLAMMABLE AEROSOL. CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION. VAPOR HARMFUL. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. CONTENTS UNDER PRESSURE.

Hazard Determination System (HDS): Health, Flammability, Reactivity

Acute Effects Routes of Entry

Dermal contact, Eye contact and Inhalation

Eyes
Causes eye irritation. Inflammation of the eye is characterized by redness, watering and itching.

Skin
Causes skin irritation. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.

Inhalation
Avoid direct inhalation of spray. Over-exposure by inhalation may cause respiratory irritation. Can cause central nervous system (CNS) depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Ingestion
Aspiration hazard if swallowed. Can enter lungs and cause damage.

Chronic effects
Repeated or prolonged exposure to the substance can produce lung damage. Prolonged skin contact may cause dermatitis with drying and cracking of skin.

Carcinogenicity Classification
Not listed as a carcinogen by OSHA, NTP or IARC.

Additional information: See toxicological information (Section 11)

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>64742-47-8</td>
<td>60-80</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>15-25</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>124-38-9</td>
<td>1-5</td>
</tr>
<tr>
<td>Calcium alkynaphthalenesulfonate</td>
<td>-</td>
<td>1-5</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

Eye Contact
Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin Contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
**Inhalation**

Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Ingestion**

Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Flash Point**

Closed cup: >93.3°C (>199.9°F)

**Flammable Limits**

Not available.

**Flammability**

Flammable Aerosol (16 CFR 1500.45)

**Fire hazard**

CONTENTS UNDER PRESSURE. Container explosion may occur under fire conditions or when heated. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

**Fire-Fighting Procedures**

Use dry chemical or CO₂. Cool closed containers exposed to fire with water. Wear special protective clothing and positive pressure, self-contained breathing apparatus.

**Spill Clean up**

Large spills are unlikely due to packaging.

**Handling and Storage**

Put on appropriate personal protective equipment (see Section 8). Keep away from heat, sparks and flame. Avoid contact with eyes, skin and clothing. DO NOT breathe vapors or spray mist. Do not ingest. Use only with adequate ventilation. Observe label precautions. Wash thoroughly after handling.

**Ingredient**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>ACGIH TLV (United States, 3/2012). Absorbed through skin. TWA: 200 mg/m³. (as total hydrocarbon vapor) 8 hours. ACGIH TLV (United States, 3/2012). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 1/2013). TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist OSHA PEL (United States, 6/2010). TWA: 5 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td></td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>ACGIH TLV (United States, 3/2012). Oxygen Depletion [Asphyxiant]. TWA: 5000 ppm 8 hours. TWA: 9000 ppm 8 hours. STEL: 30000 ppm 15 minutes. STEL: 54000 mg/m³ 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 10000 ppm 8 hours. TWA: 18000 mg/m³ 8 hours. STEL: 30000 ppm 15 minutes. STEL: 54000 mg/m³ 15 minutes. NIOSH REL (United States, 1/2013). TWA: 5000 ppm 10 hours. TWA: 9000 mg/m³ 10 hours. STEL: 30000 ppm 15 minutes. STEL: 54000 mg/m³ 15 minutes. OSHA PEL (United States, 6/2010). TWA: 5000 ppm 8 hours. TWA: 9000 mg/m³ 8 hours.</td>
</tr>
</tbody>
</table>

**Personal Protective Equipment (PPE)**

**Eyes**

Recommended: Safety glasses.

**Body**

Recommended: Chemical-resistant gloves. Viton®

**Respiratory**

Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
**Section 9. Physical and Chemical Properties**

| Physical State | Liquid. |
| pH | Not applicable. |
| Boiling Point | >204°C (>399.2°F) |
| Specific Gravity | 0.8715 |
| Solubility | Insoluble in the following materials: cold water and hot water. |
| Color | Straw. |
| Odor | Slight Petroleum-like and Banana-like. |
| Vapor Pressure | Not available. |
| Vapor Density | Not available. |
| Evaporation Rate | Not available. |
| VOC (Consumer) | 0.19 % (w/w) 0.0138 lbs/gal (1.6 g/l) |

**Section 10. Stability and Reactivity**

**Stability and Reactivity**
The product is stable.

**Incompatibility**
Extremely reactive or incompatible with the following materials: oxidizing materials.

**Hazardous Polymerization**
Under normal conditions of storage and use, hazardous polymerization will not occur.

**Hazardous Decomposition Products**
carbon oxides (CO, CO₂)

**Section 11. Toxicological Information**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>&gt;6.8 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>2000 to 4000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;5 g/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Section 12. Ecological Information**

**Environmental Effects**
Not available.

**Aquatic ecotoxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>Acute LC50 2200 µg/l Fresh water</td>
<td>Fish - Lepomis macrochirus</td>
<td>4 days</td>
</tr>
</tbody>
</table>

**Section 13. Disposal Considerations**

**Waste Information**
Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

**Waste Stream**
Classification: Non-hazardous waste
Origin: RCRA waste.

**Section 14. Transport Information**

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>None</td>
<td>Consumer commodity or Limited quantity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMDG Class</td>
<td>UN1950</td>
<td>AEROSOLS, flammable or Limited quantity</td>
<td>2.1</td>
<td>-</td>
<td>![Image]</td>
</tr>
</tbody>
</table>

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG*: Packing group
Section 15. Regulatory Information

U.S. Federal Regulations

SARA 313 toxic chemical notification and release reporting:
No products were found.

Clean Water Act (CWA) 307: naphthalene
Clean Water Act (CWA) 311: naphthalene
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

State Regulations

California Prop 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

*NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.

LMW