

## Zepreserve Aero DZ

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : Zepreserve Aero DZ  
 Material number : 00000000000009501

**Manufacturer or supplier's details**

Company : Zep Inc.  
 Address : 1310 Seaboard Industrial Blvd., NW  
 Atlanta, GA 30318  
 Telephone : 404-352-1680

**Emergency telephone numbers**

<b>For SDS Information</b>	: Compliance Services 1-877-428-9937
<b>For a Medical Emergency</b>	: 877-541-2016 Toll Free - All Calls Recorded
<b>For a Transportation Emergency</b>	: 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 compressed gas
Colour	amber, brown
Odour	oily, solvent-like

**GHS Classification**

Flammable aerosols : Category 1  
 Gases under pressure : Compressed gas  
 Skin irritation : Category 2  
 Eye irritation : Category 2A  
 Skin sensitisation : Category 1  
 Carcinogenicity : Category 1A  
 Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

**GHS Label element**

Hazard pictograms : 

Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.  
 H280 Contains gas under pressure; may explode if heated.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H336 May cause drowsiness or dizziness.  
 H350 May cause cancer.

## Zepreserve Aero DZ

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

## 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.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P280 Wear eye protection/ face protection.  
 P280 Wear protective gloves.  
 P281 Use personal protective equipment as required.

**Response:**

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.  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P333 + P313 If skin irritation or rash 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:**

P405 Store locked up.  
 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.

**Potential Health Effects****Carcinogenicity:**

<b>IARC</b>	Group 1: Carcinogenic to humans trichloroethylene	79-01-6
<b>ACGIH</b>	Suspected human carcinogen trichloroethylene	79-01-6
<b>OSHA</b>	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.	
<b>NTP</b>	Reasonably anticipated to be a human carcinogen trichloroethylene	79-01-6

## Zepreserve Aero DZ

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous components**

Chemical Name	CAS-No.	Concentration [%]
trichloroethylene	79-01-6	>= 30 - < 50
Distillates (petroleum), straight-run middle	64741-44-2	>= 20 - < 30
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	>= 5 - < 10
2-ethylhexan-1-ol	104-76-7	>= 5 - < 10
2-(2-butoxyethoxy)ethanol	112-34-5	>= 1 - < 5
carbon dioxide	124-38-9	>= 1 - < 5
Linseed oil	8001-26-1	>= 1 - < 5

**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.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Water spray jet
- Unsuitable extinguishing media : High volume water jet

## Zepreserve Aero DZ

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

Specific hazards during firefighting	: Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: Carbon dioxide (CO <sub>2</sub> ) Carbon monoxide Smoke Chlorine compounds Silicon oxides
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.

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**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.

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**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. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
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## Zepreserve Aero DZ

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Always replace cap after use.

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.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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  
Keep away from metals.  
Store and keep away from bases and alkalis.

## 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/m <sup>3</sup>	OSHA P0
		STEL	200 ppm 1,080 mg/m <sup>3</sup>	OSHA P0
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	TWA (Mist)	5 mg/m <sup>3</sup>	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m <sup>3</sup>	ACGIH
carbon dioxide	124-38-9	TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		TWA	5,000 ppm 9,000 mg/m <sup>3</sup>	NIOSH REL
		ST	30,000 ppm 54,000 mg/m <sup>3</sup>	NIOSH REL
		TWA	5,000 ppm 9,000 mg/m <sup>3</sup>	OSHA Z-1
		TWA	10,000 ppm 18,000 mg/m <sup>3</sup>	OSHA P0
		STEL	30,000 ppm	OSHA P0

## Zepreserve Aero DZ

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

		54,000 mg/m <sup>3</sup>	
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**Biological occupational exposure limits**

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
TRICHLOROETHYLENE	79-01-6	Trichloroacetic acid	Urine	End of shift at end of workweek	15 mg/l	ACGIH BEI
TRICHLOROETHYLENE		Trichloroethanol	In blood	End of shift at end of workweek	0.5 mg/l	ACGIH BEI
TRICHLOROETHYLENE		Trichloroethylene	In blood	End of shift at end of workweek		ACGIH BEI
TRICHLOROETHYLENE		Trichloroethylene	In end-exhaled air	End of shift at end of workweek		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  
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 compressed gas

**Zepreserve Aero DZ**

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

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Colour	:	amber, brown
Odour	:	oily, solvent-like
Odour Threshold	:	No data available No data available
pH	:	Not applicable
Melting point/freezing point	:	No data available
Boiling point	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	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
Density	:	1.085 g/cm <sup>3</sup>
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
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Heat of combustion	:	22 kJ/g

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**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.

