

## Zep Formula 448 4-1GL

Version 1.1

Revision Date 04/20/2015

Print Date 05/09/2016

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : Zep Formula 448 4-1GL

Material number : 000000000000120324

#### Manufacturer or supplier's details

Company : Zep Inc.

Address : 1310 Seaboard Industrial Blvd., NW  
Atlanta, GA 30318

Telephone : 404-352-1680

#### Emergency telephone numbers

<b>For SDS Information</b>	: Compliance Services 1-877-428-9937
<b>For a Medical Emergency</b>	: 877-541-2016 Toll Free - All Calls Recorded
<b>For a Transportation Emergency</b>	: CHEMTREC: 800-424-9300 - All Calls Recorded. In the District of Columbia 202-483-7616

### SECTION 2. HAZARDS IDENTIFICATION

#### Emergency Overview

Appearance	liquid
Colour	clear, dark blue
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.

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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

2-butoxyethanol

111-76-2

**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**

Chemical Name	CAS-No.	Concentration [%]
2-butoxyethanol	111-76-2	>= 1 - < 5
Sodium metasilicate (disodium salt)	6834-92-0	>= 1 - < 5
sodium dodecylbenzenesulfonate	25155-30-0	>= 1 - < 5
tetrasodium ethylenediaminetetraacetate	64-02-8	>= 1 - < 5
Fatty acids, tall-oil, sodium salts	61790-45-2	>= 1 - < 5

### 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.

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- 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.  
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
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.  
Rinse immediately with plenty of water for at least 15 minutes.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
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.  
Take victim immediately to hospital.

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**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Dry chemical  
Water  
Foam  
Carbon dioxide (CO<sub>2</sub>)
- 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 (CO<sub>2</sub>)  
Carbon monoxide  
Smoke  
Nitrogen oxides (NO<sub>x</sub>)
- 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.

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### 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 : 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 : Oxidizing agents  
Do not freeze.  
Do not store near acids.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-butoxyethanol	111-76-2	TWA	20 ppm	ACGIH
		TWA	5 ppm 24 mg/m <sup>3</sup>	NIOSH REL
		TWA	50 ppm 240 mg/m <sup>3</sup>	OSHA Z-1
		TWA	25 ppm 120 mg/m <sup>3</sup>	OSHA P0

#### Biological occupational exposure limits

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Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-BUTOXYETHANOL	111-76-2	Butoxyacetic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g	ACGIH BEI
Remarks: Creatinine						

**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 : Ensure that eyewash stations and safety showers are close to the workstation location.  
Tightly fitting safety goggles

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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Colour : clear, dark blue

Odour : mild

Odour Threshold : no data available

pH : > 13

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

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Vapour pressure	: not determined
Relative vapour density	: no data available
Density	: 1.058 g/cm <sup>3</sup>
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: not determined
Thermal decomposition	: no data available
Viscosity	
Viscosity, kinematic	: 5.2 mm <sup>2</sup> /s (20 °C)

**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	: Extremes of temperature and direct sunlight.
Incompatible materials	: Acids Oxidizing agents
Hazardous decomposition products	: Carbon oxides Nitrogen oxides (NO <sub>x</sub> )

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

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

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**Components:****Sodium metasilicate (disodium salt):**

Acute oral toxicity : LD50 rat: 1,153 mg/kg

**sodium dodecylbenzenesulfonate:**

Acute oral toxicity : LD50 Oral rat: 438 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

**2-butoxyethanol:****Sodium metasilicate (disodium salt):****sodium dodecylbenzenesulfonate:****tetrasodium ethylenediaminetetraacetate:****Fatty acids, tall-oil, sodium salts:****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  
SubstancesRemarks 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 : 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):  
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL



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Transportation Regulation: IMDG (Vessel):  
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IATA (Cargo Air):  
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IATA (Passenger Air):  
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

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

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**SECTION 15. REGULATORY INFORMATION**
**EPCRA - Emergency Planning and Community Right-to-Know Act**
**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium dodecylbenzenesulfonate	25155-30-0	1000	*

\*: 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** : 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** Not in compliance with the inventory  
**PICCS** On the inventory, or in compliance with the inventory

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**IECSC** On the inventory, or in compliance with the inventory

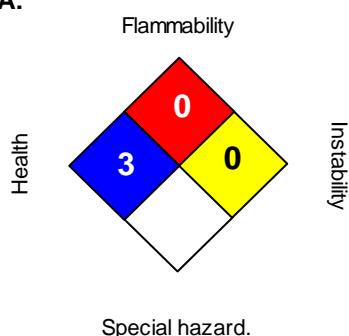
### Inventory Acronym and Validity Area Legend:

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:



#### HMIS III:

<b>HEALTH</b>	<b>3</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

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): 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.

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.

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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.