

# SAFETY DATA SHEET

## ZEP FS FORMULA 4089

Version 3.1

Revision Date 10/01/2023

Print Date 04/27/2025

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP FS FORMULA 4089

Material number : 000000000000246596

**Manufacturer or supplier's details**

Company : Zep Inc.

Address : 350 Joe Frank Harris Parkway, SE  
Emerson, GA 30137

Telephone : Compliance Services - 877-428-9937

#### Emergency telephone numbers

**For SDS Information** : Compliance Services - 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**

### SECTION 2. HAZARDS IDENTIFICATION

#### Emergency Overview

Appearance	liquid
Colour	light green, yellow
Odour	characteristic

#### GHS Classification

Skin corrosion : Category 1

Serious eye damage : Category 1

#### GHS label elements

Hazard pictograms :



Corrosion

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): Take off

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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 to an approved waste disposal plant.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Hazardous components

Chemical name	CAS-No.	Concentration [%]
sodium hydroxide	1310-73-2	$\geq 5$ - $< 10$
sodium hypochlorite	7681-52-9	$\geq 3$ - $< 5$
sodium xylenesulphonate	1300-72-7	$\geq 1$ - $< 5$
dodecyldimethylamine oxide	1643-20-5	$\geq 1$ - $< 3$

The exact percentages of disclosed substances are withheld as trade secrets.

## 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.
- 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.  
Wash off immediately with plenty of water for at least 15 minutes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.

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Rinse immediately with plenty of water for at least 15 minutes.

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| If swallowed  | : Keep respiratory tract clear.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.<br>DO NOT induce vomiting unless directed to do so by a physician or poison control center.<br>Take victim immediately to hospital.              |
| Most important symptoms and effects, both acute and delayed | : Effects are immediate and delayed.<br>Symptoms may include blistering, irritation, burns, and pain.<br>Effects are dependent on exposure (dose, concentration, contact time).<br>Causes severe skin burns and eye damage.<br>Review section 2 of SDS to see all potential hazards. |
| Notes to physician  | : Treat symptomatically. Symptoms may be delayed.  |

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### SECTION 5. FIREFIGHTING MEASURES

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| Suitable extinguishing media                  | : Dry chemical<br>Water spray jet<br>Carbon dioxide (CO <sub>2</sub> )<br>Alcohol-resistant foam  |
| 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> )<br>Carbon monoxide<br>Sulphur oxides<br>Smoke   |
| 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.<br>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

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| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment.<br>Ensure adequate ventilation.<br>Remove all sources of ignition.<br>Evacuate personnel to safe areas. |
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- 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).  
Keep in suitable, closed containers for disposal.  
Sweep up or vacuum up spillage and collect in suitable container 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.  
Avoid exposure - obtain special instructions before use.
- Conditions for safe storage : 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.  
No smoking.
- Materials to avoid : Do not store near acids.  
Oxidizing agents

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
sodium hydroxide	1310-73-2	C	2 mg/m3	ACGIH
		C	2 mg/m3	NIOSH REL
		TWA	2 mg/m3	OSHA Z-1
		C	2 mg/m3	OSHA P0
		C	2 mg/m3	CAL PEL
sodium hypochlorite	7681-52-9	STEL	2 mg/m3	US WEEL

Engineering measures : effective ventilation in all processing areas

Personal protective equipment

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Respiratory protection	: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hand protection	
Material	: Protective gloves
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	: light green, yellow
Odour	: characteristic
Odour Threshold	: No data available
pH	: 13 - 14
Melting point/freezing point	: No data available
Boiling point	: 100 °C
Flash point	: does not flash
Evaporation rate	: < 1
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: 1.176 g/cm <sup>3</sup>
Solubility(ies)	
Water solubility	: soluble in cold water, soluble in hot water
Partition coefficient: n-	: No data available

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octanol/water

Auto-ignition temperature : not determined

Thermal decomposition : No data available

Viscosity

Viscosity, kinematic : 10.4 mm<sup>2</sup>/s (20 °C)

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### 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 : Reducing agents  
Oxidizing agents

Hazardous decomposition products : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).  
Hydrogen chloride gas

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Potential Health Effects

Aggravated Medical Condition : None known.

Symptoms of Overexposure : Effects are immediate and delayed.  
Symptoms may include blistering, irritation, burns, and pain.  
Effects are dependent on exposure (dose, concentration, contact time).  
Causes severe skin burns and eye damage.  
Review section 2 of SDS to see all potential hazards.  
Treat symptomatically. Symptoms may be delayed.

#### 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

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### OSHA

carcinogen by ACGIH.

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

#### Components:

#### **sodium hydroxide:**

Acute dermal toxicity : Acute toxicity estimate Rabbit: 1,350 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

**Components:**

**sodium hydroxide :**

Toxicity to fish	: LC50 (Gambusia affinis (Mosquito fish)): 125 mg/l Exposure time: 96 h Test Method: static test
	LC50 (Oncorhynchus tshawytscha (chinook salmon)): 152 mg/l Exposure time: 96 h
	LC50 (Oncorhynchus mykiss (rainbow trout)): 40 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 34 - 47 mg/l Exposure time: 48 h
	EC50 (Crangon crangon (shrimp)): 33 - 100 mg/l Exposure time: 48 h

#### Persistence and degradability

No data available

#### Bioaccumulative potential

**Product:**

Partition coefficient: n-octanol/water	: Remarks: No data available
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#### 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	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

**Components:**

**sodium hydroxide :**



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Additional ecological information : Harmful to aquatic life.

### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
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

Transportation Regulation: 49 CFR (USA):  
UN3266, Corrosive liquid, basic, inorganic, n.o.s., (SODIUM HYDROXIDE), 8, II

Transportation Regulation: IMDG (Vessel):  
UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (SODIUM HYDROXIDE), 8, II

Transportation Regulation: IATA (Cargo Air):  
UN3266, Corrosive liquid, basic, inorganic, n.o.s., (SODIUM HYDROXIDE), 8, II

Transportation Regulation: IATA (Passenger Air):  
UN3266, Corrosive liquid, basic, inorganic, n.o.s., (SODIUM HYDROXIDE), 8, II

Transportation Regulation: TDG (Canada):  
UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (POTASSIUM HYDROXIDE), 8, II

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**

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### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium hypochlorite	7681-52-9	100	2356

### 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  
Corrosive to metals  
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)

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## SECTION 16. OTHER INFORMATION

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### Further information

#### NFPA:

HEALTH	3
FLAMMABILITY	0
INSTABILITY	0
SPECIAL HAZARD.	

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

#### HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0

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

### OSHA - GHS Label Information:

Hazard pictograms



Corrosion

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 to an approved waste disposal plant.

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