## Zepreserve Aero DZ

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

Incompatible materials	: Oxidizing agents Amines Bases Metals
Hazardous decomposition products	: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Phosgene

## SECTION 11. TOXICOLOGICAL INFORMATION

## Acute toxicity

**Product:**

Acute oral toxicity	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate : > 10 mg/l Exposure time: 4 h Test atmosphere: dust/mist 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

**Distillates (petroleum), hydrotreated heavy naphthenic:**

Acute oral toxicity	: LD50 Rat: > 5,000 mg/kg
Acute inhalation toxicity	: LC50 Rat: > 5 mg/l Exposure time: 4 h
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg

**2-ethylhexan-1-ol:**

Acute oral toxicity	: LD50 Oral Rat: 3,730 mg/kg
Acute dermal toxicity	: LD50 Dermal Rabbit: > 3,000 mg/kg

## Skin corrosion/irritation

**Zepreserve Aero DZ**

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

**Product:**

Remarks: Irritating to skin.

**Serious eye damage/eye irritation**

**Product:**

Remarks: Severe eye irritation

**Respiratory or skin sensitisation**

**Product:**

Remarks: Causes sensitisation.

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**trichloroethylene:**

**Distillates (petroleum), straight-run middle:**

**Distillates (petroleum), hydrotreated heavy naphthenic:**

**2-ethylhexan-1-ol:**

**2-(2-butoxyethoxy)ethanol:**

**carbon dioxide:**

**Linseed oil:**

**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.

## Zepreserve Aero DZ

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

## 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:****trichloroethylene :**

Partition coefficient: n-octanol/water : log Pow: 2.29

**2-ethylhexan-1-ol :**

Partition coefficient: n-octanol/water : Pow: 2.9

**2-(2-butoxyethoxy)ethanol :**

Partition coefficient: n-octanol/water : Pow: 1

## 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  
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

**Zepreserve Aero DZ**

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

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, - 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)
trichloroethylene	79-01-6	100	227

**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  
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 44 %

## Zepreserve Aero DZ

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

**California Prop 65**

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

trichloroethylene

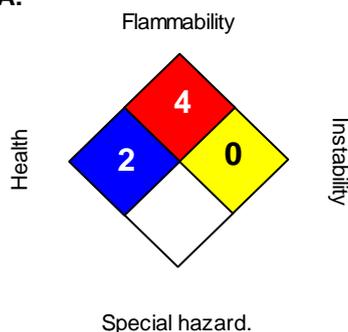
79-01-6

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

<b>TSCA</b>	On TSCA Inventory
<b>DSL</b>	This product contains one or several components that are not on the Canadian DSL nor NDSL.
<b>AICS</b>	Not in compliance with the inventory
<b>NZIoC</b>	Not in compliance with the inventory
<b>PICCS</b>	Not in compliance with the inventory
<b>IECSC</b>	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:**

<b>HEALTH</b>	<b>2</b>
<b>FLAMMABILITY</b>	<b>4</b>
<b>PHYSICAL HAZARD</b>	<b>2</b>

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

**OSHA GHS Label Information:**

Hazard pictograms



Signal word

: **Danger:**

Hazard statements

: Extremely flammable aerosol. Contains gas under pressure; may explode if heated.  
Causes skin irritation. May cause an allergic skin reaction. 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 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. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves. Use personal protective equipment as required.

**Zepreserve Aero DZ**

Version 2.0

Revision Date 07/09/2015

Print Date 12/03/2015

**Response:** 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 or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

**Storage:** Store locked up. Protect from sunlight. 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.

Version:	2.0
Revision Date:	07/09/2015
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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.