SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP CONCENTRATED GLASS CLEANER 4-1GL
Material number : 000000000000105225

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

<table>
<thead>
<tr>
<th>Appearance</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>blue, clear</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

GHS Classification

Flammable liquids : Category 3
Eye irritation : Category 2A

GHS Label element

Hazard pictograms : ⫸ ⫸

Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.

Precautionary statements : Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
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P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.

Response:
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.

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>ethanol</td>
<td>64-17-5</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>ammonium dodecyl sulphate</td>
<td>2235-54-3</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>tetrasodium ethylenediaminetetraacetate</td>
<td>64-02-8</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

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 : If unconscious place in recovery position and seek medical
advice.
If symptoms persist, call a physician.
Move to fresh air.

In case of skin contact:
Take off contaminated clothing and shoes immediately.
If symptoms persist, call a physician.
Wash clothing before reuse.
Wash off immediately with plenty of water for at least 15 minutes.

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

If swallowed:
Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.

SECTION 5. FIREFIGHTING MEASURES

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

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
- Nitrogen oxides (NOx)
- Sulphur oxides

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.
- 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:
- Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling:
- Avoid formation of aerosol.
- 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.
- Take precautionary measures against static discharges.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Open drum carefully as content may be under pressure.
- Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage:
- No smoking.
- Keep container tightly closed in a dry and well-ventilated place.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Observe label precautions.
- Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid:
- Keep away from oxidising agents and strongly acid or alkaline materials.

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>ethanol</td>
<td>64-17-5</td>
<td>TWA</td>
<td>1,000 ppm</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

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<table>
<thead>
<tr>
<th>TWA</th>
<th>1,000 ppm</th>
<th>1,900 mg/m³</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>1,000 ppm</td>
<td>1,900 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td>TWA</td>
<td>1,000 ppm</td>
<td>1,900 mg/m³</td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>

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

Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection: Safety glasses

Ensure that eyewash stations and safety showers are close to the workstation location.

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: blue, clear

Odour: characteristic

Odour Threshold: no data available

pH: 9.0 - 9.5

Melting point/freezing point: no data available

Boiling point: 100 °C

Flash point: 31.1 °C

Method: closed cup

Evaporation rate: 1

Upper explosion limit: 12 % (V)

Lower explosion limit: 1 % (V)

Vapour pressure: not determined
Relative vapour density : no data available
Density : 0.976 g/cm³
Solubility(ies)
Water solubility : soluble
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, kinematic : 5.5 mm²/s (20 °C)

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 : Oxidizing agents
Hazardous decomposition products : Carbon dioxide (CO₂)
                                Carbon monoxide
                                Nitrogen oxides (NOₓ)
                                Sulphur oxides

SECTION 11. TOXICOLOGICAL INFORMATION
Acute toxicity
Product:
Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method
Components:
ethanol:
Acute oral toxicity : LD50 Oral rat: 7,060 mg/kg
Acute inhalation toxicity : LC50 rat: 124.7 mg/l
Exposure time: 4 h

ammonium dodecyl sulphate:

Acute oral toxicity : LD50 Oral rat: > 5,000 mg/kg

Skin corrosion/irritation

Product:
Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

Product:
Remarks: Eye irritation

Respiratory or skin sensitisation
no data available

Germ cell mutagenicity
no data available

Carcinogenicity
no data available

Reproductive toxicity
no data available

ethanol:
ammonium dodecyl sulphate:
tetrasodium ethylenediaminetetraacetate:

STOT - single exposure
no data available

STOT - repeated exposure
no data available

Aspiration toxicity
no data available

Further information

Product:
Remarks: 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

**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.
Send to a licensed waste management company.

**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.

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**SECTION 14. TRANSPORT INFORMATION**

**Transportation Regulation: 49 CFR (USA):**
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

**Transportation Regulation: IMDG (Vessel):**
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UN1993, FLAMMABLE LIQUID, N.O.S., (ETHANOL), 3, III

Transportation Regulation: IATA (Cargo Air):
UN1993, Flammable liquid, n.o.s., (ETHANOL), 3, III

Transportation Regulation: IATA (Passenger Air):
UN1993, Flammable liquid, n.o.s., (ETHANOL), 3, III

Transportation Regulation: TDG (Canada):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

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

SARA 311/312 Hazards
- Fire Hazard
- Acute Health Hazard

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

SARA 313
- 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:

TSCA  On TSCA Inventory
DSL  This product contains one or several components that are not on the Canadian DSL nor NDSL.
AICS  Not in compliance with the inventory
NZIoC  Not in compliance with the inventory
PICCS  Not in compliance with the inventory
IECSC  Not in compliance with the inventory

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:  
Hazard pictograms:  
Flammability: 3  
Health: 2  
Reactivity: 0  
Special hazard:  

HMIS III:  
HEALTH: 2  
FLAMMABILITY: 3  
PHYSICAL HAZARD: 0  

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

OSHA GHS Label Information:  
Hazard pictograms:  
Signal word: Warning  
Hazard statements: Flammable liquid and vapour. Causes serious eye irritation.  
Precautionary statements:  
Response: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
Storage: Store in a well-ventilated place. Keep cool.  
Disposal: Dispose of contents/container in accordance with local regulation.

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