SAFETY DATA SHEET

ZEP RING MASTER ANGLED NECK 1 CS 12 QTS

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name: ZEP RING MASTER ANGLED NECK 1 CS 12 QTS
Material number: 00000000000184611

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

Recommended use of the chemical and restrictions on use

Recommended use: Bathroom Care Maintenance

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

<table>
<thead>
<tr>
<th>Appearance</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>green</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

GHS Classification

Skin corrosion: Category 1
Serious eye damage: Category 1

GHS label elements

Hazard pictograms: 

Signal word: Danger

Hazard statements: H314 Causes severe skin burns and eye damage.
Precautionary statements: Prevention:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
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/doctor.
P363 Wash contaminated clothing before reuse.

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>orthophosphoric acid</td>
<td>7664-38-2</td>
<td>&gt;= 20 - &lt; 30</td>
</tr>
<tr>
<td>urea hydrochloride</td>
<td>506-89-8</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts</td>
<td>68439-57-6</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Alcohols, C9-11, ethoxylated</td>
<td>68439-46-3</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>hydrochloric acid</td>
<td>7647-01-0</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.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
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.
Wash off immediately with plenty of water for at least 15 minutes.
Remove contaminated clothing and shoes.
Wash contaminated clothing before reuse.
If skin irritation persists, call a physician.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
Rinse immediately 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:
Keep respiratory tract clear.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
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 dependent on exposure (dose, concentration, contact time).
Effects are immediate and delayed.
Symptoms may include blistering, irritation, burns, and pain.
Causes severe skin burns and eye damage.

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

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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
Smoke
Phosphorus compounds
Chlorine compounds
Sulphur oxides
Nitrogen oxides (NOx)

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:
Use personal protective equipment.
emergency procedures
Environmental precautions: 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). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling: Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. To avoid spills during handling keep bottle on a metal tray. 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 bases and alkalies. 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>orthophosphoric acid</td>
<td>7664-38-2</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>3 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>3 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>OSHA P0</td>
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<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>3 mg/m³</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>1 mg/m³</td>
<td>CAL PEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>3 mg/m³</td>
<td>CAL PEL</td>
</tr>
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<td>hydrochloric acid</td>
<td>7647-01-0</td>
<td>C</td>
<td>2 ppm</td>
<td>ACGIH</td>
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<td></td>
<td></td>
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<td>5 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
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<td>C</td>
<td>5 ppm</td>
<td>OSHA Z-1</td>
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<tr>
<td></td>
<td></td>
<td>C</td>
<td>5 ppm</td>
<td>OSHA P0</td>
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</table>
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<table>
<thead>
<tr>
<th></th>
<th>PEL</th>
<th>CAL PEL</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>0.3 ppm</td>
<td>0.45 mg/m³</td>
</tr>
<tr>
<td></td>
<td>2 ppm</td>
<td></td>
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</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
Material: Protective gloves
Remarks: 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 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: liquid
Colour: green
Odour: characteristic
Odour Threshold: No data available
pH: < 1
Melting point/freezing point: No data available
Boiling point: 100 °C
Flash point: No data available
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
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Density : 1.2 g/cm³
Bulk density : No data available
Solubility(ies)
Water solubility : soluble in cold water, soluble in hot water
Solubility in other solvents : not determined
Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : not determined
Thermal decomposition : No data available
Viscosity
Viscosity, dynamic : No data available
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 : Oxidizing agents
                        Bases
Hazardous decomposition products : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
                                Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Aggravated Medical Condition : None known.
Symptoms of Overexposure : Effects are dependent on exposure (dose, concentration, contact time).
                           Effects are immediate and delayed.
                           Symptoms may include blistering, irritation, burns, and pain.

Carcinogenicity:
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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 on OSHA’s list of regulated carcinogens.

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.

Acute toxicity
Product:
Acute oral toxicity: Acute toxicity estimate: 3,693 mg/kg
Method: Calculation method

Components:
Alcohols, C9-11, ethoxylated:
Acute oral toxicity: LD50 Oral Rat: 1,400 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

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

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### 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

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

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### 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

Transportation Regulation: 49 CFR (USA):
UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (PHOSPHORIC ACID, HYDROCHLORIC ACID), 8, II - Limited quantity

Transportation Regulation: IMDG (Vessel):
UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (PHOSPHORIC ACID, HYDROCHLORIC ACID), 8, II - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (PHOSPHORIC ACID, HYDROCHLORIC ACID), 8, II - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (PHOSPHORIC ACID, HYDROCHLORIC ACID), 8, II - Limited quantity

Transportation Regulation: TDG (Canada):
UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (PHOSPHORIC ACID, HYDROCHLORIC ACID), 8, II - 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
No substances are subject to a Significant New Use Rule.
No substances are subject to TSCA 12(b) export notification requirements.

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>orthophosphoric acid</td>
<td>7664-38-2</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
Skin corrosion or irritation
Serious eye damage or eye irritation

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:

- 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:

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

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

OSHA - GHS Label Information:
Hazard pictograms:

Signal word: Danger
Hazard statements: Causes severe skin burns and eye damage.
Precautionary statements:

Prevention: Wash skin thoroughly after handling. Wear protective gloves, protective clothing, eye protection, face protection.
Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. 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/doctor. Wash contaminated clothing before reuse.

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

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