

ZEP BATTERY COAT AERO

Version 3.0 Revision Date 03/17/2017 Print Date 10/27/2017

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP BATTERY COAT AERO

Material number : 0000000000010800

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.

In the District of Columbia 202-483-7616

Recommended use of the chemical and restrictions on use

Recommended use : Vehicle Maintenance

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

| Appearance | Liquefied gas |
|------------|---------------|
| Colour | red |
| Odour | solvent-like |

GHS Classification

Flammable aerosols : Category 1
Gases under pressure : Liquefied gas
Skin irritation : Category 2
Eye irritation : Category 2A
Carcinogenicity : Category 1B

Specific target organ toxicity - : Category 3 (Central nervous system)

single exposure

GHS label elements

Hazard pictograms :









Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.

H280 Contains gas under pressure; may explode if heated.

H315 Causes skin irritation.

H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.

Zeplnc

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H350 May cause cancer.

Precautionary statements

: Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P211 Do not spray on an open flame or other ignition source. P251 Pressurized container: Do not pierce or burn, even after use.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

Storage:

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. P403 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 [%] |
|-------------------|-----------|-------------------|
| trichloroethylene | 79-01-6 | >= 30 - < 50 |
| propane | 74-98-6 | >= 10 - < 20 |
| butane | 106-97-8 | >= 10 - < 20 |
| xylenes | 1330-20-7 | >= 5 - < 10 |
| 2-butoxyethanol | 111-76-2 | >= 1 - < 5 |
| ethylbenzene | 100-41-4 | >= 1 - < 5 |

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



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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 : Consult a physician after significant exposure.

If unconscious place in recovery position and seek medical

advice.

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.

In case of eye contact : Remove contact lenses.

Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist. If in eyes, rinse with water for 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 are immediate and delayed.

Symptoms may include irritation, redness, pain, and rash.

Chronic effects are delayed and symptoms may not be

observed during an exposure.

Effects are dependent on exposure (dose, concentration,

contact time).

Causes serious eye irritation. Suspected of causing cancer.

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 Water spray jet

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 : Carbon dioxide (CO2)



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products Carbon monoxide

Smoke

Chlorine compounds

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.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations. 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. Remove all sources of ignition. Evacuate personnel to safe areas.

Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Take precautionary measures against static discharges.

Provide sufficient air exchange and/or exhaust in work rooms.

Always replace cap after use.

Dispose of rinse water in accordance with local and national

regulations.

Do not breathe vapours or spray mist.

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.



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No smoking.

Observe label precautions.

Keep in a dry, cool and well-ventilated place.

Electrical installations / working materials must comply with

the technological safety standards.

Materials to avoid : Oxidizing agents

Do not freeze.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|-------------------|-----------|-------------------------------------|--|-----------|
| trichloroethylene | 79-01-6 | TWA | 10 ppm | ACGIH |
| | | STEL | 25 ppm | ACGIH |
| | | TWA | 100 ppm | OSHA Z-2 |
| | | CEIL | 200 ppm | OSHA Z-2 |
| | | Peak | 300 ppm | OSHA Z-2 |
| | | TWA | 50 ppm 270 mg/m3 | OSHA P0 |
| | | STEL | 200 ppm 1,080 mg/m3 | OSHA P0 |
| | | STEL | 100 ppm 537 mg/m3 | CAL PEL |
| | | С | 300 ppm | CAL PEL |
| | | PEL | 25 ppm 135 mg/m3 | CAL PEL |
| propane | 74-98-6 | TWA | 1,000 ppm | ACGIH |
| | | TWA | 1,000 ppm 1,800 mg/m3 | NIOSH REL |
| | | TWA | 1,000 ppm 1,800 mg/m3 | OSHA Z-1 |
| | | TWA | 1,000 ppm 1,800 mg/m3 | OSHA P0 |
| | | PEL | 1,000 ppm 1,800 mg/m3 | CAL PEL |
| butane | 106-97-8 | TWA | 800 ppm 1,900 mg/m3 | NIOSH REL |
| | | TWA | 800 ppm 1,900 mg/m3 | OSHA P0 |
| | | PEL | 800 ppm 1,900 mg/m3 | CAL PEL |
| xylenes | 1330-20-7 | TWA | 100 ppm | ACGIH |
| | | STEL | 150 ppm | ACGIH |
| | | STEL | 150 ppm 655 mg/m3 | CAL PEL |
| | | С | 300 ppm | CAL PEL |
| | | PEL | 100 ppm 435 mg/m3 | CAL PEL |
| 2-butoxyethanol | 111-76-2 | TWA | 20 ppm | ACGIH |
| | | TWA | 5 ppm | NIOSH REL |



