

SAFETY DATA SHEET

ZEP FS FORMULA 3685

Version 2.1

Revision Date 10/01/2023

Print Date 04/27/2025

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP FS FORMULA 3685

Material number : 000000000000249485

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 | colourless |
| Odour | odourless |

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 [%] |
|----------------------|-----------|--------------------|
| orthophosphoric acid | 7664-38-2 | ≥ 30 - < 50 |
| sulphuric acid | 7664-93-9 | ≥ 3 - < 5 |

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

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Get medical attention immediately.
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 inhaled, remove to fresh air.
- 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.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.

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If eye irritation persists, consult a specialist.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

- 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 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.
- 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
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
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.

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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 : Neutralize with chalk, alkali solution or ammonia.
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.
- 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|----------------------|-----------|----------------------------------|---|-----------|
| orthophosphoric acid | 7664-38-2 | TWA | 1 mg/m3 | ACGIH |
| | | STEL | 3 mg/m3 | ACGIH |
| | | TWA | 1 mg/m3 | NIOSH REL |
| | | ST | 3 mg/m3 | NIOSH REL |
| | | TWA | 1 mg/m3 | OSHA Z-1 |
| | | TWA | 1 mg/m3 | OSHA P0 |
| | | STEL | 3 mg/m3 | OSHA P0 |
| | | PEL | 1 mg/m3 | CAL PEL |
| sulphuric acid | 7664-93-9 | STEL | 3 mg/m3 | CAL PEL |
| | | TWA (Thoracic fraction) | 0.2 mg/m3 | ACGIH |
| | | TWA | 1 mg/m3 | NIOSH REL |
| | | TWA | 1 mg/m3 | OSHA Z-1 |
| | | TWA | 1 mg/m3 | OSHA P0 |
| | | PEL | 0.1 mg/m3 | CAL PEL |
| | | STEL | 3 mg/m3 | CAL PEL |

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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.
Access to clean water to rinse eyes must be available, options include: eye wash stations or showers, or eye wash bottles with pure water.

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 : colourless

Odour : odourless

Odour Threshold : No data available

pH : 1 - 2

Melting point/freezing point : No data available

Boiling point : 107 °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 : 1.28 g/cm³

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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 | : 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 | : Bases |
| Hazardous decomposition products | : Carbon oxides Oxides of phosphorus Sulphur oxides |

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.

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| | | |
|--------------|--|-----------|
| ACGIH | Suspected human carcinogen | |
| OSHA | sulphuric acid | 7664-93-9 |
| | No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. | |
| NTP | Known to be human carcinogen | |
| | sulphuric acid | 7664-93-9 |

Acute toxicity

No data available

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

SECTION 12. ECOLOGICAL INFORMATION

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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

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.
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): UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (PHOSPHORIC ACID, SULFURIC ACID), 8, II |
|--|

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

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

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

Transportation Regulation: TDG (Canada):
UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (PHOSPHORIC ACID, SULFURIC ACID), 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

CERCLA Reportable Quantity

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|----------------------|-----------|--------------------|-----------------------------|
| orthophosphoric acid | 7664-38-2 | 5000 | * |

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|----------------|-----------|--------------------|-----------------------------|
| sulphuric acid | 7664-93-9 | 1000 | * |

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:
sulphuric acid 7664-93-9 3.36 %

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.

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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

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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.

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