

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND MANUFACTURER'S IDENTIFICATION

Product ID: 499505
Product Name: ZenaSolv
Revision Date: Apr 07, 2022
Version: 2.0
Manufacturer's Name: Zenex International
Address: 1 Zenex Circle Cleveland, OH, US, 44146
Emergency Phone: 1-800-535-5053
Information Phone Number: (440)-232-4155
Fax:
Product/Recommended Uses: Energized Electrical Cleaner

Date Printed: Apr 07, 2022
Supersedes Date: Nov 18, 2016

SECTION 2) HAZARDS IDENTIFICATION

Classification

Gases Under Pressure - Liquefied Gas
Eye Irritation - Category 2A
Skin Irritation - Category 2
Skin Sensitizer - Category 1B
Carcinogenicity - Category 1B
Specific Target Organ Toxicity - Repeated Exposure - Category 1
Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) - Category 3

Pictograms



Signal Word

Danger

Hazardous Statements - Physical

H280 - Contains gas under pressure; may explode if heated.

Hazardous Statements - Health

H350 - May cause cancer.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H372 - Causes damage to organs through prolonged or repeated exposure.
H336 - May cause drowsiness or dizziness.

Precautionary Statements - General

- P101 - If medical advice is needed, have product container or label at hand.
- P102 - Keep out of reach of children.
- P103 - Read label before use.

Precautionary Statements - Prevention

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P270 - Do not eat, drink or smoke when using this product.
- P280 - Wear protective gloves, protective clothing, eye protection and face protection.
- P264 - Wash thoroughly after handling.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P260 - Do not breathe mist, vapors or spray.
- P271 - Use only outdoors or in a well-ventilated area.

Precautionary Statements - Response

- P308 + P313 - IF exposed or concerned: Get medical attention.
- P314 - Get medical attention 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.
- P337 + P313 - If eye irritation persists: Get medical attention.
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- P333 + P313 - If skin irritation or a rash occurs: Get medical attention.
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 - Call a POISON CENTER or doctor if you feel unwell.

Precautionary Statements - Storage

- P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
- P403 + P405 - Store in a well-ventilated place. Store locked up.

Precautionary Statements - Disposal

- P501 - Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 3) COMPOSITION, INFORMATION ON INGREDIENTS

| CAS | Chemical Name | % By Weight |
|--------------|----------------------|-------------|
| 0000127-18-4 | Tetrachloroethylene | 68% - 100% |
| 0000124-38-9 | Carbon Dioxide | 1.2% - 3% |
| 0000056-23-5 | Carbon Tetrachloride | 0.1% - 2% |

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing.
If exposed/If you feel unwell/If concerned: Call a POISON CONTROL CENTER/doctor.
Eliminate all ignition sources if safe to do so.

Eye Contact

Rinse eyes cautiously with lukewarm, gently flowing water for 15 minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation persists: Get medical advice/attention. Wash contaminated clothing before re-use. IF exposed or concerned: Get medical advice/attention.

Ingestion

Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

Most Important Symptoms/Effects, Acute and Delayed

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Do not direct a solid stream of water or foam into hot, burning pools this may result in frothing and increase fire intensity.

Unsuitable Extinguishing Media

No data available.

Specific Hazards in Case of Fire

Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Product is highly flammable and forms explosive mixtures with air, oxygen, and all oxidizing agents. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a build up of internal pressure. Cool with water. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Do not direct a solid stream of water or foam into burning material; this may cause spattering and spread the fire.

Special Protective Actions

Wear goggles and use a self-contained breathing apparatus. If water is used, fog nozzles are preferred.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away.

Remove all possible sources of ignition in the surrounding area.

Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Recommended Equipment

See section 8 for specifics on personal protective equipment (PPE).

Personal Precautions

Avoid breathing vapor. Avoid contact with skin, eye or clothing. ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning Up

Absorb liquids in vermiculite, dry sand, earth or similar inert material and deposit in sealed containers for disposal.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.
Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Do not cut, drill, grind, weld, or perform similar operations on or near containers. Do not pressurize containers to empty them.
Store at temperatures below 120°F.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

| Chemical Name | OSHA TWA (mg/m3) | OSHA TWA (ppm) | OSHA STEL (mg/m3) | OSHA STEL (ppm) | OSHA Carcinogen | OSHA Skin designation | OSHA Tables (Z1, Z2, Z3) | ACGIH TWA (mg/m3) |
|----------------------|------------------|-----------------------|-------------------|----------------------------------|-----------------|-----------------------|--------------------------|-------------------|
| Carbon Tetrachloride | | 10 (a) / 25 ceiling | | 200ppm /5min. in any 3 hrs. | | | 1 | |
| Carbon Dioxide | 9000 | 5000 | | | | | 1 | |
| Tetrachloroethylene | | 100 (a) / 200 ceiling | | 300ppm /5 mins. in any 3 hrs.(a) | | | 1,2 | |

| Chemical Name | ACGIH TWA (ppm) | ACGIH STEL (mg/m3) | ACGIH STEL (ppm) | ACGIH Carcinogen | ACGIH TLV Basis | ACGIH Notations | NIOSH TWA (mg/m3) | NIOSH TWA (ppm) |
|----------------------|-----------------|--------------------|------------------|------------------|-----------------|-----------------|-------------------|-----------------|
| Carbon Tetrachloride | 5 | | 10 | A2 | Liver dam | Skin; A2 | | |
| Carbon Dioxide | 5000 | | 30000 | | Asphyxia | | 9000 | 5000 |
| Tetrachloroethylene | 25 | | 100 | A3 | CNS impair | A3; BEI | | b |

| Chemical Name | NIOSH STEL (mg/m3) | NIOSH STEL (ppm) | NIOSH Carcinogen |
|-----------------------|--------------------|------------------|------------------|
| Carbon Tetra-chloride | 12.6b | 2b | 1 |
| Carbon Dioxide | 54000 | 30000 | |
| Tetrachloro-ethylene | | | 1 |

