ZEP TOP ENGINE CLEANER

Version 4.0 Revision Date 11/08/2024 Print Date 04/27/2025

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name ZEP TOP ENGINE CLEANER

Material number 000000000568000842

Manufacturer or supplier's details

Company Zep Inc.

Address 350 Joe Frank Harris Parkway, SE

Emerson, GA 30137

Compliance Services - 877-428-9937 Telephone

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 In the District of Columbia 202-483-7616

Recommended use of the chemical and restrictions on use

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	liquid
Colour	colourless
Odour	ammoniacal

GHS Classification

Flammable liquids : Category 2 : Category 1A Skin corrosion Serious eye damage : Category 1 Carcinogenicity : Category 2 Reproductive toxicity : Category 2

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

single exposure

Specific target organ toxicity -: Category 2

repeated exposure

(Inhalation)

Aspiration hazard : Category 1

GHS label elements

Hazard pictograms











mark

Signal word : Danger

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Hazard statements : H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways. H314 Causes severe skin burns and eye damage.

H336 May cause drowsiness or dizziness. 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. P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. 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.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

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

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

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

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Hazardous components

Chemical name	CAS-No.	Concentration [%]
Solvent naphtha (petroleum), medium aliph.	64742-88-7	>= 50 - < 70
propan-2-ol	67-63-0	>= 10 - < 20
toluene	108-88-3	>= 10 - < 20
triethylamine	121-44-8	>= 5 - < 10
xylenes	1330-20-7	>= 1 - < 3
ethylbenzene	100-41-4	>= 0.1 - < 1

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.

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 : Immediate medical treatment is necessary as untreated

wounds from corrosion of the skin heal slowly and with

difficulty.

Wash off immediately with plenty of water for at least 15

minutes.

If skin irritation persists, call a physician. Remove contaminated clothing and shoes. Wash contaminated clothing before re-use.

In case of eye contact : Small amounts splashed into eyes can cause irreversible

tissue damage and blindness.

Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes.

Continue rinsing eyes during transport to hospital.

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.

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

: Chronic effects are delayed and symptoms may not be

observed during an exposure.

Effects are dependent on exposure (dose, concentration,

contact time).

Effects are immediate and delayed.

Symptoms may include blistering, irritation, burns, and pain. Symptoms may include shortness of breath, dry cough, and

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irritation of the nose, eyes, lips, mouth, and throat.

Suspected of causing cancer.

May damage fertility or the unborn child.

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 (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 (NOx)

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

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth,

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vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : 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.

Do not breathe vapours or spray mist.

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 : No smoking.

Keep container tightly closed in a dry and 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 : Store and keep away from, oxidizing agents and acids.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control Basis parameters / Permissible concentration	
propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1
		TWA	400 ppm 980 mg/m3	OSHA P0
		STEL	500 ppm 1,225 mg/m3	OSHA P0
		PEL	400 ppm 980 mg/m3	CAL PEL
		STEL	500 ppm 1,225 mg/m3	CAL PEL
toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	100 ppm	NIOSH REL

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			375 mg/m3	
		ST	150 ppm 560 mg/m3	NIOSH REL
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2
		TWA	100 ppm 375 mg/m3	OSHA P0
		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
triethylamine	121-44-8	TWA	0.5 ppm	ACGIH
		STEL	1 ppm	ACGIH
		TWA	25 ppm 100 mg/m3	OSHA Z-1
		STEL	15 ppm 60 mg/m3	OSHA P0
		TWA	10 ppm 40 mg/m3	OSHA P0
		С	1 ppm 4.1 mg/m3	CAL PEL
xylenes	1330-20-7	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		STEL	150 ppm 655 mg/m3	CAL PEL
		С	300 ppm	CAL PEL
		PEL	100 ppm 435 mg/m3	CAL PEL
ethylbenzene	100-41-4	TWA	20 ppm	ACGIH
		STEL	125 ppm	ACGIH
		TWA	100 ppm 435 mg/m3	NIOSH REL
		ST	125 ppm 545 mg/m3	NIOSH REL
		TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm 435 mg/m3	OSHA P0
		STEL	125 ppm 545 mg/m3	OSHA P0
		PEL	5 ppm 22 mg/m3	CAL PEL
		STEL	30 ppm 130 mg/m3	CAL PEL

Biological occupational exposure limits

Component	CAS-No.	Control	Biological	Sampling	Permissible	Basis
		parameters	specimen	time	concentration	
PROPAN-2-OL	67-63-0	Acetone	Urine	End of shift at end of	40 mg/l	ACGIH BEI

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METHYLBENZENE	108-88-3	Toluene	In blood	workwee k Prior to last shift of	0.02 mg/l	ACGIH BEI
				workwee k		
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 possible after exposure ceases)	0.3.mg/g Creatinine	ACGIH BEI
ETHYLBENZENE	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15.g/g creatinine	ACGIH BEI
ETHYLBENZENE		Ethylbenzen e	In end- exhaled air	Not critical		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 : Protective gloves

Remarks : The suitability for a specific workplace should be discussed

with the producers of the protective gloves.

