

ZEP-OFF AERO DZ

Version 2.0

Revision Date 07/09/2015

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP-OFF AERO DZ
 Material number : 00000000000008301

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

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Aerosol containing a liquefied gas
Colour	amber, translucent
Odour	solvent-like

GHS Classification

Flammable aerosols : Category 1
 Gases under pressure : Liquefied gas
 Acute toxicity (Oral) : Category 4
 Skin irritation : Category 2
 Eye irritation : Category 2A
 Carcinogenicity : Category 2
 Specific target organ toxicity - single exposure : Category 1
 Specific target organ toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)
 Specific target organ toxicity - repeated exposure (Oral) : Category 2 (Liver, Blood)
 Specific target organ toxicity - repeated exposure (Inhalation) : Category 2 (Central nervous system)

GHS Label element

Hazard pictograms :



Signal word : Danger

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- Hazard statements : H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H370 Causes damage to organs.
H373 May cause damage to organs (Liver, Blood) through prolonged or repeated exposure if swallowed.
H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.
- 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.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.
Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician 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.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
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:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
Disposal:
Dispose of contents/container in accordance with local regulation.

Potential Health Effects

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Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans	
	dichloromethane	75-09-2
	ethylbenzene	100-41-4
ACGIH	Confirmed animal carcinogen with unknown relevance to humans	
	dichloromethane	75-09-2
	ethylbenzene	100-41-4
OSHA	OSHA specifically regulated carcinogen	
	dichloromethane	75-09-2
NTP	Reasonably anticipated to be a human carcinogen	
	dichloromethane	75-09-2

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
dichloromethane	75-09-2	>= 50 - < 70
butane	106-97-8	>= 10 - < 20
methanol	67-56-1	>= 5 - < 10
propane	74-98-6	>= 1 - < 5
1-aminopropan-2-ol	78-96-6	>= 1 - < 5
ethylbenzene	100-41-4	>= 0.1 - < 1

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.

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Take victim immediately to hospital.

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 products : Carbon dioxide (CO₂)
Carbon monoxide
Smoke
Chlorine compounds
Nitrogen oxides (NO_x)
- 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.
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

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- 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.
 Open drum carefully as content may be under pressure.
 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.
 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 : Strong 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
dichloromethane	75-09-2	TWA	50 ppm	ACGIH
		PEL	25 ppm	OSHA CARC
		STEL	125 ppm	OSHA CARC
butane	106-97-8	TWA	800 ppm 1,900 mg/m ³	NIOSH REL
		TWA	800 ppm 1,900 mg/m ³	OSHA P0
methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m ³	NIOSH REL
		ST	250 ppm 325 mg/m ³	NIOSH REL
		TWA	200 ppm 260 mg/m ³	OSHA Z-1
propane	74-98-6	STEL	250 ppm 325 mg/m ³	OSHA P0
		TWA	200 ppm 260 mg/m ³	OSHA P0
		TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,800 mg/m ³	NIOSH REL
		TWA	1,000 ppm	OSHA Z-1

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			1,800 mg/m ³	
		TWA	1,000 ppm	OSHA P0
			1,800 mg/m ³	
xylene	1330-20-7	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
ethylbenzene	100-41-4	TWA	100 ppm	ACGIH
		STEL	125 ppm	ACGIH
		TWA	100 ppm	NIOSH REL
			435 mg/m ³	
		ST	125 ppm	NIOSH REL
			545 mg/m ³	
		TWA	100 ppm	OSHA Z-1
			435 mg/m ³	
		TWA	100 ppm	OSHA P0
			435 mg/m ³	
		STEL	125 ppm	OSHA P0
			545 mg/m ³	

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
DICHLOROMETHANE	75-09-2	Dichloromethane	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/l	ACGIH BEI
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI
ETHYLBENZENE	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift at end of workweek	700 mg/g	ACGIH BEI
Remarks: Creatinine						
ETHYLBENZENE		Ethylbenzene	In end-exhaled air	Not critical		ACGIH BEI

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 : Tightly fitting safety goggles

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Wear face-shield and protective suit for abnormal processing problems.
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 : Aerosol containing a liquefied gas
- Colour : amber, translucent
- Odour : solvent-like
- Odour Threshold : No data available
- pH : Not applicable
- Melting point/freezing point : No data available
- Boiling point : 40 °C
- Flash point :
Not applicable
- Evaporation rate : < 1
n-Butyl Acetate = 1.0
No data available
- Flammability (solid, gas) : Extremely flammable aerosol.
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : No data available
- Relative vapour density : No data available
No data available
- Density : 1.23 g/cm³
- Solubility(ies)
- Water solubility : insoluble
- Solubility in other solvents : not determined
- Partition coefficient: n-octanol/water : No data available
- Auto-ignition temperature : not determined
- Thermal decomposition : No data available

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Viscosity

Viscosity, kinematic : Not applicable

Heat of combustion : < 20 kJ/g

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.

Vapours may form explosive mixture with air.

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

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
Nitrogen oxides (NOx)**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**Acute oral toxicity : Acute toxicity estimate : 1,024 mg/kg
Method: Calculation methodAcute inhalation toxicity : Acute toxicity estimate : 5.17 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation methodAcute dermal toxicity : Acute toxicity estimate : 3,006 mg/kg
Method: Calculation method**Components:****butane:**Acute inhalation toxicity : **LC50 Mouse: 1,237 mg/l**
Exposure time: 2 h**LC50 Rat: 1,355 mg/l****propane:**

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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

1-aminopropan-2-ol:

Acute oral toxicity : LD50 Oral Rat: 1,715 mg/kg

Acute dermal toxicity : LD50 Dermal Rabbit: 1,573 mg/kg

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

dichloromethane:

butane:

methanol:

propane:

1-aminopropan-2-ol:

ethylbenzene:

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

Further information

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Product:

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.

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

Components:**butane :**

Partition coefficient: n-octanol/water : Pow: 2.89

ethylbenzene :

Partition coefficient: n-octanol/water : Pow: 3.6

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

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

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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, FLAMMABLE, 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

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
dichloromethane	75-09-2	1000	1516

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

- SARA 311/312 Hazards** : Chronic Health Hazard
Sudden Release of Pressure Hazard
Acute Health Hazard
Fire Hazard

- SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

dichloromethane	75-09-2	65.9698 %
methanol	67-56-1	9.6754 %
ethylbenzene	100-41-4	0.1025 %

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.

dichloromethane	75-09-2
ethylbenzene	100-41-4

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

methanol	67-56-1
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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
AICS	Not in compliance with the inventory
NZIoC	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not in compliance with the inventory

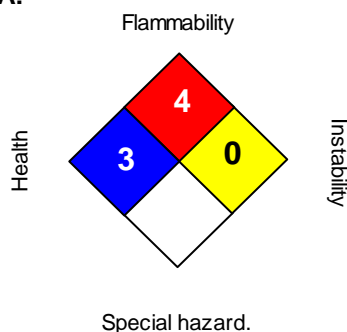
Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



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:

Hazard pictograms :



Signal word : **Danger:**

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Hazard statements	:	Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Causes damage to organs. May cause damage to organs (Liver, Blood) through prolonged or repeated exposure if swallowed. May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.
Precautionary statements	:	<p>Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away 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. Do not breathe dust/fume/gas/mist/vapours/spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection. Wear protective gloves. Use personal protective equipment as required.</p> <p>Response: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician 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: Call a POISON CENTER or doctor/physician. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.</p> <p>Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.</p> <p>Disposal: Dispose of contents/container in accordance with local regulation.</p>

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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.