

Safety Data Sheet

Kleen-Solv

SECTION I - IDENTIFICATION

PRODUCT IDENTIFIER: Kleen-Solv

PRODUCT CODE: 9612, 9895, 8432

RECOMMENDED USE: Energized Electrical Cleaner (EEC)

RESTRICTIONS ON USE: After December 8, 2026 this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers for any use. After March 8, 2027, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of PCE equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant/intermediate; (2) Processing into formulation, mixture or reaction product; (3) Processing by repackaging; (4) Recycling; (5) Industrial and commercial use as solvent in open-top batch vapor degreasing; (6) Industrial and commercial use as solvent in closed-loop batch vapor degreasing; (7) Industrial and commercial use in maskant for chemical milling; (8) Industrial and commercial use as a processing aid in catalyst regeneration in petrochemical manufacturing; (9) Industrial and commercial use as a processing aid in sectors other than petrochemical manufacturing; (10) Industrial and commercial use as solvent for cold cleaning of tanker vessels; (11) Industrial and commercial use as energized electrical cleaner; (12) Industrial and commercial use in laboratory chemicals; (13) Industrial and commercial use in solvent-based adhesives and sealants; (14) Industrial and commercial use in dry cleaning in 3rd generation machines until December 20, 2027; (15) Industrial and commercial use in all dry cleaning and related spot cleaning until December 19, 2034; (16) Export; and (17) Disposal.

COMPANY NAME: Tifco Industries

COMPANY ADDRESS: P.O. Box 40277, Houston, TX 77240

COMPANY PHONE: 800-868-4326

EMERGENCY PHONE: 800-255-3924

SECTION II – HAZARDS IDENTIFICATION

CLASSIFICATION: Aerosols: Category 3

Skin Irritant: Category 2

Eye Irritant: Category 2A

Specific Target Organ Toxicity (Single Exposure): Category 3

Carcinogenicity: Category 2

Skin Sensitization: Category 1

Acute Toxicity, Inhalation: Category 4

HAZARD STATEMENT(S): **WARNING:** Pressurized container: may burst if heated. Causes skin and serious eye irritation. May cause drowsiness or dizziness. Suspected of causing cancer. May cause an allergic skin reaction. Harmful if inhaled.

This product contains the following percentage of chemicals of unknown toxicity: N/A

PRECAUTIONARY STATEMENTS: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. -No smoking. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Avoid breathing fumes, mist, vapors, and spray. Wear protective gloves, eye protection and protective clothing. Wash hands thoroughly after handling. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing and wash before reuse. Contaminated work clothing must not be allowed out of the workplace. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. IF EXPOSED OR CONCERNED: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help. Store in a well-ventilated place. Dispose of contents and container in accordance with local, state, and national regulations.

SYMBOL:



HAZARDS NOT OTHERWISE CLASSIFIED: N/A

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SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT	CAS NUMBER	PERCENT
Tetrachloroethylene	127-18-4	80-100%
Carbon dioxide	124-38-9	3-7%

Trade Secret Information: A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION IV - FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek medical attention if irritation persists.

INGESTION: Rinse mouth with water. Do not induce vomiting unless directed by medical authority. Seek medical attention. Never give anything by mouth to an unconscious person.

INHALATION: Move to fresh air. If breathing is difficult, administer oxygen. If not breathing administer artificial respiration or at any sign of loss of consciousness seek immediate medical attention.

SKIN: Immediately wash with soap and water for 15 minutes. Remove contaminated clothing and shoes immediately. Seek medical attention if irritation persists.

ACUTE HEALTH HAZARDS: Causes skin irritation including redness, burning and drying/cracking. Causes eye irritation including redness, tearing, and pain. May cause respiratory irritation and central nervous system (CNS) depression. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

CHRONIC HEALTH HAZARDS: Possible cancer causing agent and overexposure may also include damage to skin, kidneys, liver, lungs, blood, reproductive or central nervous systems. May cause dizziness, headache, nausea, mental confusion, or visual disturbances.

NOTE TO PHYSICIAN: Do not administer adrenaline or epinephrine to a victim of chlorinated solvent poisoning. This product contains ingredients that may be anticipated to be a carcinogen.

SECTION V – FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, water spray, alcohol-resistant foam.

