SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP ZEP-A-LUME CLEANER_5GL

Material number : M60935

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

Recommended use of the chemical and restrictions on use

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	liquid
Colour	amber, clear, colourless
Odour	strong

GHS Classification

Acute toxicity (Oral) : Category 3
Acute toxicity (Inhalation) : Category 3
Acute toxicity (Dermal) : Category 2
Skin corrosion : Category 1
Serious eye damage : Category 1

GHS label elements

Hazard pictograms :

Skull and crossbones

Corrosion

Signal word : Danger

Hazard statements : H301 + H331 Toxic if swallowed or if inhaled.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P201 + P202 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
SPECIAL HANDLING INSTRUCTIONS - Due to the unique hazards associated with hydrogen fluoride (HF), facilities need to have access to emergency showers, proper personal protective equipment (PPE), a supply of calcium gluconate gel, and complete training of all individuals on proper PPE and procedures.
Response:
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
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.
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.
P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
P321 Specific treatment (see supplemental instructions on the administration of antidotes on this label).
SUPPLEMENTAL MEDICAL TREATMENT - Get immediate medical attention while applying and massaging in 2.5% calcium gluconate gel to the skin.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
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 [%]
sulphuric acid	7664-93-9	>= 10 - < 30
hydrogen fluoride	7664-39-3	>= 5 - < 10
2-butoxyethanol	111-76-2	>= 1 - < 5
Alcohols, C9-11, ethoxylated	68439-46-3	>= 1 - < 5
orthophosphoric acid	7664-38-2	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
Move to fresh air.
Oxygen or artificial respiration if needed.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention while applying and massaging in 2.5% calcium gluconate gel. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get immediate medical attention.

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.
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.
Give small amounts of water to drink.
Take victim immediately to hospital.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.

Most important symptoms and effects, both acute and delayed : 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 central nervous system depression, resulting in headache, nausea and/or dizziness.
Fatal in contact with skin.
Causes severe skin burns and eye damage.
Review section 2 of SDS to see all potential hazards.

Notes to physician	:	Treat symptomatically. Symptoms may be delayed. Delayed treatment may result in hypoglycemia, begin treatment with topical application calcium gluconate, and monitor blood chemistry. Contact a poison treatment specialist immediately if large quantities have been ingested or inhaled, or contact with large portions of the body have occurred.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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	:	Fluorine compounds Carbon dioxide (CO2) Carbon monoxide Smoke Phosphorus compounds Sulphur oxides
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.
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.
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). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Technical measures : Due to the unique hazards associated with hydrogen fluoride (HF), it is highly recommended that emergency pre-planning and training of employees occur to mitigate and facilitate rapid response to an exposure. Facilities need to have access to emergency showers, proper personal protective equipment (PPE), a supply of calcium gluconate gel, and complete training of all individuals on proper PPE and procedures.

Advice on safe handling : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Prevent unauthorized access.
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 : Oxidizing agents
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
sulphuric acid	7664-93-9	TWA	1 mg/m3	CA AB OEL
		STEL	3 mg/m3	CA AB OEL
		TWA (Thoracic)	0.2 mg/m3	CA BC OEL
		TWAEV	1 mg/m3	CA QC OEL
		STEV	3 mg/m3	CA QC OEL
		TWA (Thoracic fraction)	0.2 mg/m3	ACGIH
hydrogen fluoride	7664-39-3	TWA	0.5 ppm 0.4 mg/m3 (Fluorine)	CA AB OEL
		(c)	2 ppm 1.6 mg/m3 (Fluorine)	CA AB OEL

		C	2 ppm (Fluorine)	CA BC OEL
		C	3 ppm 2.6 mg/m3 (Fluorine)	CA QC OEL
		TWA	0.5 ppm 0.4 mg/m3 (Fluorine)	CA AB OEL
		(c)	2 ppm 1.6 mg/m3 (Fluorine)	CA AB OEL
		C	2 ppm (Fluorine)	CA BC OEL
		C	3 ppm 2.6 mg/m3 (Fluorine)	CA QC OEL
		TWA	0.5 ppm (Fluorine)	ACGIH
		C	2 ppm (Fluorine)	ACGIH
		TWA	0.5 ppm (Fluorine)	ACGIH
		C	2 ppm (Fluorine)	ACGIH
2-butoxyethanol	111-76-2	TWA	20 ppm 97 mg/m3	CA AB OEL
		TWA	20 ppm	CA BC OEL
		TWAEV	20 ppm 97 mg/m3	CA QC OEL
		TWA	20 ppm	ACGIH
orthophosphoric acid	7664-38-2	TWA	1 mg/m3	CA AB OEL
		STEL	3 mg/m3	CA AB OEL
		TWA	1 mg/m3	CA BC OEL
		STEL	3 mg/m3	CA BC OEL
		TWAEV	1 mg/m3	CA QC OEL
		STEV	3 mg/m3	CA QC OEL
		TWA	1 mg/m3	ACGIH
		STEL	3 mg/m3	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
HYDROFLUORIC ACID	7664-39-3	Fluoride	Urine	Prior to shift (16 hours after exposure ceases)	2 mg/l	ACGIH BEI
		Fluoride	Urine	End of shift (As soon as possible after exposure ceases)	3 mg/l	ACGIH BEI
2-BUTOXYETHANOL	111-76-2	Butoxyaceti	Urine	End of	200 mg/g	ACGIH

		c acid (BAA)		shift (As soon as possible after exposure ceases)	Creatinine	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 : Ensure that eyewash stations and safety showers are close to the workstation location.
Tightly fitting safety goggles
Face-shield

