SAFETY DATA SHEET



ZEP HD FLOOR STRIP CONC Z

Version 1.1 Revision Date 04/10/2015 Print Date 07/16/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP HD FLOOR STRIP CONC Z

Material number : ZULFFS5G

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 : CHEMTREC: 800-424-9300 - All Calls Recorded.

Emergency In the District of Columbia 202-483-7616

Note: This product is labeled as a consumer product in accordance with the United States Consumer Product Safety Commission regulations. The warnings presented below in this Safety Data Sheet (SDS) comply with the 2012 OSHA Hazard Communication Standard (GHS - Globally Harmonized System of Classification and Labeling). The requirements for the labeling and warnings of consumer products may differ from those required for GHS based hazard communication.

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

| Appearance | liquid |
|------------|-------------------|
| Colour | colourless, clear |
| Odour | solvent-like |

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.



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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

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.

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 | >= 10 - < 20 |
| 2-aminoethanol | 141-43-5 | >= 5 - < 10 |

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.



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If unconscious place in recovery position and seek medical

advice

If symptoms persist, call a physician.

Remove to fresh air.

If unconscious place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.

Wash off immediately with plenty of water for at least 15

minutes.

If on clothes, remove clothes.

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 : Remove contact lenses.

Protect unharmed eye.

If eye irritation persists, consult a specialist.

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

Keep eye wide open while rinsing.

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 : 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.

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

Water spray jet Alcohol-resistant foam Carbon dioxide (CO2)



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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)

Specific extinguishing

methods

: Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.

Further information : Standard procedure for chemical fires.

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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.

Ensure adequate ventilation.

Refer to protective measures listed in sections 7 and 8. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

: 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).

Sweep up or vacuum up spillage and collect in suitable

container for disposal.

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.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the



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application area.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes.

Do not breathe vapours or spray mist.

Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national

regulations.

Always replace cap after use.

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 : Store and keep away from, oxidizing agents and 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/m3 | NIOSH REL |
| | | TWA | 50 ppm 240 mg/m3 | OSHA Z-1 |
| | | TWA | 25 ppm 120 mg/m3 | OSHA P0 |
| 2-aminoethanol | 141-43-5 | TWA | 3 ppm | ACGIH |
| | | STEL | 6 ppm | ACGIH |
| | | TWA | 3 ppm 8 mg/m3 | NIOSH REL |
| | | ST | 6 ppm 15 mg/m3 | NIOSH REL |
| | | TWA | 3 ppm 6 mg/m3 | OSHA Z-1 |
| | | STEL | 6 ppm 15 mg/m3 | OSHA P0 |
| | | TWA | 3 ppm 8 mg/m3 | OSHA P0 |

Biological occupational exposure limits



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| Component | CAS-No. | Control | Biological | Sampling | Permissible | Basis |
|---------------------|----------|----------------------------|------------|--|---------------|-----------|
| | | parameters | specimen | time | concentration | |
| 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.

Safety glasses

Wear face-shield and protective suit for abnormal processing

problems.

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 : colourless, clear

Odour : solvent-like

Odour Threshold : no data available

pH : 11.5 - 12.5

Melting point/freezing point : no data available

Boiling point : > 100 °C Flash point : > 93.3 °C



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Method: TCC

Evaporation rate : < 1

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : 19 hPa (20 °C)

Relative vapour density : no data available

Density : 1 g/cm3

Solubility(ies)

Water solubility : soluble in cold water, soluble in hot water

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 : no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable

No decomposition if stored and applied as directed.

Chemical stability : Stable under normal conditions.

No decomposition if stored and applied as directed.

Possibility of hazardous

reactions

: No decomposition if stored and applied as directed.

Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.

Extremes of temperature and direct sunlight.

no data available

Incompatible materials : Acids

Oxidizing agents

Hazardous decomposition

products

: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION



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Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 2,682 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 : 4,585 mg/kg

Method: Calculation method

Components:

2-aminoethanol:

Acute oral toxicity : LD50 Oral mouse: 700 mg/kg

LD50 Oral rat: 1,515 mg/kg

Acute inhalation toxicity : LC50 mouse: > 1.21 mg/l

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: 2-aminoethanol:

STOT - single exposure

no data available

STOT - repeated exposure

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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

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 : Dispose of in accordance with local regulations.

Do not contaminate ponds, waterways or ditches with

chemical or used container.

The product should not be allowed to enter drains, water



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courses or the soil.

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.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):

NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

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

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

| ' | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|---------------------|----------|--------------------|-----------------------------|
| 2,2'-iminodiethanol | 111-42-2 | 100 | * |

^{*:} 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

Acute Health Hazard



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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 WARNING! This product contains a chemical known to the

State of California to cause cancer.

2,2'-iminodiethanol 111-42-2

The components of this product are reported in the following inventories:

TSCA On TSCA Inventory

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

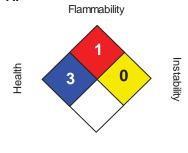
Inventory Acronym and Validity Area Legend:

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:



Special hazard.

HMIS III:

| HEALTH | 3 |
|-----------------|---|
| FLAMMABILITY | 1 |
| PHYSICAL HAZARD | 0 |

0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms



Signal w ord : Danger:



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Hazard statements Precautionary statements Causes severe skin burns and eye damage.

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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