

**ZEP-X-OUT II 1 DZ**

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Material name : ZEP-X-OUT II 1 DZ  
Material number : 000000000000019501

**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 compressed gas
Colour	clear, colourless
Odour	mild, solvent-like

**GHS Classification**

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

**GHS Label element**

Hazard pictograms



Signal word

: Danger

Hazard statements

: H280 Contains gas under pressure; may explode if heated.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H350 May cause cancer.

Precautionary statements

: **Prevention:**  
P201 Obtain special instructions before use.

## ZEP-X-OUT II 1 DZ

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

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

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 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.

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:**

P405 Store locked up.

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

**Disposal:**

P501 Dispose of contents/container in accordance with local regulation.

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

Group 1: Carcinogenic to humans

trichloroethylene 79-01-6

Group 2A: Probably carcinogenic to humans

tetrachloroethylene 127-18-4

Group 2B: Possibly carcinogenic to humans

1,2-epoxybutane 106-88-7

**ACGIH**

Suspected human carcinogen

trichloroethylene 79-01-6

Confirmed animal carcinogen with unknown relevance to humans

tetrachloroethylene 127-18-4

**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

tetrachloroethylene 127-18-4

trichloroethylene 79-01-6

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

**ZEP-X-OUT II 1 DZ**

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

Substance / Mixture : Mixture

**Hazardous components**

Chemical Name	CAS-No.	Concentration [%]
tetrachloroethylene	127-18-4	$\geq 70$ - $< 90$
trichloroethylene	79-01-6	$\geq 20$ - $< 30$
carbon dioxide	124-38-9	$\geq 1$ - $< 5$
1,2-epoxybutane	106-88-7	$\geq 0.1$ - $< 1$

**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 : If unconscious place in recovery position and seek medical advice.  
Consult a physician after significant exposure.  
Remove to fresh air.
- 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 : Rinse immediately with plenty of water for at least 15 minutes.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.  
DO NOT induce vomiting unless directed to do so by a physician or poison control center.

**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
- 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

**ZEP-X-OUT II 1 DZ**

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

	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. Dispose of rinse water in accordance with local and national regulations. Do not breathe vapours or spray mist. Provide sufficient air exchange and/or exhaust in work rooms. Always replace cap after use. Take precautionary measures against static discharges.
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.

## ZEP-X-OUT II 1 DZ

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

Observe label precautions.

No smoking.

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 alkalies.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
tetrachloroethylene	127-18-4	TWA	25 ppm	ACGIH
		STEL	100 ppm	ACGIH
		TWA	100 ppm	OSHA Z-2
		CEIL	200 ppm	OSHA Z-2
		Peak	300 ppm	OSHA Z-2
		TWA	25 ppm 170 mg/m3	OSHA P0
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
carbon dioxide	124-38-9	TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		TWA	5,000 ppm 9,000 mg/m3	NIOSH REL
		ST	30,000 ppm 54,000 mg/m3	NIOSH REL
		TWA	5,000 ppm 9,000 mg/m3	OSHA Z-1
		TWA	10,000 ppm 18,000 mg/m3	OSHA P0
		STEL	30,000 ppm 54,000 mg/m3	OSHA P0
1,2-epoxybutane	106-88-7	TWA	2 ppm	US WEEL

## Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
TETRACHLOROETHYLENE	127-18-4	Tetrachloroethylene	In blood	Prior to shift (16 hours after exposure)	0.5 mg/l	ACGIH BEI

## ZEP-X-OUT II 1 DZ

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

TETRACHLOROETHENE		Tetrachloroethylene	In end-exhaled air	Prior to shift (16 hours after exposure ceases)	3 .parts per million	ACGIH BEI
TRICHLOROETHENE	79-01-6	Trichloroacetic acid	Urine	End of shift at end of workweek	15 mg/l	ACGIH BEI
TRICHLOROETHENE		Trichloroethanol	In blood	End of shift at end of workweek	0.5 mg/l	ACGIH BEI
TRICHLOROETHENE		Trichloroethylene	In blood	End of shift at end of workweek		ACGIH BEI
TRICHLOROETHENE		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

