

ZEP COLD GALVANIZE COATING AERO DZ

Version 4.0 Revision Date 08/17/2018 Print Date 12/05/2018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP COLD GALVANIZE COATING AERO DZ

Material number : 00000000000019001

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 : CHEMTREC: 800-424-9300 - All Calls Recorded.

Emergency In the District of Columbia 202-483-7616

Recommended use of the chemical and restrictions on use

Recommended use : Protective Coating

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Aerosol containing a liquefied gas
Colour	No data available
Odour	solvent-like

GHS Classification

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

Specific target organ toxicity -

single exposure

: Category 3 (Central nervous system)

Specific target organ toxicity -

repeated exposure

: Category 2

Aspiration hazard : Category 1

GHS label elements

Hazard pictograms









Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.



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H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or

repeated exposure.

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/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

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:

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.

P308 + P313 IF exposed or concerned: Get medical advice/

P331 Do NOT induce vomiting.

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 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Mixture

Hazardous components



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Chemical name	CAS-No.	Concentration [%]
butane	106-97-8	>= 10 - < 30
toluene	108-88-3	>= 20 - < 30
methyl acetate	79-20-9	>= 10 - < 20
propane	74-98-6	>= 10 - < 30

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

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.

Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later.

Do not leave the victim unattended. Get medical attention immediately.

If inhaled : Remove person to fresh air. If signs/symptoms continue, get

medical attention.

If unconscious, place in recovery position and seek medical

advice.

In case of skin contact : Remove contaminated clothing and shoes.

If skin irritation persists, call a physician. Wash off with soap and plenty of water. Wash contaminated clothing before reuse.

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.

DO NOT induce vomiting unless directed to do so by a

physician or poison control center. Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

Take victim immediately to hospital.

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.

Symptoms may differ depending on organs and systems affected. These effects generally are reflected in reduced function or change, which may include cramping, swelling,

respiratory issues, and general pain.

Chronic effects are delayed and symptoms may not be

observed during an exposure.

Effects are dependent on exposure (dose, concentration,

contact time).

Symptoms may include central nervous system depression,

resulting in headache, nausea and/or dizziness.

Effects are immediate and delayed.

Symptoms may include irritation, redness, pain, and rash.

Causes skin irritation.



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Causes serious eye irritation.

Suspected of damaging fertility or the unborn child.

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated

exposure.

May be fatal if swallowed and enters airways.

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 : Foam

Carbon dioxide (CO2)

Dry powder Dry sand

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

Specific extinguishing

Further information

methods

: Cool containers/tanks with water spray.

: 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.

Standard procedure for chemical fires.

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.

Use personal protective equipment. Remove all sources of ignition.

Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions : F

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).



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Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes. Do not breathe vapours or spray mist. Use only with adequate ventilation. Wear personal protective equipment.

Always replace cap after use.

Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. 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.

Keep in a dry, cool and well-ventilated place.

Observe label precautions.

Electrical installations / working materials must comply with

the technological safety standards.

Keep away from sources of ignition - No smoking.

Take measures to prevent the build up of electrostatic charge.

Materials to avoid : Strong oxidizing agents

Storage temperature : < 50 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
butane	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	800 ppm 1,900 mg/m3	OSHA P0
		PEL	800 ppm 1,900 mg/m3	CAL PEL
toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m3	NIOSH REL
		ST	150 ppm 560 mg/m3	NIOSH REL



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		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2
		TWA	100 ppm	OSHA P0
			375 mg/m3	
		STEL	150 ppm 560 mg/m3	OSHA P0
		PEL	10 ppm 37 mg/m3	CAL PEL
		С	500 ppm	CAL PEL
		STEL	150 ppm 560 mg/m3	CAL PEL
methyl acetate	79-20-9	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 610 mg/m3	NIOSH REL
		ST	250 ppm 760 mg/m3	NIOSH REL
		TWA	200 ppm 610 mg/m3	OSHA Z-1
		TWA	200 ppm 610 mg/m3	OSHA P0
		STEL	250 ppm 760 mg/m3	OSHA P0
		PEL	200 ppm 610 mg/m3	CAL PEL
		STEL	250 ppm 760 mg/m3	CAL PEL
propane	74-98-6	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,800 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,800 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,800 mg/m3	OSHA P0
		PEL	1,000 ppm 1,800 mg/m3	CAL PEL

