

| Version 1.2 | | Revision Date 02/05/2018 | Print Date 12/09/2021 |
|--------------------------|---------|----------------------------------|-----------------------|
| | | | |
| SECTION 1. PRODUCT AND | COMPA | NY IDENTIFICATION | |
| Material name | : | ZEP STREAK-FREE GLASS CLE | ANER_12CS 32OZ |
| Material number | : | ZU112032 | |
| Manufacturer or supplier | 's deta | ils | |
| Company | : | Zep Inc. | |
| Address | : | 350 Joe Frank Harris Parkway, SE | E |

Emerson, GA 30137

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 |

Recommended use of the chemical and restrictions on use

Recommended use : Glass Cleaner

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 | dark, blue |
| Odour | pleasant |

GHS Classification

| Flammable liquids | : Category 4 |
|--------------------------|--|
| GHS label elements | |
| Signal word | : Warning |
| Hazard statements | : H227 Combustible liquid. |
| Precautionary statements | Prevention: P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P280 Wear protective gloves/ eye protection/ face protection. Response: P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. |



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| | Storage: P403 + P235 Store in a well-ventil Disposal: P501 Dispose of contents/contain regulation. | |
| | | |

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Mixture

Hazardous components

| Chemical name | CAS-No. | Concentration [%] | |
|-----------------|----------|-------------------|--|
| 2-butoxyethanol | 111-76-2 | >= 1 - < 5 | |
| | | | |

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

SECTION 4. FIRST AID MEASURES

| General advice | : | Do not leave the victim unattended. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. 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 | : | If skin irritation persists, call a physician. Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. |
| In case of eye contact | : | Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist. Keep eye wide open while rinsing. Rinse immediately with plenty of water for at least 15 minutes. |
| 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. |
| Most important symptoms and effects, both acute and delayed | : | Effects may be delayed, symptoms may include minor eye or skin irritation. Overexposure may cause mild eye or skin irritation. |
| Notes to physician | : | Treat symptomatically. Symptoms may be delayed. |



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SECTION 5. FIREFIGHTING MEASURES

| Suitable extinguishing media | : | Carbon dioxide (CO2) Water spray jet Alcohol-resistant foam Dry chemical |
|---|---|--|
| 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 |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Further information | : | For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers. |
| 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. |
|---|---|--|
| Environmental precautions | : | Prevent further leakage or spillage if safe to do so. |
| Methods and materials for containment and cleaning up | : | Neutralise with acid. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal. |

SECTION 7. HANDLING AND STORAGE

| Advice on safe handling | Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Avoid exposure - obtain special instructions before use. |
|-------------------------|---|
| | Avoid exposure - obtain special instructions before use. Take precautionary measures against static discharges. |

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| Conditions for safe storage | : No smoking. Keep in a well-ventilated place. Observe label precautions. Electrical installations / working ma the technological safety standards. | |
| Materials to avoid | : 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 |
|-----------------|----------|-------------------------------------|---|-----------|
| 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 |
| | | PEL | 20 ppm 97 mg/m3 | CAL PEL |

Biological occupational exposure limits

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

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 Remarks | | Protective gloves The suitability for a specific workplace should be discussed with the producers of the protective gloves. |
| Eye protection | : | Safety glasses |
| Skin and body protection | : | Impervious clothing Choose body protection according to the amount and |



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| | concentration of the dangerous sub | stance at the work place. |
| Hygiene measures | : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at t | he end of workday. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| Appearance | : | liquid |
|--|---|---|
| Colour | : | dark, blue |
| Odour | : | pleasant |
| Odour Threshold | : | No data available |
| рН | : | 10.5 - 11.5 |
| Melting point/freezing point | : | No data available |
| Boiling point | : | 96.1 °C |
| Flash point | : | 76.7 °C Method: closed cup |
| Evaporation rate | : | 1 |
| Upper explosion limit | : | No data available |
| Lower explosion limit | : | No data available |
| Vapour pressure | : | not determined |
| | | No data available |
| Relative vapour density | : | No data available |
| Density | : | 0.998 g/cm3 |
| Solubility(ies) | | |
| Water solubility | : | soluble in cold water, soluble in hot water |
| 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. | |