UNSUITABLE EXTINGUISHING MEDIA: Water jets or streams.

SPECIAL FIRE FIGHTING PROCEDURES: Wear NIOSH approved Self Contained Breathing Apparatus with a full face piece operated in a positive pressure demand mode with full body protective clothing when fighting fires. Use water spray only to cool exposed containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Contents under pressure. Exposure to temperatures above 122 °F (50 °C) may cause bursting. Keep away from heat, sparks, open flames and other sources of ignition.

HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon, chlorine, hydrogen chloride and phosgene.

SECTION VI – ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: Refer to section VIII for proper Personal Protective Equipment.

SPILL: Use absorbent on spill, sweep to clean. Dispose in accordance with local, state and federal laws. Small releases may be wiped up with wiping material.

WASTE DISPOSAL: Dispose of in accordance with local, state and federal regulations. Do not dump in sewers. Wrap container and place in trash collection. Do not puncture, incinerate, or reuse container.

RCRA STATUS: Waste solvent likely considered U210 (Tetrachloroethylene) under RCRA, however product should be fully characterized prior to disposal (40 CFR 261).

SECTION VII – HANDLING AND STORAGE

HANDLING AND STORAGE: Wear proper personal protective equipment when using this product. Avoid contact with skin, eyes and clothing. Do not inhale mist or vapor. Do not use or store with strong oxidizers. Protect from sunlight. Store in a well ventilated area. Do not expose to temperatures exceeding 50 °C/122 °F. Pressurized container: Do not pierce or burn, even after use. Store in a cool, dry area. Do not use or store near heat, open flames or other sources of ignition. Wash contaminated clothing and shoes thoroughly before reuse. Wash hands thoroughly after handling.

OTHER PRECAUTIONS: Keep out of the reach of children. Read and follow the directions on the product label. They are the best guide to using the product in the most effective manner. The label also gives you the necessary safety precautions to protect your health. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warning and precautions listed for the product.

INCOMPATIBILITY: Strong acids, strong alkalis, strong oxidizing agents, chemically active metals, such as aluminum, barium, lithium, sodium, magnesium, potassium, titanium, beryllium, concentrated nitric acid some plastics, rubbers, and coatings.

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SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

HAZARDOUS INGREDIENT	OSHA PEL	ACGIH TLV
Tetrachloroethylene	100 ppm	25 ppm
Carbon dioxide	5000 ppm	5000 ppm

ENGINEERING CONTROLS / VENTILATION: Material is heavier than air. Material may concentrate in low lying areas. Normal, forced ventilation required to meet TLV requirements. Local exhaust ventilation is generally preferred.

RESPIRATORY PROTECTION: Avoid breathing vapor. If exposure levels are exceeded then organic vapor cartridge respirator or SCBA will be needed.

PERSONAL PROTECTIVE EQUIPMENT: Safety glasses/goggles, chemical resistant gloves and synthetic apron.

ADDITIONAL MEASURES: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective clothing to prevent repeated or prolonged contact with product. Contaminated work clothing must not be allowed out of the workplace. Avoid contact with skin or eyes and avoid breathing vapors. Wash hands after use. If clothing becomes contaminated, immediately remove and wash.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, colorless to slight tint spray.

ODOR: Chlorinated solvent.

ODOR THRESHOLD: N/D

pH: N/A

MELTING POINT/FREEZING POINT: N/D

INITIAL BOILING POINT AND BOILING RANGE: N/D

FLASH POINT: N/D

EVAPORATION RATE: N/D

FLAMMABILITY (solid/gas): Not considered a flammable aerosol or an extremely flammable aerosol by OSHA (29CFR 1910.1200).

UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:

LOWER FLAMMABILITY LIMIT: N/D

UPPER FLAMMABILITY LIMIT: N/D

EXPLOSIVE LIMIT LOWER (%): N/D

EXPLOSIVE LIMIT UPPER (%): N/D

VAPOR PRESSURE (mm Hg): N/D

VAPOR DENSITY (AIR=1): N/D

RELATIVE DENSITY (H₂O=1): 1.62 @ 77 °F (25 °C).

SOLUBILITY(IES): Negligible.