(C) - Ceiling limit, A2 - Suspected Human Carcinogen, A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, BEI - Substances for which there is a Biological Exposure Index or Indices, CNS - Central nervous system, dam - Damage, impair - Impairment

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density 13.59 lb/gal

Density VOC 0 lb/gal

% VOC 0%

Appearance Clear liquid

Odor Threshold Odor N.A.

Description N.A.

pH N.A.

Water Solubility N.A.

Flammability Will not burn.

Flash Point Symbol N.A.

Flash Point N.A.

Viscosity N.A.

Lower Explosion Level N.A.

Upper Explosion Level N.A.

Vapor Density Melting N.A.

Point Freezing Point N.A.

Low Boiling Point N.A.

High Boiling Point N.A.

Decomposition Pt N.A.

Auto Ignition Temp N.A.

Evaporation Rate Slower than ether.

SECTION 10) STABILITY AND REACTIVITY

Stability

The product is stable under normal storage conditions.

Conditions to Avoid

High temperatures.

Incompatible Materials

None known.

Hazardous Reactions/Polymerization

Will not occur.

Hazard Decomposition Products

None known.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation

Causes skin irritation.

Likely Route of Exposure

Inhalation, ingestion, skin absorption.

Serious Eye Damage/Irritation

Causes serious eye irritation.

Carcinogenicity

May cause cancer.

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Respiratory/Skin Sensitization

May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure

May cause drowsiness or dizziness.

Specific Target Organ Toxicity - Repeated Exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration Hazard

No data available.

Acute Toxicity

No data available.

0000127-18-4 Tetrachloroethylene

LC50 (rat): Approximately 3786 ppm (4-hour exposure) (22); approximately 4000 ppm (4-hour exposure) (23)

LC50 (mouse): 5200 ppm (4-hour exposure) (24)

LD50 (oral, rat): Approximately 2600 mg/kg (cited as 1.6 mL/kg) (20)

LD50 (oral, male rat): 3835 mg/kg (25)

LD50 (oral, female rat): 3005 mg/kg (25)

LD50 (dermal, rabbit): Greater than 3245 mg/kg (0/5 animals died) (2)

0000056-23-5 Carbon Tetrachloride

LC50 (rat): 8000 ppm (4-hour exposure) (24)

LD50 (oral, male rat): 2500 mg/kg (25)

LD50 (oral, rat): 2920 mg/kg (26)

LD50 (dermal, guinea pig): greater than 15000 mg/kg (cited as greater than 0.94 mL/kg) (27)

LD50 (dermal, rat): 5070 mg/kg (28, unconfirmed)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Toxic to aquatic life with long lasting effects.

Persistence and Degradability

No data available.

Bio-Accumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

| | IATA Information | IMDG Information | U.S. DOT Information |
|----------------------------------|-------------------------|-------------------|----------------------|
| UN number: | UN1950 | UN1950 | UN1950 |
| Proper shipping name: | Aerosols, non-flammable | Aerosols | Aerosols |
| Hazard class: | 2.2 | 2.2 | 2.2 |
| Packaging group: | N.A. | N.A. | N.A. |
| Hazardous substance (RQ): | | | No Data Available |
| Marine Pollutant: | | No Data Available | No Data Available |
| Note / Special Provision: | (LTD QTY) | (LTD QTY) | (LTD QTY) |
| Toxic-Inhalation Hazard: | | | No Data Available |

SECTION 15) REGULATORY INFORMATION

| CAS | Chemical Name | % By Weight | Regulation List |
|--------------|----------------------|-------------|--|
| 0000127-18-4 | Tetrachloroethylene | 68% - 100% | SARA313, CERCLA, HAPS, SARA312, VHAPS, VOC exempt, TSCA, RCRA, ACGIH, California Proposition 65 Cancer, OSHA |
| 0000124-38-9 | Carbon Dioxide | 1.2% - 3% | SARA312, TSCA, ACGIH, OSHA |
| 0000056-23-5 | Carbon Tetrachloride | 0.1% - 2% | SARA313, CERCLA, HAPS, SARA312, VHAPS, TSCA, RCRA, ACGIH, California Proposition 65 Cancer, OSHA |

SECTION 16) OTHER INFORMATION

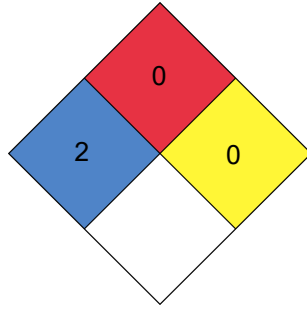
Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS

| | |
|---------------------|-----|
| Health | * 2 |
| FLAMMABILITY | 0 |
| Physical Hazard | 0 |
| Personal Protection | B |

NFPA



(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

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