

ZEP DRY GRAPHITE AERO DZ

Version 1.0

Revision Date 01/29/2015

Print Date 11/10/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP DRY GRAPHITE AERO DZ

Material number : 00000000000016401

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	dark grey
Odour	solvent-like

GHS Classification

Flammable aerosols : Category 2
 Gases under pressure : Liquefied 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 : H223 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.
 H350 May cause cancer.

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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, hot surfaces, sparks, open flames and other ignition sources. 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 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:
 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:
 P501 Dispose of contents/container in accordance with local regulation.

Potential Health Effects
Carcinogenicity:

IARC	Group 1: Carcinogenic to humans	
	trichloroethylene	79-01-6
ACGIH	Suspected human carcinogen	
	trichloroethylene	79-01-6
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

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
trichloroethylene	79-01-6	>= 50 - < 70
propane	74-98-6	>= 10 - < 20
butane	106-97-8	>= 10 - < 20
propan-2-ol	67-63-0	>= 5 - < 10
graphite	7782-42-5	>= 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.
If on clothes, remove clothes.
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
- 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 (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.

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Hazardous combustion products	: Carbon dioxide (CO ₂) 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	: Sweep up or vacuum up spillage and collect in suitable container for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	: Do not breathe vapours/dust. 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.
Conditions for safe storage	: BEWARE: Aerosol is pressurized. Keep away from direct sun

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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.

Keep in a cool, well-ventilated place.

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

Observe label precautions.

Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Oxidizing agents
Keep away from metals.

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 ³	OSHA P0
propane	74-98-6	STEL	200 ppm 1,080 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 1,800 mg/m ³	OSHA Z-1
butane	106-97-8	TWA	1,000 ppm 1,800 mg/m ³	OSHA P0
		TWA	800 ppm 1,900 mg/m ³	NIOSH REL
propan-2-ol	67-63-0	TWA	800 ppm 1,900 mg/m ³	OSHA P0
		TWA	200 ppm	ACGIH
graphite	7782-42-5	STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m ³	NIOSH REL
		ST	500 ppm 1,225 mg/m ³	NIOSH REL
		TWA	400 ppm 980 mg/m ³	OSHA Z-1
		TWA	400 ppm 980 mg/m ³	OSHA P0
		STEL	500 ppm 1,225 mg/m ³	OSHA P0

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		(Respirable) TWA (Dust)	15 Million particles per cubic foot	OSHA Z-3
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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
PROPAN-2-OL	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

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.

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Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Aerosol containing a liquefied gas
Colour	: dark grey
Odour	: solvent-like
Odour Threshold	: no data available
pH	: not applicable
Melting point/freezing point	: not determined
Boiling point	: 82.2 - 87.8 °C
Flash point	: not applicable
Evaporation rate	: > 1 n-Butyl Acetate = 1.0
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Density	: 1.32 g/cm ³
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

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Vapours may form explosive mixture with air.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Oxidizing agents

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Metals
Alkali metals

Hazardous decomposition products : Phosgene
Hydrogen chloride gas
Chlorine
Carbon oxides

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

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

Skin corrosion/irritation**Product:**

Remarks: May cause skin irritation in susceptible persons.

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

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trichloroethylene:**propane:****butane:****propan-2-ol:****graphite:****STOT - single exposure**

no data available

STOT - repeated exposure

no data available

Aspiration toxicity

no data available

Further information**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.

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

butane :

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

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

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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 chemical or used container.
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
International regulation**IATA-DGR**

UN/ID No.	: 1950
Proper shipping name	: Aerosols, non-flammable
Class	: 2.2
Packing group	: Not Assigned
Labels	: 2.2
Packing instruction (cargo aircraft)	: 203
Packing instruction (passenger aircraft)	: 203

IMDG-Code

UN number	: 1950
Proper shipping name	: AEROSOLS
Class	: 2.2
Packing group	: Not Assigned
Labels	: 2.2
EmS Code	: F-D, S-U
Marine pollutant	: no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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Not applicable for product as supplied.

National Regulations
49 CFR

UN/ID/NA number : 1950
 Proper shipping name : Aerosols, non-flammable
 Class : 2.2
 Packing group : Not Assigned
 Labels : 2.2
 ERG Code : 126
 Marine pollutant : no

Special precautions for user

not applicable

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	159

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Fire Hazard
 Sudden Release of Pressure Hazard
 Acute Health Hazard
 Chronic Health 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:
 trichloroethylene 79-01-6 62.8498 %

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:

TSCA On TSCA Inventory

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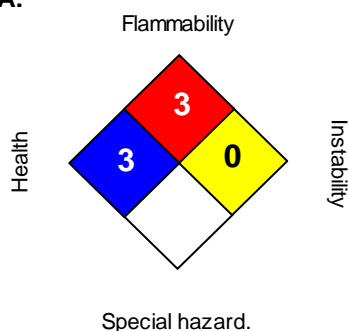
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DSL	This product contains one or several components that are not on the Canadian DSL nor NDSL.
AICS	Not in compliance with the inventory
NZIoC	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not in compliance with 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), TSCA (USA)

SECTION 16. OTHER INFORMATION**Further information****NFPA:****HMIS III:**

HEALTH	3
FLAMMABILITY	3
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

: 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 away from heat, hot surfaces, sparks, open flames and other ignition sources. 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. 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 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.

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

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