

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: Electrón
TRADE NAMES: Electrón; Methylene Chloride, Degreasing Grade;
OTHER/GENERIC NAMES: Dielectric Solvent; Flushing Agent; Cleaner; Degreaser
SYNONYMS: Dichloromethane
PRODUCT USE: Especially conceived for the internal and external cleaning of refrigeration and air conditioning systems, electrical connectors, electric motors, panels, chassis of mechanical equipment, videos, transformers, watches and all types of electrical equipment. ELECTRON eliminates moisture, dust and dirt. Quickly dissolves grease, mineral and synthetic oils. It is non-corrosive product and it does not affect insulation of the equipment, leaving no residue and has high dielectric strength.

EXIM TRADING LLC 12601 NW 115TH Ave, Unit 111A, Medley, FL, 33178
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FOR CHEMICAL EMERGENCY

Spill, Leak, Fire, Exposure or Accident
CALL INFOTRAC – Day or Night
800-535-5053
OUTSIDE UNITED STATES, CALL COLLECT 1-352-323-3500

2. HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS CLASSIFICATION: Acute toxicity, Category 4

GHS SYMBOL:



GHS SIGNAL WORD: WARNING

GHS HAZARD STATEMENT: Harmful if swallowed. May be harmful if inhaled

EMERGENCY OVERVIEW:

COLOR: Colorless
PHYSICAL FORM: Liquid
ODOR: Mildly sweet, chloroform-like odor
SIGNAL WORD: WARNING

MAJOR HEALTH HAZARDS: HARMFUL IF SWALLOWED. MAY BE IRRITATING TO RESPIRATORY TRACT, SKIN AND EYES. MAY CAUSE CARDIAC AND CENTRAL NERVOUS SYSTEM EFFECTS. CHEMICAL ASPHYXIANT. MAY CAUSE LIVER DAMAGE. MAY CAUSE CANCER BASED ON ANIMAL DATA.

PRECAUTIONARY STATEMENTS: Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Keep container tightly closed. Wash thoroughly after handling. Use only with adequate ventilation.

POTENTIAL HEALTH EFFECTS:

INHALATION: May cause upper respiratory tract irritation and central nervous system depression with symptoms such as confusion, lightheadedness, nausea, vomiting, headache, and fatigue. Causes formation of carbon monoxide in blood which may affect the cardiovascular system and central nervous system. Continued exposure may cause unconsciousness and even death.

SKIN CONTACT: May cause effects ranging from mild irritation to severe pain, and possibly burns, depending on the intensity of contact. Skin absorption may occur.

EYE CONTACT: Vapors may cause eye irritation. Contact may cause tearing, redness, a stinging or burning feeling, swelling, and blurred vision.

INGESTION: May cause nausea or vomiting. If vomiting results in aspiration, chemical pneumonia could occur. Absorption through the gastrointestinal tract may produce central nervous system depression.

TARGET ORGANS: Blood, central nervous system, liver, skin, cardiovascular system, eyes

CHRONIC EFFECTS: May cause liver damage. May cause cancer based on animal data.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Heart or cardiovascular disorders, kidney disorders, liver disorders, nervous system disorders, respiratory system (including asthma and other breathing disorders), skin disorders and allergies.

ADDITIONAL DATA: Alcohol may enhance the toxic effects. May cross the placenta. May be excreted in breast milk. Concurrent exposure to carbon monoxide, smoking, or physical activity may increase the level of carboxyhemoglobin in the blood resulting in additive effects.

CARCINOGEN STATUS:

OSHA: Yes
NTP: Yes
IARC: Yes. See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT:	DICHLOROMETHANE
CAS NUMBER:	75-09-2
PERCENTAGE:	99.97-100
COMPONENT:	PROPYLENE OXIDE
CAS NUMBER:	75-56-9
PERCENTAGE:	Proprietary

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation/Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY.

SKIN CONTACT: Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods. GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT: Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION: Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. If vomiting occurs spontaneously, keep airway clear. Do not give fluids. GET MEDICAL ATTENTION IMMEDIATELY.

NOTE TO PHYSICIAN: This material is an aspiration hazard. Risk of aspiration must be weighed against possible toxicity of the material (see ingestion) when determining whether to induce emesis or to perform gastric lavage. This material sensitizes the heart to the effects of sympathomimetic amines. Epinephrine other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. This material is metabolized to carbon monoxide. Consequently, elevations in carboxyhemoglobin as high as 50% have been reported, and levels may continue to rise for several hours after exposure has ceased. Data in experimental animals suggest there is a narrow margin between concentrations causing anesthesia and death.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Slight fire hazard.

EXTINGUISHING MEDIA: Use foam, dry chemical, CO₂, or water spray.

FIRE FIGHTING: Wear NIOSH approved positive-pressure self-contained breathing apparatus. Concentrated vapors may be ignited by high intensity energy source. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Keep water runoff out of water supplies and sewers (see Section 6 of the MSDS).

