SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP SOLV SOLVENT_20L

Material number : 424047C

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	clear, colourless
Odour	slight chlorine, hydrocarbon-like

GHS Classification

Skin irritation : Category 2
Eye irritation : Category 2B
Carcinogenicity : Category 1B

GHS label elements

Hazard pictograms :

Health hazard Exclamation mark

Signal word : Danger

Hazard statements : H315 + H320 Causes skin and eye irritation.

H350 May cause cancer.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
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/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
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 [%]
tetrachloroethylene	127-18-4	>= 80 - <= 100
carbon tetrachloride	56-23-5	>= 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 : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
If on clothes, remove clothes.
Wash contaminated clothing before re-use.
If skin irritation persists, call a physician.

In case of eye contact : 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	:	Induce vomiting immediately and call a physician. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed	:	Effects are immediate and delayed. Symptoms may include irritation, redness, pain, and rash. 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. Causes skin irritation. Causes serious eye irritation. Review section 2 of SDS to see all potential hazards. May cause an allergic skin reaction. May cause cancer. Causes damage to organs through prolonged or repeated exposure.
Notes to physician	:	Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical Foam Carbon dioxide (CO2)
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 Chlorine compounds
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. 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	:	Use personal protective equipment. Ensure adequate ventilation.
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

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. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	:	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	:	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
tetrachloroethylene	127-18-4	STEL	100 ppm	CA AB OEL

			678 mg/m3	
		TWA	25 ppm 170 mg/m3	CA AB OEL
		TWA	25 ppm	CA BC OEL
		STEL	100 ppm	CA BC OEL
		TWAEV	25 ppm 170 mg/m3	CA QC OEL
		STEV	100 ppm 685 mg/m3	CA QC OEL
		TWA	25 ppm	ACGIH
		STEL	100 ppm	ACGIH
carbon tetrachloride	56-23-5	TWA	5 ppm 31 mg/m3	CA AB OEL
		STEL	10 ppm 63 mg/m3	CA AB OEL
		TWA	2 ppm	CA BC OEL
		TWA	2 ppm	CA ON OEL
		STEL	3 ppm	CA ON OEL
		STEV	10 ppm 63 mg/m3	CA QC OEL
		TWAEV	5 ppm 31 mg/m3	CA QC OEL
		TWA	5 ppm	ACGIH
		STEL	10 ppm	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
TETRACHLOROETHENE	127-18-4	Tetrachloroethylene	In blood	Prior to shift (16 hours after exposure ceases)	0.5 mg/l	ACGIH BEI
		Tetrachloroethylene	In end-exhaled air	Prior to shift (16 hours after exposure ceases)	3 ppm	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.
Tightly fitting safety goggles

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	:	liquid
Colour	:	clear, colourless
Odour	:	slight chlorine, hydrocarbon-like
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point	:	121 °C
Flash point	:	No data available
Evaporation rate	:	0.09
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	1.9 kPa
Relative vapour density	:	No data available
Density	:	1.62 g/cm3
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	Not applicable
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	not determined
Thermal decomposition	:	No data available
Viscosity		
Viscosity, kinematic	:	2.3 mm2/s (20 °C)

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	:	Extremes of temperature and direct sunlight. Heat, flames and sparks.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Aggravated Medical Condition	:	None known.
Symptoms of Overexposure	:	Effects are immediate and delayed. Symptoms may include irritation, redness, pain, and rash. 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. Causes skin irritation. Causes serious eye irritation. Review section 2 of SDS to see all potential hazards. May cause an allergic skin reaction. May cause cancer. Causes damage to organs through prolonged or repeated exposure. Treat symptomatically. Symptoms may be delayed.

Carcinogenicity:

IARC	Group 2A: Probably carcinogenic to humans	
	tetrachloroethylene	127-18-4
	Group 2B: Possibly carcinogenic to humans	
	carbon tetrachloride	56-23-5
ACGIH	Suspected human carcinogen	

carbon tetrachloride	56-23-5
Confirmed animal carcinogen with unknown relevance to humans	
tetrachloroethylene	127-18-4

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 2,656 mg/kg
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Components:

tetrachloroethylene:
Acute oral toxicity : LD50 Oral Rat: 2,629 mg/kg

Acute inhalation toxicity : LC50 Rat: 34,200 mg/l
Exposure time: 8 h

Acute dermal toxicity : LD50 Dermal Rabbit: 5,000 mg/kg

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Severe eye irritation

Respiratory or skin sensitisation

Product:

Remarks: Causes sensitisation.

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

Components:

tetrachloroethylene :

Partition coefficient: n-octanol/water	:	log Pow: 3.40

carbon tetrachloride :

Partition coefficient: n-octanol/water	:	log Pow: 2.83 (25 °C)

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life. The GHS H401 statement “Toxic to aquatic life” noted above is an Acute Aquatic Toxicity Category 2 classification. Although the product has the potential to harm the environment, it is not classified as a marine pollutant or regulated under transportation regulations.

Components:
carbon tetrachloride :

Ozone-Depletion Potential	1.1
Regulation	UNEP - Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer (Update: 2009-10-01)
Group	Annex B - Group II: Carbon tetrachloride

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.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation (TDG) / Règlement Pour Le Transport (TMD): (Canada):
UN1897, TETRACHLOROETHYLENE, 6.1, III

Transportation Regulation / Règlement Pour Le Transport: IMDG (Vessel):
UN1897, TETRACHLOROETHYLENE, 6.1, III

Transportation Regulation / Règlement Pour Le Transport: IATA (Cargo Air):
UN1897, Tetrachloroethylene, 6.1, III

Transportation Regulation / Règlement Pour Le Transport: IATA (Passenger Air):
UN1897, Tetrachloroethylene, 6.1, III

Transportation Regulation / Règlement Pour Le Transport: 49 CFR (USA):
UN1897, Tetrachloroethylene, 6.1, III

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:

TSCA	On TSCA Inventory
DSL	All components of this product are on the Canadian DSL

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 :

Health hazard Exclamation mark

Signal word : **Danger:**

Hazard statements : Causes skin and eye irritation. May cause cancer.

Precautionary statements :

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response: IF ON SKIN: Wash with plenty of water. 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.

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

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