Section 1. Chemical Product and Company Identification

Product name: ZEP 45
Product Use: Aerosol Lubricant
Product Code: 0174
Date of issue: 10/04/05
Supersedes: 01/06/03

Emergency Telephone: Technical Services Group
Telephone: (780) 453-8100 (Business Hours 8:00-5:00)

For a Medical or Transportation Emergency:
CANUTEC (24 Hours)
(613) 996-6666 - Call Collect

Prepared by: Technical Services Group
Zep Manufacturing Co. of Canada
11627 178th Street
Edmonton, Alberta T5S 1N6

Date of Preparation: 10/04/05

Section 2. Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>Name of Hazardous Ingredients</th>
<th>CAS #</th>
<th>% by Weight</th>
<th>Toxicity Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRICHLOROETHYLENE; acetylene trichloride; 1-chloro-2,2-dichloroethylene</td>
<td>79-01-6</td>
<td>30 - 60</td>
<td>LD50 Oral 4920 mg/kg</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>LD50 Mouse Oral 2402 mg/kg</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>LD50 Rabbit Dermal 29800 mg/kg</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>LC50 Mouse Inhalation 12500 ppm (4 hour(s))</td>
</tr>
<tr>
<td>PARAFFIN OIL; blend of heavy and light naphthenic petroleum distillate</td>
<td>64742-52-5</td>
<td>10 - 30</td>
<td>Not available.</td>
</tr>
<tr>
<td>MINERAL SEAL OIL; mineral oil; petrolatum</td>
<td>64741-77-1</td>
<td>5 - 10</td>
<td>Not available.</td>
</tr>
<tr>
<td>BLEND OF AMYL ACETATE; 3-METHYL BUTYL ACETATE; 2-METHYL BUTYL ACETATE; CARBON DIOXIDE</td>
<td>628-63-7; 123-92-2; 624-41-9; 124-38-9</td>
<td>1 - 5</td>
<td>Not available.</td>
</tr>
<tr>
<td>DIETHYLENE GLYCOL MONOBUTYL ETHER; 2-(2-butoxyethoxy)-ethanol; butyl carbitol</td>
<td>112-34-5</td>
<td>1 - 5</td>
<td>LD50 Oral 5660 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LD50 Mouse Oral 2400 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LD50 Rabbit Dermal 2700 mg/kg</td>
</tr>
</tbody>
</table>

Section 3. Hazards Identification

Acute Effects Routes of Entry
Skin Hazardous in case of skin contact (irritant, permeator). Non-sensitizer for skin. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Eyes Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Liquid in eye may cause irritation with possible damage if not rinsed immediately.
Inhalation Hazardous in case of inhalation. Vapors and aerosol can produce mucous membrane, nose and throat irritation. Can cause central nervous system depression. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness, and nausea, and may lead to unconsciousness or death. Medical Conditions Aggravated by Overexposure: Respiratory, Heart (Cardiac).
Ingestion Aspiration hazard if swallowed- can enter lungs and cause damage.

Chronic Effects Repeated or prolonged exposure to the substance can produce damage to liver, kidneys and central nervous system. Defatting to the skin. Prolonged skin contact may cause dermatitis with drying and cracking of skin.

Additional information: See Toxicological Information (section 11)

Section 4. First Aid Measures

Eye Contact Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin Contact Wash affected area with soap or mild detergent and water. Remove contaminated clothing and shoes. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Wash clothing before reuse.
Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Aspiration hazard if swallowed-can enter lungs and cause damage. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Section 5. Fire Fighting Measures

Flammable Limits  Not applicable.

Flammability  Not considered to be flammable. (CSMA)

Auto-ignition Temperature  Not applicable.

Fire-Fighting Procedures  Use dry chemical or CO2. Wear special protective clothing and positive pressure, self-contained breathing apparatus.

Fire Hazard  Avoid all possible sources of ignition (spark or flame). Vapor may cause fire.

Products of Combustion  Hydrogen Chloride (HCl), Chlorine and Phosgene Gas.

Explosion hazard  Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

No specific information is available in our database regarding the product's risks of explosion in the presence of various materials.

Section 6. Accidental Release Measures

Spill Clean up  Large spills are unlikely due to packaging.