PARTITION COEFFICIENT: n-OCTANOL/WATER (K_{ow}): N/D

AUTOIGNITION TEMPERATURE: N/D

DECOMPOSITION TEMPERATURE: N/D

VISCOOSITY: N/D

SECTION X – STABILITY AND REACTIVITY

REACTIVITY: Chemically active metals and acids.

CHEMICAL STABILITY: Stable.

POSSIBLE HAZARDOUS REACTIONS: None known.

CONDITIONS TO AVOID: Temperatures greater than 122 °F may cause bursting. Avoid incompatible materials.

INCOMPATIBLE MATERIALS: Strong acids, strong alkalis, strong oxidizing agents, chemically active metals, such as aluminum, barium, lithium, sodium, magnesium, potassium, titanium, beryllium, concentrated nitric acid some plastics, rubbers, and coatings.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, chlorine, hydrogen chloride and phosgene.

SECTION XI – TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: **Tetrachloroethylene (Perchloroethylene) (127-18-4):** LD₅₀ (Oral, Rat) 2629 mg/kg; LC₅₀ (Inhalation, Mouse, 8hr) 34200 mg/m³. **Carbon dioxide (124-38-9):** LC₅₀ (Inhalation, Rat, 30m) 470,000 ppm.

ROUTES OF ENTRY: Eyes, Inhalation, Skin

EYES: Causes irritation, burning, redness, tearing.

INGESTION: Not a likely route of exposure under normal product handling conditions. Causes gastrointestinal irritation, headaches, nausea, diarrhea, vomiting, abdominal cramps.

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INHALATION: Causes respiratory tract irritation, dizziness, headache, nausea, depression of central nervous system (CNS). Prolonged exposure may cause unconsciousness, heart effects, liver effects, kidney effects and death.

SKIN: Irritation likely, redness and pain. May cause localized defatting, blistering with prolonged skin contact. May be absorbed through the skin.

MEDICAL CONDITION AGGRAVATED: Excessive exposure will aggravate pre-existing disorders of eyes, skin, respiratory, liver, kidney, cardiovascular system, pulmonary illnesses, or central nervous system (CNS).

ACUTE HEALTH HAZARDS: Causes skin irritation including redness, burning and drying/cracking. Causes eye irritation including redness, tearing, and pain. May cause respiratory irritation and central nervous system (CNS) depression. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

CHRONIC HEALTH HAZARDS: Possible cancer causing agent and overexposure may also include damage to skin, kidneys, liver, lungs, blood, reproductive or central nervous systems. May cause dizziness, headache, nausea, mental confusion, or visual disturbances.

CARCINOGENICITY: OSHA: No Data Available ACGIH: A3 - Animal Carcinogen NTP: 2 - Anticipated
IARC: 2A - Probable OTHER: CA Prop 65

SECTION XII – ECOLOGICAL INFORMATION

ECOTOXICITY: Toxic to aquatic life with long lasting effects. **Tetrachloroethylene (Perchloroethylene)** (127-18-4): LC₅₀ (*Pimephales promelas*, 96h) 18.4 mg/L; LC₅₀ (*Oncorhynchus mykiss*, 96hr) 5 mg/L; LC₅₀ (*Lepomis macrochirus*, 96hr) 12.9 mg/L; LC₅₀ (*Cyprinodon variegatus*, 96h) 29.4 - 52.2 mg/L; LC₅₀ (Mysid shrimp, 96h) 10.2 mg/L; EC₅₀ (*Daphnia magna*, 48h) 18 mg/L.

PERSISTENCE AND DEGRADABILITY: Component or components of this product are not biodegradable.

BIOACCUMULATIVE POTENTIAL: Components in this mixture can bioaccumulate in aquatic organisms.

MOBILITY IN SOIL: This product is mobile in soil.

OTHER ADVERSE EFFECTS: None known.

SECTION XIII – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Dispose of in accordance with local, state and federal regulations. Do not dump in sewers. Wrap container and place in trash collection. Do not puncture, incinerate, or reuse container.

RCRA STATUS: Waste solvent likely considered U210 (Tetrachloroethylene) under RCRA, however product should be fully characterized prior to disposal (40 CFR 261).

SECTION XIV - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Aerosols, Ltd. Qty.