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| Possibility of hazardous reactions | : Vapours may form explosive mixtu No decomposition if stored and ap | | |
| Conditions to avoid | : Heat, flames and sparks. Extremes of temperature and direct | ct sunlight. | |
| Incompatible materials | : Oxidizing agents | | |
| Hazardous decomposition products | : Carbon oxides | | |

SECTION 11. TOXICOLOGICAL INFORMATION

| Potential Health Effects | |
|---|--|
| Aggravated Medical Condition Symptoms of Overexposure | None known. Effects may be delayed, symptoms may include minor eye or skin irritation. |
| Carcinogenicity: | |
| IARC ACGIH | 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. Confirmed animal carcinogen with unknown relevance to humans |
| | 2-butoxyethanol 111-76-2 ethanol 64-17-5 |
| OSHA | No component of this product present at levels greater than or |
| NTP | equal to 0.1% is on OSHA's list of regulated carcinogens. 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 | |
| Product: | |
| Acute oral toxicity | : Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method |
| Acute inhalation toxicity | : Acute toxicity estimate : > 200 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 |
| Components: | |



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| 2-butoxyethanol: | | |
| Acute oral toxicity | : LD50 Oral Rat: 880 mg/kg | |
| Aquita darmal taviaitu | : LD50 Dermal Rabbit: 1,060 mg/kg | |
| Acute dermal toxicity | . LDS0 Deimai Rabbit. 1,000 mg/kg | |
| Skin corrosion/irritation | | |
| Product: | | |
| Remarks: May cause skin ir | rritation and/or dermatitis. | |
| Serious eye damage/eye irrita | tion | |
| Product: | | |
| Remarks: Contact with eyes | s may cause irritation. | |
| Pomarka: Vanaura may aa | use irritation to the even respiratory system | a and the ekin |
| Remarks. Vapours may cau | use irritation to the eyes, respiratory system | n and the skin. |
| Respiratory or skin sensitisation | on | |
| 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 availal | ble | |
| | | |
| | | |
| | | |
| SECTION 12. ECOLOGICAL IN | FORMATION | |
| Ecotoxicity | | |
| No data available | | |



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| 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; Stratospheric Ozone - CAA Sectior Substances | |
| Remarks | This product neither contains, nor w with a Class I or Class II ODS as do Clean Air Act Section 602 (40 CFR + B). | efined by the U.S. |
| 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 courses or the soil. |
| Contaminated packaging | Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum. |

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

SAFETY DATA SHEET



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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

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 | Calculated product RQ |
|---------------------------|-----------|--------------|-----------------------|
| | | (lbs) | (lbs) |
| ammonia, aqueous solution | 1336-21-6 | 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 | : | Flammable (gases, aerosols, liquids | , or solids) | |
|----------------------|---|---|--------------|----------------|
| SARA 302 | : | No chemicals in this material are sul requirements of SARA Title III, Sect | , , | ıg |
| SARA 313 | : | The following components are subje established by SARA Title III, Section 2-butoxyethanol | | els 2.001 % |
| California Prop. 65 | | | | |
| | | This product does not contain any California to cause cancer, birth de reproductive harm. | | |



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

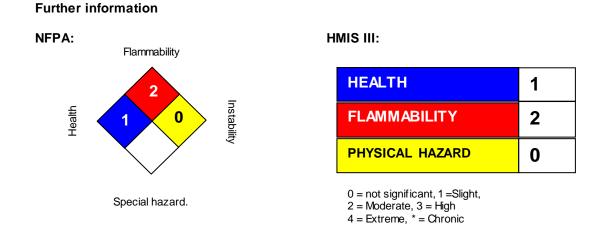
| TSCA | On TSCA Inventory |
|------|--|
| DSL | All components of this product are on the Canadian DSL |

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



OSHA - GHS Label Information:

| Signal word Hazard statements Precautionary statements | : Warning: : Combustible liquid. |
|--|---|
| | Prevention: Keep aw ay from heat/sparks/open flames/hot surfaces. No smoking. Wear protective gloves/ eye protection/face protection. Response: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. |
| | Storage : Store in a w ell-ventilated place. Keep cool. Disposal : Dispose of contents/container in accordance with local regulation. |

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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.

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.