SAFETY DATA SHEET

A07326 ZEP 45 017401 20N17

Version 2.2  Revision Date 06/18/2018  Print Date 04/02/2019

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : A07326 ZEP 45 017401 20N17
Material number : 000000000000017401

Manufacturer or supplier’s details
Company : Zep Inc.
Address : 350 Joe Frank Harris Parkway, SE Emerson, GA 30137
Telephone : 404-352-1680

Emergency telephone numbers
For SDS Information : Compliance Services 1-877-428-9937
For a Medical Emergency : 877-541-2016 Toll Free - All Calls Recorded

Recommended use of the chemical and restrictions on use
Recommended use : Lubricant

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Aerosol containing a compressed gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>brown</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

GHS Classification

<table>
<thead>
<tr>
<th>Gases under pressure</th>
<th>Compressed gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>Category 2A</td>
</tr>
<tr>
<td>Skin sensitisation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 1B</td>
</tr>
<tr>
<td>Specific target organ toxicity</td>
<td>Category 3 (Central nervous system)</td>
</tr>
</tbody>
</table>

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H280 Contains gas under pressure; may explode if heated. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.

Precautionary statements:

**Prevention:**
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P264 Wash skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- P362 Take off contaminated clothing and wash before reuse.

**Storage:**
- P403 Store in a well-ventilated place.
- P410 + P403 Protect from sunlight. Store in a well-ventilated place.

**Disposal:**
- P501 Dispose of contents/container in accordance with local regulation.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance / Mixture:** Mixture

**Hazardous components**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>trichloroethylene</td>
<td>79-01-6</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>&gt;= 20 - &lt; 30</td>
</tr>
<tr>
<td>Distillates (petroleum), straight-run middle</td>
<td>64741-44-2</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>112-34-5</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>carbon dioxide</td>
<td>124-38-9</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>pentyl acetate</td>
<td>628-63-7</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>2-methylbutyl acetate</td>
<td>624-41-9</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

The exact percentages of disclosed substances are withheld as trade secrets.
SECTION 4. FIRST AID MEASURES

General advice: Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled: Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact: If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

In case of eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed: Do NOT induce vomiting.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed: Effects are immediate and delayed.
Symptoms may include irritation, redness, pain, and rash.
Symptoms may include central nervous system depression, resulting in headache, nausea and/or dizziness.
Chronic effects are delayed and symptoms may not be observed during an exposure.
Causes skin irritation.
Causes serious eye irritation.
Review section 2 of SDS to see all potential hazards.

Notes to physician: Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media: High volume water jet

Specific hazards during: Do not allow run-off from fire fighting to enter drains or water
firefighting courses.

Hazardous combustion products:
- Carbon dioxide (CO2)
- Carbon monoxide
- Smoke
- Chlorine compounds

Specific extinguishing methods:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information:
Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Special protective equipment for firefighters:
Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
- Use personal protective equipment.
- Ensure adequate ventilation.
- Remove all sources of ignition.
- Evacuate personnel to safe areas.
- Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions:
- Prevent product from entering drains.
- Prevent further leakage or spillage if safe to do so.
- If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up:
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
- Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling:
- Do not breathe vapours or spray mist.
- Avoid exposure - obtain special instructions before use.
- Avoid contact with skin and eyes.
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.
- Take precautionary measures against static discharges.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Dispose of rinse water in accordance with local and national regulations.
- Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not
be employed in any process in which this mixture is being used. Always replace cap after use.

Conditions for safe storage: BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. No smoking. Keep in a cool, well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid: Oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>trichloroethylene</td>
<td>79-01-6</td>
<td>TWA</td>
<td>10 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>25 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>OSHA Z-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEIL</td>
<td>200 ppm</td>
<td>OSHA Z-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peak</td>
<td>300 ppm</td>
<td>OSHA Z-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>50 ppm</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>200 ppm</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>100 ppm</td>
<td>CAL PEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>25 ppm</td>
<td>CAL PEL</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>TWA (Mist)</td>
<td>5 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>ACGIH</td>
</tr>
<tr>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>112-34-5</td>
<td>TWA (Inhalable fraction)</td>
<td>10 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>carbon dioxide</td>
<td>124-38-9</td>
<td>TWA</td>
<td>5,000 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>30,000 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5,000 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>30,000 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5,000 ppm</td>
<td>OSHA Z-1</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRICHLOROETHENE</td>
<td>79-01-6</td>
<td>Trichloroacetic acid</td>
<td>Urine</td>
<td>End of shift at end of workweek</td>
<td>15 mg/l</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td>TRICHLOROETHENE</td>
<td>Trichloroethanol</td>
<td>In blood</td>
<td>End of shift at end of workweek</td>
<td>0.5 mg/l</td>
<td>ACGIH BEI</td>
<td></td>
</tr>
<tr>
<td>TRICHLOROETHENE</td>
<td>Trichloroethylene</td>
<td>In end-exhaled air</td>
<td>End of shift at end of workweek</td>
<td></td>
<td>ACGIH BEI</td>
<td></td>
</tr>
</tbody>
</table>

**Engineering measures**
- Effective ventilation in all processing areas

**Personal protective equipment**

**Respiratory protection**
- Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

**Hand protection**
- Protective gloves
- The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection**
- Tightly fitting safety goggles
- Wear face-shield and protective suit for abnormal processing problems.

