SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : Heavy Duty Butyl Degreaser 4-1GL
Material number : R08824

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 : liquid
Colour : dark blue, clear
Odour : mild

GHS Classification
Skin corrosion : Category 1A
Serious eye damage : Category 1

GHS Label element
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.
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:
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 Confirmed animal carcinogen with unknown relevance to humans

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>2-butoxyethanol</td>
<td>111-76-2</td>
<td>&gt;= 20 - &lt; 30</td>
</tr>
<tr>
<td>sodium xylenesulphonate</td>
<td>1300-72-7</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>disodium metasilicate</td>
<td>6834-92-0</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: 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.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact:
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed:
Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do NOT induce vomiting.
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.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Dry chemical
Unsuitable extinguishing media: High volume water jet
Hazardous combustion products:
Carbon dioxide (CO2)
Carbon monoxide
Smoke
Sulphur oxides
Specific extinguishing methods:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information: Standard procedure for chemical fires.
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.
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:
Neutralise with acid.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
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:
- 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>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TWA</td>
<td>20 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 ppm, 24 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>50 ppm, 240 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>25 ppm, 120 mg/m³</td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

<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>2-BUTOXYETHANOL</td>
<td>111-76-2</td>
<td>Butoxyacetic acid (BAA)</td>
<td>Urine</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>200 mg/g</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

Remarks: Creatinine

Personal protective equipment
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: 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: dark blue, clear
Odour: mild
Odour Threshold: no data available
pH: 12.5 - 13.52
Melting point/freezing point: no data available
Boiling point: 104.44 °C
Flash point: does not flash
Evaporation rate: 1
Upper explosion limit: no data available
Lower explosion limit: no data available
Vapour pressure: not determined
Relative vapour density: no data available
Density: 1.021 g/cm³
Solubility(ies):
Water solubility: soluble
Partition coefficient: n-octanol/water: no data available
Auto-ignition temperature: not determined
Thermal decomposition: no data available
Viscosity: 5.7 mm²/s (20 °C)
SECTION 10. STABILITY AND REACTIVITY

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
Oxidizing agents
Hazardous decomposition products : Carbon dioxide (CO2)
Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:
Acute oral toxicity : Acute toxicity estimate : 2,129 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : 4,869 mg/kg
Method: Calculation method

Components:
disodium metasilicate:
Acute oral toxicity : LD50 rat: 1,153 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

Heavy Duty Butyl Degreaser 4-1GL

Germ cell mutagenicity
no data available

Carcinogenicity
no data available

Reproductive toxicity
no data available

2-butoxyethanol:
sodium xylenesulphonate:
disodium metasilicate:

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
Remarks: This product neither contains, nor was manufactured
Additional ecological information: no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Dispose of in accordance with local regulations.
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
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 : 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 All components of this product are on the Canadian DSL.
- AICS On the inventory, or in compliance with the inventory
- NZIoC On the inventory, or in compliance with the inventory
- PICCS On the inventory, or in compliance with the inventory
- IECSC On the inventory, or in compliance with the inventory

Inventory Acronym and Validity Area Legend:
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

HMIS III:

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

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

OSHA GHS Label Information:
SAFETY DATA SHEET

Heavy Duty Butyl Degreaser 4-1GL

Version 1.0  Revision Date 10/18/2014  Print Date 05/13/2015

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): Remove/ Take off immediately all contaminated clothing. Rinse skin with 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 with 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 locked up.
  Disposal: Dispose of contents/container in accordance with local regulation.

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