

ZEP POWERHOUSE AERO DZ

Version 2.1

Revision Date 08/03/2015

Print Date 01/22/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP POWERHOUSE AERO DZ

Material number : 00000000000028201

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	colourless
Odour	characteristic

GHS ClassificationGases under pressure : Liquefied gas
Skin irritation : Category 2
Eye irritation : Category 2A**GHS Label element**

Hazard pictograms :



Signal word : Warning

Hazard statements : H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H319 Causes serious eye irritation.Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
P251 Do not pierce or burn, even after use.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water

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for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P412 Do not expose to temperatures exceeding 50 °C/ 122 °F.

Potential Health Effects**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

Confirmed animal carcinogen with unknown relevance to humans

OSHA

2-butoxyethanol 111-76-2
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

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.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
ethanol	64-17-5	>= 10 - < 20
butane	106-97-8	>= 1 - < 5
2-butoxyethanol	111-76-2	>= 1 - < 5
2-aminoethanol	141-43-5	>= 1 - < 5
propan-2-ol	67-63-0	>= 1 - < 5
propane	74-98-6	>= 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 : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.

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- 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.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray jet
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
Nitrogen oxides (NO_x)
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- 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.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Evacuate personnel to safe areas.
Ensure adequate ventilation.
Remove all sources of ignition.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform

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respective authorities.
Prevent product from entering drains.

Methods and materials for : Neutralise with acid.
containment and cleaning up

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Always replace cap after use.
Dispose of rinse water in accordance with local and national regulations.
Do not breathe vapours or spray mist.
Avoid exposure - obtain special instructions before use.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
- 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.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
Keep in a dry, cool and well-ventilated place.
- Materials to avoid : Do not store near acids.
Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m ³	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m ³	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m ³	OSHA P0
butane	106-97-8	TWA	800 ppm 1,900 mg/m ³	NIOSH REL
		TWA	800 ppm 1,900 mg/m ³	OSHA P0
2-butoxyethanol	111-76-2	TWA	20 ppm	ACGIH
		TWA	5 ppm	NIOSH REL

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			24 mg/m ³	
		TWA	50 ppm	OSHA Z-1
			240 mg/m ³	
		TWA	25 ppm	OSHA P0
			120 mg/m ³	
2-aminoethanol	141-43-5	TWA	3 ppm	ACGIH
		STEL	6 ppm	ACGIH
		TWA	3 ppm	NIOSH REL
			8 mg/m ³	
		ST	6 ppm	NIOSH REL
			15 mg/m ³	
		TWA	3 ppm	OSHA Z-1
			6 mg/m ³	
		STEL	6 ppm	OSHA P0
			15 mg/m ³	
		TWA	3 ppm	OSHA P0
			8 mg/m ³	
propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm	NIOSH REL
			980 mg/m ³	
		ST	500 ppm	NIOSH REL
			1,225 mg/m ³	
		TWA	400 ppm	OSHA Z-1
			980 mg/m ³	
		TWA	400 ppm	OSHA P0
			980 mg/m ³	
		STEL	500 ppm	OSHA P0
			1,225 mg/m ³	
propane	74-98-6	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm	NIOSH REL
			1,800 mg/m ³	
		TWA	1,000 ppm	OSHA Z-1
			1,800 mg/m ³	
		TWA	1,000 ppm	OSHA P0
			1,800 mg/m ³	

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-BUTOXYETHANOL	111-76-2	Butoxyacetic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g	ACGIH BEI
Remarks: Creatinine						
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 : Use respiratory protection unless adequate local exhaust

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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 liquefied gas
Colour	: colourless
Odour	: characteristic
Odour Threshold	: No data available
pH	: 10.5 - 11.5
Melting point/freezing point	: No data available
Boiling point	: 98.3 °C
Flash point	: < 60 °C
Evaporation rate	: < 1
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: 0.97 g/cm ³
Solubility(ies)	
Water solubility	: soluble
Solubility in other solvents	: not determined

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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	:	< 20 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	:	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	:	Acids Strong oxidizing agents
Hazardous decomposition products	:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Nitrogen oxides (NOx)

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:**ethanol:**

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Acute oral toxicity : LD50 Oral Rat: 7,060 mg/kg**Acute inhalation toxicity** : LC50 Rat: 124.7 mg/l
Exposure time: 4 h**butane:****Acute inhalation toxicity** : LC50 Mouse: 1,237 mg/l
Exposure time: 2 h

LC50 Rat: 1,355 mg/l

2-aminoethanol:**Acute oral toxicity** : LD50 Oral Mouse: 700 mg/kg

LD50 Oral Rat: 1,515 mg/kg

Acute inhalation toxicity : LC50 Mouse: > 1.21 mg/l**propan-2-ol:****Acute oral toxicity** : LD50 Oral Rat: 4,396 mg/kg
Method: Calculation method**propane:****Acute inhalation toxicity** : LC50 Mouse: 1,237 mg/l
Exposure time: 2 hLC50 Rat: 658 mg/l
Exposure time: 4 h

LC50 Rat: 1,355 mg/l

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

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Reproductive toxicity

No data available

ethanol:
butane:
2-butoxyethanol:
2-aminoethanol:
propan-2-ol:
propane:

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

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 :**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

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Remarks	Substances 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

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: 49 CFR (USA): ORM-D, CONSUMER COMMODITY

Transportation Regulation: IMDG (Vessel): UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Cargo Air): UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity
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Transportation Regulation: IATA (Passenger Air): UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity
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Transportation Regulation: TDG (Canada): UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity
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SECTION 15. REGULATORY INFORMATION

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

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Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
2,2'-iminodiethanol	111-42-2	100	*

*: 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 : Acute Health Hazard
Sudden Release of Pressure Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.
2,2'-iminodiethanol 111-42-2
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
methanol 67-56-1

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

TSCA On TSCA Inventory
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), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

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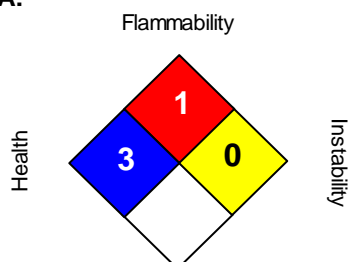
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Further information

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	2

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

OSHA GHS Label Information:

Hazard pictograms



Signal word

Hazard statements

Precautionary statements

Warning:
Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation.

Prevention: Wash skin thoroughly after handling. Wear eye protection/ face protection. Wear protective gloves. Do not pierce or burn, even after use.

Response: IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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. Store in a well-ventilated place. Do not expose to temperatures exceeding 50 °C/ 122 °F.

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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.

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