**Skin and body protection**
- Impervious clothing
- Choose body protection according to the amount and...
Hygiene measures: When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**: Aerosol containing a compressed gas
- **Colour**: brown
- **Odour**: characteristic
- **Odour Threshold**: No data available
- **pH**: Not applicable
- **Boiling point**: 87.22 °C
- **Flash point**: Not applicable
- **Evaporation rate**: < 1
- **Flammability (solid, gas)**: Not classified as a flammability hazard
- **Upper explosion limit**: Not applicable
- **Lower explosion limit**: Not applicable
- **Vapour pressure**: Not applicable
- **Relative vapour density**: No data available
- **Density**: 1.137 g/cm³
- **Water solubility**: insoluble
- **Partition coefficient: n-octanol/water**: No data available
- **Auto-ignition temperature**: not determined
- **Thermal decomposition**: No data available
- **Viscosity**: Not applicable
- **Heat of combustion**: 20.59 kJ/g

SECTION 10. STABILITY AND REACTIVITY

- **Reactivity**: Stable
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: Vapours may form explosive mixture with air. No decomposition if stored and applied as directed.
Conditions to avoid: Heat, flames and sparks.
Incompatible materials: Metals
Oxidizing agents
Hazardous decomposition products: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Chlorine Phosgene Hydrogen chloride gas

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects
Aggravated Medical Condition: None known.
Symptoms of Overexposure: Effects are immediate and delayed. Symptoms may include irritation, redness, pain, and rash. Symptoms may include central nervous system depression, resulting in headache, nausea and/or dizziness. Chronic effects are delayed and symptoms may not be observed during an exposure.

Carcinogenicity:
IARC: Group 1: Carcinogenic to humans
trichloroethylene 79-01-6
ACGIH: Suspected human carcinogen
trichloroethylene 79-01-6
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.
NTP: Known to be human carcinogen
trichloroethylene 79-01-6

Acute toxicity
Product:
Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:
trichloroethylene: Acute oral toxicity: LD50 Oral Rat: 4,920 mg/kg
### Acute Inhalation Toxicity
- **LC50 Mouse:** 8450 ppm
- **Exposure time:** 4 h

### Acute Dermal Toxicity
- **LD50 Dermal Rabbit:** > 20,000 mg/kg

### Acute Oral Toxicity
- **LD50 Rat:** > 5,000 mg/kg

### Acute Inhalation Toxicity
- **LC50 Rat:** > 5 mg/l
- **Exposure time:** 4 h

### Acute Dermal Toxicity
- **LD50 Rabbit:** > 5,000 mg/kg

### Skin Corrosion/Irritation
**Product:**
- Remarks: Irritating to skin.

### Serious Eye Damage/Eye Irritation
**Product:**
- Remarks: Severe eye irritation

### Respiratory or Skin Sensitisation
**Product:**
- Remarks: Causes sensitisation.

### Germ Cell Mutagenicity
- No data available

### Carcinogenicity
- No data available

### Reproductive Toxicity
- No data available

### STOT - Single Exposure
- No data available

### STOT - Repeated Exposure
- No data available

### Aspiration Toxicity
- No data available

### Further Information
**Product:**
Remarks: No data available

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential

**Product:**
Partition coefficient: n-octanol/water : Remarks: No data available

**Components:**
trichloroethylene :
Partition coefficient: n-octanol/water : log Pow: 2.29

2-(2-butoxyethoxy)ethanol :
Partition coefficient: n-octanol/water : Pow: 1

pentyl acetate :
Partition coefficient: n-octanol/water : log Pow: 2.3

Mobility in soil
No data available

Other adverse effects
No data available

**Product:**

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.
SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of in accordance with local regulations.

Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IMDG (Vessel):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: TDG (Canada):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

The product as delivered to the customer conforms to packaging requirements for shipment by road under US Department of Transportation (DOT) regulations. Additional transportation classifications noted above are for reference only, and not a certification or warranty of the suitability of the packaging for shipment under these alternative transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list: The following substance(s) is/are subject to TSCA 12(b) export notification requirements:
trichloroethylene 79-01-6

No substances are subject to a Significant New Use Rule.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity
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Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
---|---|---|---|
trichloroethylene | 79-01-6 | 100 | 212 |

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards:
- Gases under pressure
- Skin corrosion or irritation
- Serious eye damage or eye irritation
- Respiratory or skin sensitisation
- Carcinogenicity
- Specific target organ toxicity (single or repeated exposure)

SARA 302:
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313:
The following components are subject to reporting levels established by SARA Title III, Section 313:
- trichloroethylene 79-01-6 47 %
- 2-(2-butoxyethoxy)ethanol 112-34-5 4.3931 %
- 2-butoxyethanol 111-76-2 0.0669 %

California Prop. 65
WARNING: This product can expose you to chemicals including trichloroethylene, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL All components of this product are on the Canadian DSL
TSCA On TSCA Inventory

For information on the country notification status for other regions please contact the manufacturer’s regulatory group.

Inventory Acronym and Validity Area Legend:
TSCA (USA), DSL (Canada), NDSL (Canada)

SECTION 16. OTHER INFORMATION
Further information

NFPA: Flammability

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Special hazard.

HMIS III:

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2*</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

OSHA - GHS Label Information:

Signal word: Danger:

Hazard pictograms:

- Flammable
- Hazards to Health
- Reactivity

Hazard statements:

Contains gas under pressure; may explode if heated. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause drowsiness or dizziness. May cause cancer.

Precautionary statements:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/ attention. If skin irritation or rash occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

Storage: Store in a well-ventilated place. Protect from sunlight. Store in a well-ventilated place.

Disposal: Dispose of contents/container in accordance with local regulation.

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We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.
Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®, Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®, Rexodan®, Mykal™, and a number of private labeled brands.