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| | | | 24 mg/m3 | |
|--------------|----------|------|----------------------|-----------|
| | | 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 |
| ethylbenzene | 100-41-4 | TWA | 20 ppm | ACGIH |
| | | STEL | 125 ppm | ACGIH |
| | | TWA | 100 ppm 435 mg/m3 | NIOSH REL |
| | | ST | 125 ppm 545 mg/m3 | NIOSH REL |
| | | TWA | 100 ppm 435 mg/m3 | OSHA Z-1 |
| | | TWA | 100 ppm 435 mg/m3 | OSHA P0 |
| | | STEL | 125 ppm 545 mg/m3 | OSHA P0 |
| | | PEL | 5 ppm 22 mg/m3 | CAL PEL |
| | | STEL | 30 ppm 130 mg/m3 | CAL PEL |

Biological occupational exposure limits

| Component | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|-----------------|----------|---|------------------------|--|---------------------------|-----------|
| TRICHLOROETHENE | 79-01-6 | Trichloroace tic acid | Urine | End of shift at end of workwee k | 15 mg/l | ACGIH BEI |
| TRICHLOROETHENE | | Trichloroeth anol | In blood | End of shift at end of workwee k | 0.5 mg/l | ACGIH BEI |
| TRICHLOROETHENE | | Trichloroeth ylene | In end- exhaled air | End of shift at end of workwee k | | ACGIH BEI |
| 2-BUTOXYETHANOL | 111-76-2 | Butoxyacetic acid (BAA) | Urine | End of shift (As soon as possible after exposure ceases) | 200.mg/g Creatinine | ACGIH BEI |
| ETHYLBENZENE | 100-41-4 | Sum of mandelic acid and phenyl glyoxylic acid | Urine | End of shift (As soon as possible after exposure ceases) | 0.15.g/g creatinine | ACGIH BEI |
| ETHYLBENZENE | | Ethylbenzen | In end- | Not | | ACGIH BEI |



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e exhaled air critical

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

Ensure that eyewash stations and safety showers are close to

the workstation location.

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 : Liquefied gas

Colour : red

Odour : solvent-like

Odour Threshold : No data available

No data available

pH : Not applicable

Melting point/freezing point : Not applicable

Boiling point : 54.4 °C

Flash point :

not determined

Evaporation rate : 0.75

n-Butyl Acetate = 1.0

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit : 10.5 %(V)

Lower explosion limit : 8 %(V)



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Vapour pressure : 0.8 hPa

Relative vapour density : No data available

Density : 1.25 g/cm3

Solubility(ies)

Water solubility : insoluble

Partition coefficient: n-

octanol/water

: No data available

Auto-ignition temperature : not determined

Thermal decomposition : No data available

Viscosity

Viscosity, kinematic : No data available

Heat of combustion : 25.75 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

Hazardous decomposition

products

Carbon monoxide, carbon dioxide and unburned

hydrocarbons (smoke).

Chlorine Phosgene

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Aggravated Medical

Condition

: None known.

Symptoms of Overexposure

: Effects are immediate and delayed.

Symptoms may include irritation, redness, pain, and rash. Chronic effects are delayed and symptoms may not be

observed during an exposure.

Effects are dependent on exposure (dose, concentration,

contact time).