Eye protection : Access to clean water to rinse eyes must be available, options

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

with pure water. Safety glasses

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 : liquid

Colour : colourless
Odour : ammoniacal

Odour Threshold : No data available
pH : No data available
Melting point/freezing point : No data available

Boiling point : 82 - 202 °C Flash point : 8.89 °C

Method: PMCC

Evaporation rate : No data available
Upper explosion limit : No data available
Lower explosion limit : No data available
Vapour pressure : Not applicable
Relative vapour density : No data available

Density : 0.80 g/cm3

Solubility(ies)

Water solubility : partly soluble
Partition coefficient: n- : No data available

octanol/water

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.

No decomposition if stored and applied as directed.

Conditions to avoid : Heat, flames and sparks.

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Incompatible materials : Acids

Strong oxidizing agents

Hazardous decomposition

products

: Smoke

Carbon monoxide Nitrogen oxides (NOx) Carbon dioxide (CO2)

Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Aggravated Medical

: None known.

Condition

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).

Effects are immediate and delayed.

Symptoms may include blistering, irritation, burns, and pain. Symptoms may include shortness of breath, dry cough, and

irritation of the nose, eyes, lips, mouth, and throat.

Suspected of causing cancer.

May damage fertility or the unborn child.

Review section 2 of SDS to see all potential hazards. Treat symptomatically. Symptoms may be delayed.

Carcinogenicity:

IARC Group 2B: Possibly carcinogenic to humans

ethylbenzene 100-41-4

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 : 4,978 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 35.07 mg/l

Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

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Acute dermal toxicity : Acute toxicity estimate : 3,507 mg/kg

Method: Calculation method

Components:

propan-2-ol:

Acute oral toxicity : LD50 Oral Rat: 4,396 mg/kg

Method: Calculation method

Skin corrosion/irritation

Product:

Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

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.

Components:

toluene:

Remarks: No data available

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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 <u>Components:</u> propan-2-ol:

Partition coefficient: n-

octanol/water

: log Pow: 0.05

toluene :

Partition coefficient: n-

: Pow: 2.73

octanol/water

xylenes:

Partition coefficient: n-

: Pow: 3.12

octanol/water ethylbenzene:

Partition coefficient: n-

: Pow: 3.6

octanol/water

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

Components:

toluene:

Additional ecological

information

: No data available

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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):

UN1993, Flammable liquids, n.o.s., (ISOPROPANOL), 3, II - Limited quantity

Transportation Regulation: IMDG (Vessel):

UN1993, FLAMMABLE LIQUID, N.O.S., (ISOPROPANOL), 3, II - Limited quantity

Transportation Regulation: IATA (Cargo Air):

UN1993, Flammable liquid, n.o.s., (ISOPROPANOL), 3, II - Limited quantity

Transportation Regulation: IATA (Passenger Air):

UN1993, Flammable liquid, n.o.s., (ISOPROPANOL), 3, II - Limited quantity

Transportation Regulation: TDG (Canada):

UN1993, FLAMMABLE LIQUID, N.O.S., (ISOPROPANOL), 3, II - 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 : The following substance(s) is/are subject to a Significant New

Use Rule:

1-butylpyrrolidin-2-one 3470-98-2

The following substance(s) is/are subject to TSCA 12(b) export

notification requirements:

1-butylpyrrolidin-2-one 3470-98-2

EPCRA - Emergency Planning and Community Right-to-Know Act

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CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
xylenes	1330-20-7	100	4927

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)

Skin corrosion or irritation

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

Aspiration hazard Carcinogenicity Reproductive toxicity

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 11.3856 % triethylamine 121-44-8 8 % ethylbenzene 100-41-4 0.1089 %

California Prop. 65



WARNING: This product can expose you to chemicals including ethylbenzene, benzene, cumene, naphthalene, which is/are known to the State of California to cause cancer, and toluene, benzene, which is/are known to the State of California to cause birth defects or other reproductive harm. 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

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Further information

NFPA:

HEALTH	3
FLAMMABILITY	3
INSTABILITY	0
SPECIAL HAZARD.	

0 = not significant, 1 = Slight,

2 = Moderate, 3 = High

4 = Extreme

HMIS III:

HEALTH	3*
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

OSHA - GHS Label Information:

Hazard pictograms



Health hazard





Signal word Hazard statements

: Danger:

Highly flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes severe skin burns and eye damage. May cause drowsiness or dizziness. 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. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/ lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. 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

SAFETY DATA SHEET ZEP TOP ENGINE CLEANER

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SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. IF exposed or concerned: Get medical advice/ attention. Wash contaminated clothing before reuse. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage: Store in a well-ventilated place. Keep cool.

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

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