SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP RECIRCULATING DETERGENT 40LB
Material number : 000000000000036334

Manufacturer or supplier’s details
Company : Zep Inc.
Address : 1310 Seaboard Industrial Blvd., NW
Atlanta, GA 30318
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
For a Transportation Emergency : CHEMTREC: 800-424-9300 - All Calls Recorded.
In the District of Columbia 202-483-7616

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance : powder
Colour : white
Odour : odourless

GHS Classification
Acute toxicity (Oral) : Category 4
Skin corrosion : Category 1B
Serious eye damage : Category 1
Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS Label element

Hazard pictograms

Signal word : Danger

Hazard statements : H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary statements : Prevention:
P260 Do not breathe dust or mist.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

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

Potential Health Effects

Carcinogenicity:

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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>sodium carbonate</td>
<td>497-19-8</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Sodiumsilicate, pentahydrate</td>
<td>10213-79-3</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>tetrasodium pyrophosphate</td>
<td>7722-88-5</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>sodium benzoate</td>
<td>532-32-1</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Alcohols, C10-14, ethoxylated</td>
<td>66455-15-0</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

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

If inhaled: Move to fresh air. If symptoms persist, call a physician.

In case of skin contact: Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 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. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Dry chemical

Unsuitable extinguishing media: High volume water jet

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

Hazardous combustion products: Carbon dioxide (CO2) Carbon monoxide Sulphur oxides Smoke Phosphorus 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.

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.
- Avoid dust formation.
- Avoid breathing dust.

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:
- Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling:
- Avoid formation of respirable particles.
- Do not breathe vapours/dust.
- 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.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage:
- Keep container tightly closed in a dry and well-ventilated place.
- Observe label precautions.
- Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid:
- Store and keep away from, oxidizing agents and acids.

SECTION 8. EXPOSURE CONTROLS/PARTIAL 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>tetrasodium pyrophosphate</td>
<td>7722-88-5</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>

Personal protective equipment:

Respiratory protection:
- In the case of dust or aerosol formation use respirator with an approved filter.
- Dust safety masks are recommended when the dust concentration is more than 10 mg/m³.
Hand protection
Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection: Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection: Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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: powder

Colour: white

Odour: odourless

Odour Threshold: no data available

pH: not applicable

Melting point/freezing point: no data available

Boiling point: not applicable

Flash point: not applicable

Evaporation rate: no data available

Upper explosion limit: no data available

Lower explosion limit: no data available

Vapour pressure: no data available

Relative vapour density: no data available

Density: not applicable

Solubility(ies)

Water solubility: partly soluble

Solubility in other solvents: not applicable

Partition coefficient: n-octanol/water: no data available

Auto-ignition temperature: not determined

Thermal decomposition: no data available

Viscosity
Viscosity, kinematic : no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No decomposition if stored and applied as directed.

Conditions to avoid : no data available

Incompatible materials : Acids

Hazardous decomposition products : Carbon dioxide (CO2)

Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 1,177 mg/kg

Method: Calculation method

Components:

sodium carbonate:
Acute oral toxicity : LD50 Oral rat: 4,090 mg/kg

Acute inhalation toxicity : LC50 rat: 5,750 mg/l

Exposure time: 2 h

Sodiumsilicate, pentahydrate:
Acute oral toxicity : LD50 Oral rat: 847 mg/kg

Skin corrosion/irritation

Product:

Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

no data available
SAFETY DATA SHEET

ZEP RECIRCULATING DETERGENT 40LB

Version 1.4  Revision Date 02/03/2015  Print Date 04/26/2016

Germ cell mutagenicity
no data available

Carcinogenicity
no data available

Reproductive toxicity
no data available

sodium carbonate:
Sodiumsilicate, pentahydrate:
tetrasodium pyrophosphate:
sodium benzoate:
Alcohols, C10-14, ethoxylated:

STOT - single exposure
no data available

STOT - repeated exposure
no data available

Aspiration toxicity
no data available

Further information

Product:
Remarks: no data available

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

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
SAFETY DATA SHEET

ZEP RECIRCULATING DETERGENT 40LB

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: no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Dispose of in accordance with local regulations.
Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging: Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International regulation

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

49 CFR
Not regulated as a dangerous good

Special precautions for user
not applicable

SECTION 15. REGULATORY INFORMATION
EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethane-1,2-diol</td>
<td>107-21-1</td>
<td>5000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Acute Health Hazard

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

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Validity Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>On TSCA Inventory</td>
</tr>
<tr>
<td>DSL</td>
<td>This product contains one or several components that are not on the Canadian DSL nor NDSL</td>
</tr>
<tr>
<td>AICS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>NZIoC</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>PICCS</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>IECSC</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
</tbody>
</table>

Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECl (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION
Further information

NFPA: Flammability

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Special hazard.

OSHA GHS Label Information:

Hazard pictograms: Danger

Signal word: Danger

Hazard statements: Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary statements:

Prevention: Do not breathe dust or mist. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin w ith water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously w ith water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Wash contaminated clothing before reuse.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

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

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™, Seilig™, 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.