Section 7. Handling and Storage

Handling  Avoid contact with eyes, skin and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Wash thoroughly after handling. Wash contaminated clothing before reusing.

Storage  Keep container in a cool, well-ventilated area. Do not store above 49°C (120.2°F). Do not puncture or incinerate. Keep away from heat and direct sunlight. Keep out of the reach of children.

Section 8. Exposure Controls, Personal Protection

Personal Protection  Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Protective Clothing (Pictograms)

Eyes  Safety glasses.

Hands and Body  Chemical resistant gloves. Neoprene gloves. Nitrile gloves. Natural rubber (latex)

Respiratory  Avoid breathing vapors or spray mists. Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

Exposure Limits  Consult local authorities for acceptable exposure limits.

<table>
<thead>
<tr>
<th>Name of Hazardous Ingredients</th>
<th>CAS #</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichloroethylene</td>
<td>79-01-6</td>
<td>ACGIH TLV (United States). TWA: 50 ppm 8 hour(s).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL: 100 ppm 15 minute(s). OSIA PEL (United States).</td>
</tr>
<tr>
<td>Paraffin Oil</td>
<td>64742-52-5</td>
<td>OSHA PEL (United States). TWA: 5 ppm 8 hour(s). Form: Mist</td>
</tr>
<tr>
<td>Mineral Seal Oil</td>
<td>64741-77-1</td>
<td>OSHA PEL (United States). TWA: 5 mg/m³ 8 hour(s). Form: Mist</td>
</tr>
<tr>
<td>Blend of amyl acetate, 3-methyl butyl acetate, &amp; 2-methyl butyl acetate</td>
<td>628-63-7; 123-92-2; 624-41-9</td>
<td>OSHA PEL (United States). TWA: 5 ppm 8 hour(s). Form: Mist</td>
</tr>
<tr>
<td>Diethylene Glycol Monobutyl Ethe</td>
<td>112-34-5</td>
<td>Manufacturer (United States). TWA: 35 ppm 8 hour(s).</td>
</tr>
</tbody>
</table>

Section 9. Physical and Chemical Properties

Physical State  Aerosol. (Oily liquid.)

pH  Not applicable.

Boiling Point  189°C (372.2°F)

Freezing Point  Not available.

Specific Gravity  1.095 (Water = 1)

Solubility  Insoluble in cold water, hot water.


Odor  Sweet. (Strong.)

Vapor Pressure  Not available.

Vapor Density  Not available.

Evaporation Rate  <1 compared to Carbon tetrachloride

VOC (Consumer)  50.0%  551 (g/l).
Section 10. Stability and Reactivity

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

**Incompatibility** Avoid contact with strong oxidizers, excessive heat, sparks or open flame.

**Reactivity** Will not occur.

**Hazardous Decomposition Products** Hydrogen Chloride (HCl), Chlorine and Phosgene Gas.

Section 11. Toxicological Information

**Carcinogenic Effects** Classified + (Proven.) by OSHA [Trichloroethylene]. Classified 2A (Probable for human) by IARC, and Group 2 (Reasonably Anticipated To Be Human Carcinogens) by NTP [Trichloroethylene].

**Reproductive Effects** Not available.

**Mutagenic Effects** Not available.

**Teratogenic Effects** Not available.

Section 12. Ecological Information

**Ecotoxicity** Not available.

**Biodegradable/OECD** Not available.

Section 13. Disposal Considerations

**Waste Information** Consult your local or regional authorities. Waste must be disposed according to applicable regulations. **Waste Stream** Not available.

Section 14. Transport Information

<table>
<thead>
<tr>
<th>Regulatory Information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Class</th>
<th>Packing Group</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG Classification</td>
<td></td>
<td></td>
<td>Limited Quantity</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Limited Quantity: Small quantities of controlled goods are not regulated as Dangerous Goods according to the TDG regulations.

Section 15. Regulatory Information

**WHMIS (Canada)** Class A: Compressed gas.

Class D-1B: Material causing immediate and serious toxic effects (TOXIC).

Class D-2B: Material causing other toxic effects (TOXIC).

**Other Regulations** Not available.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the available information required by the CPR.

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.