

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP GROOVY V AERO

Material number : 000000000000022100

Manufacturer or supplier's details

Company : Zep Inc.

Address : 350 Joe Frank Harris Parkway, SE
Emerson, GA 30137

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**Recommended use of the chemical and restrictions on use**

Recommended use : Lubricant

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance	Aerosol containing a liquefied gas
Colour	purple
Odour	characteristic

GHS ClassificationFlammable aerosols : Category 1
Gases under pressure : Liquefied gas
Skin irritation : Category 2
Eye irritation : Category 2A
Specific target organ toxicity - single exposure : Category 3 (Central nervous system)
Aspiration hazard : Category 1**GHS label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

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

Precautionary statements

: **Prevention:**

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/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
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.
P331 Do NOT induce vomiting.
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:

P501 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 [%]
acetone	67-64-1	>= 10 - < 20
propane	74-98-6	>= 10 - < 20
Naphtha (petroleum), light alkylate	64741-66-8	>= 10 - < 20
butane	106-97-8	>= 10 - < 20
copper	7440-50-8	>= 10 - < 20
2,2',2''-nitrilotriethanol	102-71-6	>= 5 - < 10

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

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

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 | : Move to fresh air.
Call a physician or poison control centre immediately. |
| In case of skin contact | : Wash off immediately with plenty of water for at least 15 minutes.
If on clothes, remove clothes.
Wash clothing before reuse. |
| In case of eye contact | : Remove contact lenses.
If eye irritation persists, consult a specialist.
Rinse immediately with plenty of water for at least 15 minutes. |
| If swallowed | : Rinse mouth with water.
If swallowed, call a poison control centre or doctor immediately.
If a person vomits when lying on his back, place him in the recovery position.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
If large quantities of this material are swallowed, call a physician immediately. |
| Most important symptoms and effects, both acute and delayed | : Aspiration may cause pulmonary oedema and pneumonitis.
Symptoms may include shortness of breath, dry cough, and irritation of the nose, eyes, lips, mouth, and throat.
Effects are immediate and delayed.
Symptoms may include irritation, redness, pain, and rash.
Effects are dependent on exposure (dose, concentration, contact time).
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
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 (CO ₂)
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. |

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

Hazardous combustion products	: Carbon dioxide (CO ₂) Carbon monoxide Smoke Nitrogen oxides (NO _x)
Specific extinguishing methods	: Do not allow run-off from fire fighting to enter drains or water courses.
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	: Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment. 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 and shovel into suitable containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	: Avoid exposure - obtain special instructions before use. Do not allow contact with air. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep away from children. Do not repack. Use ventilation adequate to exhaust vapours. See the safety datasheet. Wear self-contained breathing apparatus and protective suit. Do not breathe vapours or spray mist. Always replace cap after use. Dispose of rinse water in accordance with local and national regulations. Avoid contact with skin and eyes. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms.
-------------------------	---

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

- Conditions for safe storage : Do not store together with oxidizing and self-igniting products. Keep in a dry, cool and well-ventilated place. 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.
- Materials to avoid : Keep away from oxidizing agents and strongly acid or alkaline materials. 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
acetone	67-64-1	TWA	250 ppm	ACGIH
		STEL	500 ppm	ACGIH
		TWA	250 ppm 590 mg/m ³	NIOSH REL
		TWA	1,000 ppm 2,400 mg/m ³	OSHA Z-1
		TWA	750 ppm 1,800 mg/m ³	OSHA P0
		STEL	1,000 ppm 2,400 mg/m ³	OSHA P0
		STEL	750 ppm 1,780 mg/m ³	CAL PEL
		C	3,000 ppm	CAL PEL
		PEL	500 ppm 1,200 mg/m ³	CAL PEL
propane	74-98-6	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
		TWA	1,000 ppm 1,800 mg/m ³	OSHA P0
		PEL	1,000 ppm 1,800 mg/m ³	CAL PEL
butane	106-97-8	TWA	800 ppm 1,900 mg/m ³	NIOSH REL
		TWA	800 ppm 1,900 mg/m ³	OSHA P0
		PEL	800 ppm 1,900 mg/m ³	CAL PEL
copper	7440-50-8	TWA (dusts and mists)	1 mg/m ³	OSHA Z-1
		TWA (Fumes)	0.1 mg/m ³	OSHA Z-1
		TWA (Dust)	1 mg/m ³	ACGIH

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

		and mist)		
		TWA (Fumes)	0.2 mg/m3	ACGIH
		TWA (Dust)	1 mg/m3	NIOSH REL
		TWA (Mist)	1 mg/m3	NIOSH REL
		TWA (dusts and mists)	1 mg/m3	OSHA Z-1
		TWA (Fumes)	0.1 mg/m3	OSHA Z-1
		PEL (Fumes)	0.1 mg/m3	CAL PEL
2,2',2"-nitritotriethanol	102-71-6	TWA	5 mg/m3	ACGIH
		PEL	5 mg/m3	CAL PEL

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-PROPANONE	67-64-1	Acetone	Urine	End of shift (As soon as possible after exposure ceases)	25 mg/l	ACGIH BEI

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

Remarks

: Impervious gloves

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

Eye protection

: Face-shield

Chemical resistant goggles must be worn.

