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#### **SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Material name : ZEP AVIATION POWER DEGREASER

Material number : H02300C

## Manufacturer or supplier's details

Company : Zep Inc.

Address 11627 - 178 Street

Edmonton, Alberta T5S 1N6

Canada

Telephone : Compliance Services - 877-428-9937

## **Emergency telephone numbers**

For SDS Information Compliance Services - 877-428-9937

For a Medical Emergency 877-541-2016 Toll Free - All Calls Recorded

For a Transportation CHEMTREC: 800-424-9300 - All Calls Recorded.

**Emergency** 

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

#### **SECTION 2. HAZARDS IDENTIFICATION**

#### **Emergency Overview**

Appearance	Aerosol containing a compressed gas	
Colour	colourless, light yellow	
Odour	strong	

#### **GHS Classification**

Flammable aerosols : Category 1 : Compressed gas Gases under pressure : Category 2 Skin irritation : Category 2A Eye irritation Carcinogenicity : Category 2 Carcinogenicity : Category 2 Reproductive toxicity : Category 1B

Specific target organ toxicity - : Category 3 (Respiratory system, Central nervous system)

single exposure

Specific target organ toxicity - : Category 2

repeated exposure

(Inhalation)

## **GHS** label elements

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Hazard pictograms









Flame

Gas cylinder

vlinder Health h

Health hazard

Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.

H280 Contains gas under pressure; may explode if heated.

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.

H360 May damage fertility or the unborn child.

H373 May cause damage to organs 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P260 Do not breathe 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/ protective clothing/ eye protection/ face protection.

## Response:

P302 + P352 IF ON SKIN: Wash with plenty of 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.

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/

P362 + P364 Take off contaminated clothing and wash it 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.

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

Substance / Mixture : Mixture

## **Hazardous components**

Chemical name	CAS-No.	Concentration [%]
1-bromopropane	106-94-5	>= 80 - <= 100
carbon dioxide	124-38-9	>= 1 - < 5
dimethoxymethane	109-87-5	>= 1 - < 5
2-methylpropan-2-ol	75-65-0	>= 1 - < 5
1,2-epoxybutane	106-88-7	>= 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.

If on clothes, remove clothes.

Wash off immediately with plenty of water for at least 15

minutes.

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.

Most important symptoms and effects, both acute and

delayed

d

: Chronic effects are delayed and symptoms may not be

observed during an exposure.

Effects are dependent on exposure (dose, concentration,

contact time).

Suspected of causing cancer.

May damage fertility or the unborn child if inhaled. Review section 2 of SDS to see all potential hazards.

Notes to physician : Treat symptomatically. Symptoms may be delayed.

#### **SECTION 5. FIREFIGHTING MEASURES**

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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.

Hazardous combustion

products

: Carbon dioxide (CO2) Carbon monoxide

Smoke

OILIOKC

Bromine compounds

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

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 or spray mist.

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.

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Always replace cap after use.

Dispose of rinse water in accordance with local and national

regulations.

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.

Keep container tightly closed in a dry and well-ventilated

place.

Observe label precautions.

Electrical installations / working materials must comply with

the technological safety standards.

Materials to avoid : Store and keep away from, oxidizing agents and acids.

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
1-bromopropane	106-94-5	TWA	10 ppm 50 mg/m3	CA AB OEL
		TWA	10 ppm	CA BC OEL
		TWA	0.1 ppm	ACGIH
carbon dioxide	124-38-9	TWA	5,000 ppm 9,000 mg/m3	CA AB OEL
		STEL	30,000 ppm 54,000 mg/m3	CA AB OEL
		TWA	5,000 ppm	CA BC OEL
		STEL	15,000 ppm	CA BC OEL
		STEV	30,000 ppm 54,000 mg/m3	CA QC OEL
		TWAEV	5,000 ppm 9,000 mg/m3	CA QC OEL
		TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
dimethoxymethane	109-87-5	TWA	1,000 ppm 3,110 mg/m3	CA AB OEL
		TWA	1,000 ppm	CA BC OEL
		STEL	1,250 ppm	CA BC OEL
		TWAEV	1,000 ppm 3,110 mg/m3	CA QC OEL
		TWA	1,000 ppm	ACGIH
2-methylpropan-2-ol	75-65-0	TWA	100 ppm 303 mg/m3	CA AB OEL
		TWA	100 ppm	CA BC OEL
		TWAEV	100 ppm 303 mg/m3	CA QC OEL
		TWA	100 ppm	ACGIH

