

ZEP FOAMING COIL CLEANER AERO DZ

Version 2.0

Revision Date 07/06/2017

Print Date 02/02/2018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP FOAMING COIL CLEANER AERO DZ

Material number : 00000000000020201

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 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

Recommended use : Specialty Cleaner and Remover

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

| | |
|------------|------------------------------------|
| Appearance | Aerosol containing a liquefied gas |
| Colour | colourless, clear |
| Odour | characteristic |

GHS Classification

Gases under pressure : Liquefied gas

Skin corrosion : Category 1

Serious eye damage : Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H280 Contains gas under pressure; may explode if heated.
H314 Causes severe skin burns and eye damage.Precautionary statements : **Prevention:**
P260 Do not breathe dust or mist.
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): Take off 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.

Storage:

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Disposal:

Dispose of contents/container in accordance with local regulation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

| Chemical name | CAS-No. | Concentration [%] |
|---|------------|-------------------|
| 1-(1-methyl-2-propoxyethoxy)propan-2-ol | 29911-27-1 | >= 1 - < 5 |
| butane | 106-97-8 | >= 1 - < 5 |
| propane-1,2-diol | 57-55-6 | >= 1 - < 5 |
| propane | 74-98-6 | >= 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.
- If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
If skin irritation persists, call a physician.
- In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water for at least 15 minutes.
Keep eye wide open while rinsing.
- If swallowed : Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.

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Most important symptoms and effects, both acute and delayed : Effects are immediate and delayed. Effects are dependent on exposure (dose, concentration, contact time). Symptoms may include blistering, irritation, burns, and pain. 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 : Alcohol-resistant foam
Carbon dioxide (CO₂)
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 : 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.
Ensure adequate ventilation.
Remove all sources of ignition.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Prevent product from entering drains.
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.

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SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
Keep in a dry, cool and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Do not freeze.
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 |
|------------------|----------|-------------------------------|--|-----------|
| butane | 106-97-8 | TWA | 800 ppm 1,900 mg/m ³ | NIOSH REL |
| | | TWA | 800 ppm 1,900 mg/m ³ | OSHA P0 |
| | | PEL | 800 ppm 1,900 mg/m ³ | CAL PEL |
| propane-1,2-diol | 57-55-6 | TWA | 10 mg/m ³ | US WEEL |
| propane | 74-98-6 | TWA | 1,000 ppm | ACGIH |
| | | TWA | 1,000 ppm 1,800 mg/m ³ | NIOSH REL |
| | | TWA | 1,000 ppm 1,800 mg/m ³ | OSHA Z-1 |
| | | TWA | 1,000 ppm 1,800 mg/m ³ | OSHA P0 |
| | | PEL | 1,000 ppm 1,800 mg/m ³ | CAL PEL |

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

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| | |
|--------------------------|---|
| 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 |
| 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 | : Wash hands before breaks and at the end of workday. When using do not eat, drink or smoke. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|---|
| Appearance | : Aerosol containing a liquefied gas |
| Colour | : colourless, clear |
| Odour | : characteristic |
| Odour Threshold | : No data available |
| pH | : 12 - 13 |
| Melting point/freezing point | : Not applicable |
| Boiling point | : 100 °C |
| Flash point | : Not applicable |
| Evaporation rate | : 1 |
| Flammability (solid, gas) | : Not classified as a flammability hazard |
| Upper explosion limit | : Not applicable |
| Lower explosion limit | : Not applicable |
| Vapour pressure | : No data available |
| Relative vapour density | : No data available |
| Density | : 1.017 g/cm ³ |
| Solubility(ies) | |
| Water solubility | : soluble in hot water, soluble in cold water |
| Solubility in other solvents | : 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 |

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Heat of combustion : < 20 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.
No decomposition if stored and applied as directed.

Conditions to avoid : Heat, flames and sparks.
Extremes of temperature and direct sunlight.

Incompatible materials : Oxidizing agents
Acids

Hazardous decomposition products : Carbon oxides
Organic Substances

SECTION 11. TOXICOLOGICAL INFORMATION**Potential Health Effects**

Aggravated Medical Condition : None known.

Symptoms of Overexposure : Effects are immediate and delayed.
Effects are dependent on exposure (dose, concentration, contact time).
Symptoms may include blistering, irritation, burns, and pain.

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 carcinogen by ACGIH.

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.

Acute toxicity**Product:**

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

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

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**Ecotoxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential**Product:**Partition coefficient: n- : Remarks: No data available
octanol/water**Components:**

1-(1-methyl-2-propoxyethoxy)propan-2-ol :

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Partition coefficient: n-octanol/water : Pow: 7.7
butane :
 Partition coefficient: n-octanol/water : Pow: 2.89
propane-1,2-diol :
 Partition coefficient: n-octanol/water : log Pow: -1.07

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.
 Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

| |
|---|
| Transportation Regulation: 49 CFR (USA): ORM-D, CONSUMER COMMODITY |
|---|

| |
|---|
| Transportation Regulation: IMDG (Vessel): UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity |
|---|

| |
|--|
| Transportation Regulation: IATA (Cargo Air): |
|--|

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UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

 Transportation Regulation: IATA (Passenger Air):
 UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

 Transportation Regulation: TDG (Canada):
 UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

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) |
|----------------|-----------|--------------------|-----------------------------|
| sodium nitrite | 7632-00-0 | 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 : Sudden Release of Pressure Hazard
Acute Health Hazard

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 WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

toluene

108-88-3

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

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For information on the country notification status for other regions please contact the manufacturer's regulatory group.

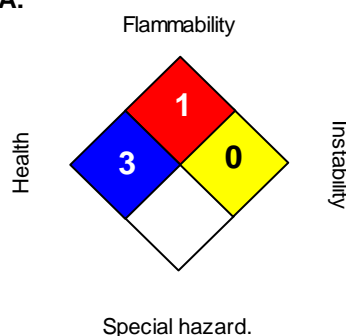
Inventory Acronym and Validity Area Legend:

TSCA (USA), DSL (Canada), NDSL (Canada)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

| | |
|-----------------|---|
| HEALTH | 3 |
| FLAMMABILITY | 1 |
| PHYSICAL HAZARD | 2 |

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

OSHA - GHS Label Information:

Hazard pictograms



Signal word

: **Danger:**

Hazard statements

: Contains gas under pressure; may explode if heated. Causes severe skin burns and eye damage.

Precautionary statements

Prevention: Do not breathe dust or mist. 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.
Storage: Protect from sunlight. Store in a well-ventilated place.
Disposal: Dispose of contents/container in accordance with local regulation.

| | |
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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

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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.