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 : Avoid contact with skin, eyes and clothing.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	amber, clear, colourless
Odour	:	strong
Odour Threshold	:	No data available
pH	:	< 1
Melting point/freezing point	:	Not applicable
Boiling point	:	104.44 °C
Flash point	:	does not flash
Evaporation rate	:	1

Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	No data available
Density	:	1.12 g/cm3
Bulk density	:	No data available
Solubility(ies)		
Water solubility	:	soluble
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, dynamic	:	No data available
Viscosity, kinematic	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Incompatible materials	:	Oxidizing agents Bases
Hazardous decomposition products	:	Carbon oxides Phosphorus compounds Sulphur oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Aggravated Medical Condition	:	None known.
Symptoms of Overexposure	:	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 central nervous system depression, resulting in headache, nausea and/or dizziness.
Fatal in contact with skin.
Causes severe skin burns and eye damage.
Review section 2 of SDS to see all potential hazards.
Treat symptomatically. Symptoms may be delayed.
Delayed treatment may result in hypoglycemia, begin treatment with topical application calcium gluconate, and monitor blood chemistry.

Contact a poison treatment specialist immediately if large quantities have been ingested or inhaled, or contact with large portions of the body have occurred.

Carcinogenicity:

IARC	Group 1: Carcinogenic to humans	
	sulphuric acid	7664-93-9
ACGIH	Suspected human carcinogen	
	sulphuric acid	7664-93-9
	Confirmed animal carcinogen with unknown relevance to humans	
	2-butoxyethanol	111-76-2

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : 73.09 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate : 7.12 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : 73.32 mg/kg Method: Calculation method

Components:

2-butoxyethanol:

Acute oral toxicity	:	LD50 Oral Rat: 880 mg/kg

Acute dermal toxicity : LD50 Dermal Rabbit: 1,060 mg/kg

Alcohols, C9-11, ethoxylated:
Acute oral toxicity : LD50 Oral Rat: 1,400 mg/kg

Skin corrosion/irritation

Product:

Remarks: Causes skin burns. Harmful if absorbed through the skin. Contact results in immediate skin absorption which may cause hypocalcemia (calcium loss). This effect may be delayed for several hours after exposure. Severe over-exposure by absorption can result in death. Get immediate medical attention.

Remarks: Extremely corrosive and destructive to tissue.

Components:

hydrogen fluoride:
Remarks: Causes skin burns. Harmful if absorbed through the skin. Contact results in immediate skin absorption which may cause hypocalcemia (calcium loss). This effect may be delayed for several hours after exposure. Severe over-exposure by absorption can result in death. Get immediate medical attention.

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: 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

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.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation (TDG) / Règlement Pour Le Transport (TMD): (Canada):
UN2922, CORROSIVE LIQUID, TOXIC, N.O.S., (HYDROFLUORIC ACID, SULFURIC ACID), 8, (6.1), II

Transportation Regulation / Règlement Pour Le Transport: IMDG (Vessel):
UN2922, CORROSIVE LIQUID, TOXIC, N.O.S., (HYDROFLUORIC ACID, SULFURIC ACID), 8, (6.1), II

Transportation Regulation / Règlement Pour Le Transport: IATA (Cargo Air):
UN2922, Corrosive liquid, toxic, n.o.s., (HYDROFLUORIC ACID, SULFURIC ACID), 8, (6.1), II

Transportation Regulation / Règlement Pour Le Transport: IATA (Passenger Air):
UN2922, Corrosive liquid, toxic, n.o.s., (HYDROFLUORIC ACID, SULFURIC ACID), 8, (6.1), II

Transportation Regulation / Règlement Pour Le Transport: 49 CFR (USA):
UN2922, Corrosive liquids, toxic, n.o.s., (HYDROFLUORIC ACID, SULFURIC ACID), 8, (6.1), II

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	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

WHMIS - GHS Label Information:

Hazard pictograms :

Skull and crossbones

Corrosion

Signal word : **Danger:**

Hazard statements : Toxic if swallowed or if inhaled. Fatal in contact with skin. Causes severe skin burns and eye damage.

Precautionary statements :

Prevention: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Do not get in eyes,

on skin, or on clothing. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. SPECIAL HANDLING INSTRUCTIONS - Due to the unique hazards associated with hydrogen fluoride (HF), facilities need to have access to emergency showers, proper personal protective equipment (PPE), a supply of calcium gluconate gel, and complete training of all individuals on proper PPE and procedures.
Response: IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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. Take off immediately all contaminated clothing and wash it before reuse. Specific treatment (see supplemental instructions on the administration of antidotes on this label). SUPPLEMENTAL MEDICAL TREATMENT - Get immediate medical attention while applying and massaging in 2.5% calcium gluconate gel to the skin.
Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal: Dispose of contents/container in accordance with local regulation.

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