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1-bromopropane	106-94-5	TWA	10 ppm	CA AB OEL
			50 mg/m3	
		TWA	10 ppm	CA BC OEL
		TWA	0.1 ppm	ACGIH
carbon dioxide	124-38-9	TWA	5,000 ppm 9,000 mg/m3	CA AB OEL
		STEL	30,000 ppm 54,000 mg/m3	CA AB OEL
		TWA	5,000 ppm	CA BC OEL
		STEL	15,000 ppm	CA BC OEL
		STEV	30,000 ppm 54,000 mg/m3	CA QC OEL
		TWAEV	5,000 ppm 9,000 mg/m3	CA QC OEL
		TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
dimethoxymethane	109-87-5	TWA	1,000 ppm 3,110 mg/m3	CA AB OEL
		TWA	1,000 ppm	CA BC OEL
		STEL	1,250 ppm	CA BC OEL
		TWAEV	1,000 ppm 3,110 mg/m3	CA QC OEL
		TWA	1,000 ppm	ACGIH
2-methylpropan-2-ol	75-65-0	TWA	100 ppm 303 mg/m3	CA AB OEL
		TWA	100 ppm	CA BC OEL
		TWAEV	100 ppm 303 mg/m3	CA QC OEL
		TWA	100 ppm	ACGIH

**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 : Protective gloves

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.

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.

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#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Aerosol containing a compressed gas

Colour : colourless, light yellow

Odour : strong

Odour Threshold : No data available pH : Not applicable Melting point/freezing point : No data available

Boiling point : 71.11 °C

Flash point

No data available

Evaporation rate : > 1

n-Butyl Acetate = 1.0

Flammability (solid, gas,

liquid)

: Extremely flammable aerosol.

Upper explosion limit : 8.5 %(V)

Lower explosion limit : 4.6 %(V)

Vapour pressure : 155 hPa (20 °C)

Relative vapour density : No data available

Density : 1.353 g/cm3

Solubility(ies)

Water solubility : slightly soluble 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 : 16.7 kJ/g

### **SECTION 10. STABILITY AND REACTIVITY**

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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.

Incompatible materials : Acids

Oxidizing agents

**Bases** 

Hazardous decomposition

products

: Carbon monoxide, carbon dioxide and unburned

hydrocarbons (smoke). Hydrogen halides

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

**Potential Health Effects** 

Aggravated Medical

Condition

: None known.

Symptoms of Overexposure : Chronic effects are delayed and symptoms may not be

observed during an exposure.

Effects are dependent on exposure (dose, concentration,

contact time).

Suspected of causing cancer.

May damage fertility or the unborn child if inhaled. Review section 2 of SDS to see all potential hazards. Treat symptomatically. Symptoms may be delayed.

Carcinogenicity:

IARC Group 2B: Possibly carcinogenic to humans

1-bromopropane 106-94-5

1,2-epoxybutane 106-88-7

Group 2B: Possibly carcinogenic to humans

ACGIH Confirmed animal carcinogen with unknown relevance to

humans

1-bromopropane 106-94-5

**Acute toxicity** 

**Product:** 

Acute inhalation toxicity : Acute toxicity estimate : > 10 mg/l

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Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute toxicity estimate : > 10 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

#### 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

## 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**

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### **Ecotoxicity**

No data available

## Persistence and degradability

No data available

### **Bioaccumulative potential**

**Product:** 

Partition coefficient: n-

octanol/water

Components:

1-bromopropane :

Partition coefficient: n-

octanol/water

2-methylpropan-2-ol:

Partition coefficient: n-

octanol/water

: log Pow: 0.317 (22.5 °C)

: Remarks: No data available

pH: 6.8 - 7.3

1,2-epoxybutane:

Partition coefficient: n-

octanol/water

: Pow: 0.68

: Pow: 2.1

## Mobility in soil

No data available

### Other adverse effects

No data available

## **Product:**

Additional ecological

information

: No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

**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 (TDG) / Règlement Pour Le Transport (TMD): (Canada): UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

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Transportation Regulation / Règlement Pour Le Transport: IMDG (Vessel): UN1950, AEROSOLS, 2.1, - Limited quantity

Transportation Regulation / Règlement Pour Le Transport: IATA (Cargo Air): UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation / Règlement Pour Le Transport: IATA (Passenger Air): UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation / Règlement Pour Le Transport: 49 CFR (USA): UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

The product as delivered to the customer conforms to packaging requirements for shipment by road under Transport Dangerous Goods (TDG) Canada 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**

This product has been classified according to the hazard criteria of the HPR and the SDS contains all of the information required by the HPR.

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

**DSL** This product contains one or more components that are listed on the

Canadian NDSL. All other components 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**

WHMIS - GHS Label Information:

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Hazard pictograms









Gas cylinder

Health hazar

Exclama

Signal word

Hazard statements

Danger:

Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure if inhaled.

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. Do not pierce or burn, even after use. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: IF ON SKIN: Wash with plenty of 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. 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 it 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.

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