: Ensure that eyewash stations and safety showers are close to the workstation location.  
Safety glasses

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

**ZEP-X-OUT II 1 DZ**

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

Colour	: clear, colourless
Odour	: mild, solvent-like
Odour Threshold	: no data available
pH	: not applicable
Melting point/freezing point	: no data available
Boiling point	: 87.2 °C
Flash point	: not applicable
Evaporation rate	: > 1 n-Butyl Acetate = 1.0
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Density	: 1.562 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, kinematic	: no data available
Heat of combustion	: 5.42 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	: Extremes of temperature and direct sunlight. Heat, flames and sparks.
Incompatible materials	: Oxidizing agents

**ZEP-X-OUT II 1 DZ**

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

Metals  
Bases

Hazardous decomposition products : Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide  
Gaseous hydrogen chloride (HCl).  
Chlorine  
Phosgene

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

Acute oral toxicity : Acute toxicity estimate : 3,069 mg/kg  
Method: Calculation method

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

**Components:****tetrachloroethylene:**

Acute oral toxicity : LD50 Oral rat: 2,629 mg/kg

Acute inhalation toxicity : LC50 rat: 34,200 mg/l  
Exposure time: 8 h

Acute dermal toxicity : LD50 Dermal rabbit: 5,000 mg/kg

**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

**Skin corrosion/irritation****Product:**

Remarks: Irritating to skin.

**Serious eye damage/eye irritation****Product:**

Remarks: Irritating to eyes.

**Respiratory or skin sensitisation**



**ZEP-X-OUT II 1 DZ**

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**tetrachloroethylene:****trichloroethylene:****carbon dioxide:****1,2-epoxybutane:****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: 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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**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:****tetrachloroethylene :**

Partition coefficient: n-  
octanol/water : log Pow: 3.40

**trichloroethylene :**

**ZEP-X-OUT II 1 DZ**

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

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

**1,2-epoxybutane :**  
Partition coefficient: n-octanol/water : Pow: 0.68

**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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life.

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**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 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.

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**SECTION 14. TRANSPORT INFORMATION**

Transportation Regulation: 49 CFR (USA): ORM-D, CONSUMER COMMODITY
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Transportation Regulation: IMDG (Vessel): UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity
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## ZEP-X-OUT II 1 DZ

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

Transportation Regulation: IATA (Cargo Air):  
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, , 2.2, - 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)
tetrachloroethylene	127-18-4	100	138

## 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  
Chronic Health Hazard  
Sudden Release of Pressure Hazard

**SARA 302** : 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:

tetrachloroethylene	127-18-4	72.4095 %
trichloroethylene	79-01-6	24.8007 %
1,2-epoxybutane	106-88-7	0.1247 %

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

tetrachloroethylene	127-18-4
trichloroethylene	79-01-6

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

<b>TSCA</b>	On TSCA Inventory
<b>DSL</b>	All components of this product are on the Canadian DSL.
<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:

## ZEP-X-OUT II 1 DZ

Version 1.0

Revision Date 03/05/2015

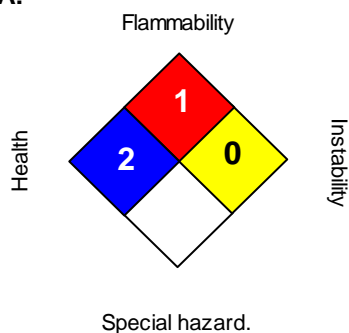
Print Date 01/10/2018

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

## SECTION 16. OTHER INFORMATION

## Further information

## NFPA:



## HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

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 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. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/ face protection. Wear protective gloves. Use personal protective equipment as required.

**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 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. Store in a well-ventilated place.

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

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 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-X-OUT II 1 DZ**

Version 1.0

Revision Date 03/05/2015

Print Date 01/10/2018

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.