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
METHYLBENZENE	108-88-3	Toluene	In blood	Prior to last shift of workwee k	0.02 mg/l	ACGIH BEI
METHYLBENZENE		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
METHYLBENZENE		o-Cresol	Urine	End of shift (As soon as	0.3.mg/g Creatinine	ACGIH BEI



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		possible after
		exposure
		ceases)

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 : Safety glasses

Access to clean water to rinse eyes must be available, options

include: eye wash stations or showers, or eye wash bottles

with pure water.

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 : No data available

Odour : solvent-like

Odour Threshold : No data available

pH : Not applicable
Melting point/freezing point : Not applicable

Boiling point : $87.97 \,^{\circ}\text{C}$ Flash point : $-104.4 \,^{\circ}\text{C}$

Evaporation rate : not determined

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit : 10.9 %(V)



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Lower explosion limit : 2 %(V)

Vapour pressure : 3,792 hPa (21.1 °C)

Relative vapour density : No data available

Density : 0.807 g/cm3

Solubility(ies)

Water solubility : No data available Solubility in other solvents : not determined

Partition coefficient: n-

octanol/water

: No data available

Auto-ignition temperature : No data available
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.

No decomposition if stored and applied as directed.

Conditions to avoid : Heat, flames and sparks.

Extremes of temperature and direct sunlight.

Incompatible materials : Strong oxidizing agents

Nitrous acid and other nitrosating agents

Halogenated compounds

Hazardous decomposition

products

: Carbon dioxide (CO2) Carbon monoxide

Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Aggravated Medical

: None known.

Condition

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.



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Symptoms may differ depending on organs and systems affected. These effects generally are reflected in reduced function or change, which may include cramping, swelling, respiratory issues, and general pain.

Chronic effects are delayed and symptoms may not be observed during an exposure.

Effects are dependent on exposure (dose, concentration, contact time).

Symptoms may include central nervous system depression, resulting in headache, nausea and/or dizziness.

Effects are immediate and delayed.

Symptoms may include irritation, redness, pain, and rash.

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

No data available

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



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Product:

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

Product:

Assessment: May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

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.

Components:

toluene:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Product:

Partition coefficient: n-

: Remarks: No data available

octanol/water **Components**:

butane:

Partition coefficient: n-

: Pow: 2.89

octanol/water

toluene :

Partition coefficient: n-

: Pow: 2.73

octanol/water

Mobility in soil



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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

Components:

toluene :

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: 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

Transportation Regulation: IATA (Passenger Air): UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: TDG (Canada):



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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)
toluene	108-88-3	1000	4887

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Gases under pressure

Flammable (gases, aerosols, liquids, or solids)

Skin corrosion or irritation

Serious eye damage or eye irritation

Reproductive toxicity

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:

toluene 108-88-3 20.46 %

California Prop. 65



WARNING: This product can expose you to chemicals including Cadmium, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to

www.P65Warnings.ca.gov.



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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.

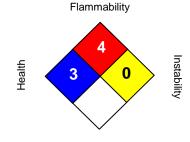
Inventory Acronym and Validity Area Legend:

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

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Special hazard.

HMIS III:

HEALTH	3*
FLAMMABILITY	4
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 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. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. 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 SWALLOWED: Immediately call a POISON CENTER/doctor. IF ON 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. IF exposed or concerned: Get medical advice/ attention. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/



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> 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. Keep cool.

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

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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.