HAZARD CLASS/DIVISION: 2.2 (6.1)

UN/NA NUMBER: UN1950

PACKING GROUP: N/A

AIR SHIPMENT

PROPER SHIPPING NAME: Aerosols, non-flammable, containing substances in Division 6.1, Packing Group III.

HAZARD CLASS/DIVISION: 2.2 (6.1)

UN/NA NUMBER: UN1950

PACKING GROUP: N/A

SHIPPING BY WATER:

VESSEL (IMO/IMDG)

PROPER SHIPPING NAME: Aerosols, toxic.

HAZARD CLASS/DIVISION: 2.2 (6.1)

UN/NA NUMBER: UN1950

PACKING GROUP: N/A

ENVIRONMENTAL HAZARDS WATER: Marine Pollutant.

SECTION XV - REGULATORY INFORMATION

TSCA STATUS: All chemicals are listed or exempt.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): **Tetrachloroethylene (Perchloroethylene)** (127-18-4) Reportable Quantity = 100 pounds.

SARA 311/312 HAZARD CATEGORIES: Health Hazard and Physical Hazard.

SARA 313 REPORTABLE INGREDIENTS: **Tetrachloroethylene (Perchloroethylene)** (127-18-4).

CLEAN WATER ACT: **Tetrachloroethylene (Perchloroethylene)** (127-18-4) is a priority pollutant and a toxic pollutant.

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STATE REGULATIONS: California Proposition 65: WARNING: This product can expose you to chemicals including

Tetrachloroethylene (Perchloroethylene), which is known to the state of California to cause cancer. For more information go to www.P65Warnings.ca.gov. **Tetrachloroethylene (Perchloroethylene)** (127-18-4): Included on State Hazardous Substances Inventories, Right-to-Know lists and/or Air Quality or Air Pollutants lists for the following states: CA, DE, ID, IL, ME, MN, NJ, NY, PA, RI, WV, WI.

INTERNATIONAL REGULATIONS: Listed or exempt from listing/notification on the following chemical inventories: Australian Inventory of Industrial Chemicals (AIIC, Australia); Domestic Substances List (DSL, Canada); Inventory of Existing Chemical Substances in China (IECSC, China); Existing and New Chemical Substances (ENCS, Japan); Korean Existing Chemicals Inventory (KECI, Korea); New Zealand Inventory of Chemicals (NZIoC, New Zealand); Philippine Inventory of Chemicals and Chemical Substances (PICCS, Philippines); Taiwan Chemical Substance Inventory (TCSI, Taiwan).

VOLATILE ORGANIC COMPOUNDS (VOC): 0%

Tetrachloroethylene (Perchloroethylene or PCE) containing products: After December 8, 2026 this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers for any use. After March 8, 2027, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of PCE equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant/intermediate; (2) Processing into formulation, mixture or reaction product; (3) Processing by repackaging; (4) Recycling; (5) Industrial and commercial use as solvent in open-top batch vapor degreasing; (6) Industrial and commercial use as solvent in closed-loop batch vapor degreasing; (7) Industrial and commercial use in maskant for chemical milling; (8) Industrial and commercial use as a processing aid in catalyst regeneration in petrochemical manufacturing; (9) Industrial and commercial use as a processing aid in sectors other than petrochemical manufacturing; (10) Industrial and commercial use as solvent for cold cleaning of tanker vessels; (11) Industrial and commercial use as energized electrical cleaner; (12) Industrial and commercial use in laboratory chemicals; (13) Industrial and commercial use in solvent-based adhesives and sealants; (14) Industrial and commercial use in dry cleaning in 3rd generation machines until December 20, 2027; (15) Industrial and commercial use in all dry cleaning and related spot cleaning until December 19, 2034; (16) Export; and (17) Disposal.

NFPA HEALTH: 2

HMIS HEALTH: *2

NFPA FLAMMABILITY: 1

HMIS FLAMMABILITY: 1

NFPA REACTIVITY: 0

HMIS REACTIVITY: 0

NFPA OTHER: None

HMIS PROTECTION: C

SECTION XVI - OTHER INFORMATION

PREPARATION BY: Craig Bernard

DATE PREPARED: 12/13/2013

REVISION DATE: 07/22/2025

N/A = Not Applicable; N/D = Not Determined

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