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Carcinogenicity:

IARC Group 1: Carcinogenic to humans

trichloroethylene 79-01-6

Group 2B: Possibly carcinogenic to humans

ethylbenzene 100-41-4

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 Reasonably anticipated to be a human carcinogen

trichloroethylene 79-01-6

Acute toxicity

Product:

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

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : > 30000 ppm

Exposure time: 4 h
Test atmosphere: gas
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg

Method: Calculation method

Components:

trichloroethylene:

Acute oral toxicity : LD50 Oral Rat: 4,920 mg/kg

Acute inhalation toxicity : LC50 Mouse: 8450 ppm

Exposure time: 4 h

Acute dermal toxicity : LD50 Dermal Rabbit: > 20,000 mg/kg

propane:

Acute inhalation toxicity : LC50 Mouse: 1,237 mg/l

Exposure time: 2 h

LC50 Rat: 658 mg/l Exposure time: 4 h

LC50 Rat: 1,355 mg/l

butane:

Acute inhalation toxicity : LC50 Mouse: 1,237 mg/l

Exposure time: 2 h

LC50 Rat: 1,355 mg/l



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Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Severe eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

trichloroethylene:

propane:

butane:

xylenes:

2-butoxyethanol:

ethylbenzene:

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

Further information

Product:

Remarks: No data available

Remarks: No data available

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.



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: 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 Components:

trichloroethylene:

Partition coefficient: n-

octanol/water

butane:

Partition coefficient: n-

octanol/water

xylenes:

Partition coefficient: n-

octanol/water

ethylbenzene:

Partition coefficient: n-

octanol/water

: Pow: 3.6

: Pow: 2.89

: Pow: 3.12

: log Pow: 2.29

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., Harmful to

aquatic life with long lasting effects.

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



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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, 2.1, - Limited quantity

Transportation Regulation: IATA (Cargo Air):

UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: IATA (Passenger Air): UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: TDG (Canada):

UN1950, AEROSOLS, FLAMMABLE, 2.1, (LQ), - 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.

The following substance(s) is/are subject to TSCA 12(b) export

notification requirements:

trichloroethylene 79-01-6

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

CERCLA Reportable Quantity

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|-------------------|---------|--------------------|-----------------------------|
| trichloroethylene | 79-01-6 | 100 | 204 |

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

Fire Hazard



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Sudden Release of Pressure Hazard

Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting

requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels

established by SARA Title III, Section 313:

trichloroethylene 79-01-6 48.9999 % ethylbenzene 100-41-4 2.63 %

California Prop 65 WARNING! This product contains a chemical known to the

State of California to cause cancer.

trichloroethylene 79-01-6 ethylbenzene 100-41-4

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

harm.

trichloroethylene 79-01-6

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.

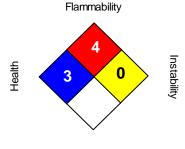
Inventory Acronym and Validity Area Legend:

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

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Special hazard.

HMIS III:

| HEALTH | 3* |
|-----------------|----|
| FLAMMABILITY | 4 |
| PHYSICAL HAZARD | 2 |

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

4 = Extreme, * = Chronic

OSHA - GHS Label Information:



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Hazard pictograms









Signal word : Danger:

Hazard statements : Extremely flammable aerosol. Contains gas under pressure; may explode if heated.

Causes skin irritation. Causes serious eye irritation. May cause drowsiness or

dizziness. May cause cancer.

Precautionary statements :

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep aw ay from heat/sparks/open flames/hot surfaces. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/fume/ gas/mist/ vapours/spray. Wash skin thoroughly after handling. Use only outdoors or in a w ell-ventilated area. Wear protective gloves/ protective clothing/ eye protection/face protection.

Response: IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

 $\textbf{Storage:} \ \textbf{Protect from sunlight.} \ \textbf{Do not expose to temperatures exceeding 50 °C/122}$

°F. Store in a well-ventilated place.

Disposal: Dispose of contents/container in accordance with local regulation.

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