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

: Wash hands before breaks and at the end of workday.

When using do not eat, drink or smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

Appearance	: Aerosol containing a liquefied gas
Colour	: purple
Odour	: characteristic
Odour Threshold	: No data available
pH	: Not applicable
Melting point/freezing point	: Not applicable
Boiling point	: 847.7 °C
Flash point	: Not applicable
Evaporation rate	: No data available
Flammability (solid, gas)	: Extremely flammable aerosol.
Upper explosion limit	: 11.9 %(V)
Lower explosion limit	: 2 %(V)
Vapour pressure	: No data available
Relative vapour density	: 0.955
Density	: 0.955 g/cm3
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: Not applicable
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: 317 °C
Thermal decomposition	: No data available
Viscosity	
Viscosity, kinematic	: No data available
Heat of combustion	: 25.53 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	: Exposure to air.

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidizing agents Nitrous acid and other nitrosating agents Oxygen
Hazardous decomposition products	: Nitrogen oxides (NO _x) Phosphorus compounds

SECTION 11. TOXICOLOGICAL INFORMATION**Potential Health Effects**

Aggravated Medical Condition	: None known.
Symptoms of Overexposure	: Aspiration may cause pulmonary oedema and pneumonitis. Symptoms may include shortness of breath, dry cough, and irritation of the nose, eyes, lips, mouth, and throat. Effects are immediate and delayed. Symptoms may include irritation, redness, pain, and rash. Effects are dependent on exposure (dose, concentration, contact time).

Carcinogenicity:**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Acute toxicity**Product:**

Acute oral toxicity	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	: LC50 Rat: 2,134 mg/l Exposure time: 4 h Test atmosphere: gas Remarks: Toxic by inhalation and if swallowed.
Acute dermal toxicity	: LD50 Guinea pig: 40,131.4297 mg/kg

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

LD50 Rabbit: 5,145.8477 mg/kg

LD50 Rat: 6,003.3398 mg/kg

Components:**acetone:**

Acute oral toxicity : LD50 Rat: 5,800 mg/kg

Acute inhalation toxicity : LC50 Rat: 132 mg/l
Exposure time: 3 h

LC50 Rat: 50.1 mg/l

Acute dermal toxicity : LD50 Guinea pig: > 7,426 mg/kg

LD50 Rabbit: > 7,426 mg/kg

Naphtha (petroleum), light alkylate:

Acute oral toxicity : LD50 Rat: 4,820 mg/kg

Acute inhalation toxicity : LC50 Rat: > 5,020 mg/l
Exposure time: 4 hLC50 Rat: > 4,980 mg/l
Exposure time: 4 hLC50 Rat: > 4.96 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD50 Rabbit: > 1,900 mg/kg

copper:

Acute oral toxicity : LD50 Rat: 300 - 500 mg/kg

Acute dermal toxicity : LD50 Rat: > 2,000 mg/kg

2,2',2''-nitritotriethanol:

Acute oral toxicity : LD50 Rat: 6,400 mg/kg

Acute dermal toxicity : LD50 Rabbit: > 2,000 mg/kg

Skin corrosion/irritation**Product:**

Remarks: Irritating to skin.

Serious eye damage/eye irritation

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

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

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity**Product:**

May be fatal if swallowed and enters airways.

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:**butane :**

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

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

2,2',2''-nitritotriethanol :
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

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.

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

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

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.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
acetone	67-64-1	5000	*
copper	7440-50-8	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Gases under pressure
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)
Aspiration 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:

copper	7440-50-8	15 %
--------	-----------	------

California Prop. 65

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018



WARNING: This product can expose you to chemicals including 2,2'-iminodiethanol, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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

DSL All components of this product are on the Canadian DSL
TSCA On TSCA Inventory

For information on the country notification status for other regions please contact the manufacturer's regulatory group.

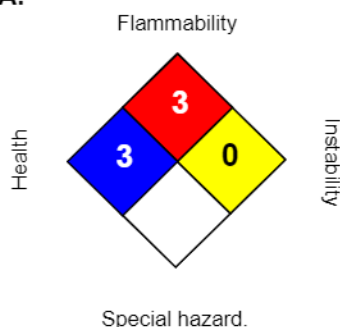
Inventory Acronym and Validity Area Legend:

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

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	3
PHYSICAL HAZARD	3

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

OSHA - GHS Label Information:

Hazard pictograms :



Signal word :

Hazard statements :

Precautionary statements :

Danger:

Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

Prevention: 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. Wear protective gloves/ eye protection/ face protection.

Response: IF SWALLOWED: Immediately call a POISON CENTER/doctor. IF ON

ZEP GROOVY V AERO

Version 3.1

Revision Date 02/20/2018

Print Date 07/25/2018

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. Do NOT induce vomiting. 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: 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:	3.1
Revision Date:	02/20/2018
Print Date:	07/25/2018

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 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.