SENSITIVITY TO MECHANICAL IMPACT: Not sensitive

SENSITIVITY TO STATIC DISCHARGE: Not sensitive

FLASH POINT: none, TCC

LOWER FLAMMABLE LIMIT: 12% @ 100°C

UPPER FLAMMABLE LIMIT: 19% @ 100°C

AUTOIGNITION: 1033°F (556.1°C)

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition or combustion products: hydrogen chloride, chlorine, phosgene, oxides of carbon

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Evacuation of surrounding area may be necessary for large spills. Shut off ventilation system if needed. Wear appropriate personal protective equipment recommended in Section 8 of the MSDS. Completely contain spilled material with dikes, sandbags, etc. Most vapors are heavier than air and will spread along ground and collect in low or confined areas (drains, basements, tanks). Ventilate closed spaces before entering. Stop leak if possible without personal risk. Remove contaminated soil or collect with appropriate absorbent and place into suitable container. Keep container tightly closed. Dispose properly. Liquid material may be removed with a properly rated vacuum truck. Keep out of water supplies, sewers and soil. Avoid discharge into drains, surface water or groundwater. Releases should be reported, if required, to appropriate agencies. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Store in a cool, dry place. Store in a well-ventilated area. Prevent water or moist air from entering storage tanks or containers. Do not enter confined spaces without following proper confined space entry procedures. Do not store in aluminum container or use aluminum fittings or transfer lines. Protect from sunlight. Do not reuse drum without recycling or reconditioning in accordance with any applicable federal, state or local laws. Do not use cutting or welding torches, open flames or electric arcs on empty or full containers. Keep separated from incompatible substances (see Section 10 of the MSDS).

HANDLING: Most vapors are heavier than air and will spread along ground and collect in low or confined areas (drains, basements, tanks). Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Wash thoroughly after handling. When using, do not eat, drink or smoke.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

DICHLOROMETHANE (METHYLENE CHLORIDE):

25 ppm OSHA TWA PEL

125 ppm OSHA STEL 15 minute(s)

12.5 ppm OSHA action level

50 ppm ACGIH TWA

PROPYLENE OXIDE:

100 ppm (240 mg/m³) OSHA TWA

20 ppm (50 mg/m³) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)

2 ppm ACGIH TWA (sensitizer)

BIOLOGICAL LIMIT VALUES:

DICHLOROMETHANE (METHYLENE CHLORIDE):

BEI®: 0.3 mg/L

DETERMINANT: Dichloromethane in urine

SAMPLING TIME: End of shift

VENTILATION: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits. Monitoring must be performed regularly in accordance with 29 CFR 1910.1052(d) to determine exposure level(s).

EYE PROTECTION: Wear safety glasses with side shields. Wear chemical safety goggles with a face shield to protect against skin and eye contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

PROTECTIVE MATERIAL TYPES: Trelchem®, Tychem®, Viton®, polyvinyl alcohol (PVA)

IMMEDIATELY DANGEROUS TO LIFE OR HEALTH: 2,300 ppm (methylene chloride)

RESPIRATOR: The minimum requirements for respiratory protection for methylene chloride appear in 29 CFR 1910.1052 (f).

Where concentrations are above the IDLH, or are unknown, or during spills and/or emergencies, use any supplied-air respirator that has a full face piece and is operated in a pressure-demand or other positive pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure demand or other positive-pressure mode.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
APPEARANCE:	Clear
COLOR:	Colorless
ODOR:	Mildly sweet, chloroform-like odor
MOLECULAR WEIGHT:	84.94
MOLECULAR FORMULA:	CH ₂ Cl ₂
BOILING POINT:	104°F (40°C)
FREEZING POINT:	-139°F (-95°C)
FLASH POINT:	None, TCC
LOWER FLAMMABLE LIMIT:	12% @ 100°C
UPPER FLAMMABLE LIMIT:	19% @ 100°C
AUTO IGNITION:	1033 F (556.1°C)
VAPOR PRESSURE:	350 mmHg @ 20°C
VAPOR DENSITY:	2.9 (air=1)
SPECIFIC GRAVITY:	1.31-1.32 @ 25°C (water=1)
WATER SOLUBILITY:	1.32% @ 25°C
pH:	Not applicable
VOLATILITY:	100%
ODOR THRESHOLD:	200-300 ppm (causes olfactory fatigue)
EVAPORATION RATE:	0.7 (ether=1)
COEFFICIENT OF WATER/OIL DISTRIBUTION:	Log Pow = 1.25

10. STABILITY AND REACTIVITY

REACTIVITY:	Stable at normal temperatures and pressure.
CONDITIONS TO AVOID:	Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Avoid contact with incompatible substances and conditions due to generation of phosgene and other toxic and irritating substances.
INCOMPATIBILITIES:	Bases, Oxygen, Sodium, Potassium, Strong Oxidizing

HAZARDOUS DECOMPOSITION:	Materials, Reactive Metals Thermal decomposition or combustion products: hydrogen chloride, chlorine, phosgene, oxides of carbon
POLYMERIZATION:	Will not polymerize.

11. TOXICOLOGICAL INFORMATION

METHYLENE CHLORIDE:

IRRITATION DATA: 810 mg/24 hour(s) skin-rabbit severe; 100 mg/24 hour(s) skin-rabbit moderate; 162 mg eyes-rabbit moderate; 10 mg eyes-rabbit mild; 500 mg/24 hour(s) eyes-rabbit mild

TOXICITY DATA: 52 mg/L/4 hour(s) inhalation-rat LC₅₀; 985 - 1,600 mg/kg oral-rat LD₅₀

MUTAGENIC DATA: Positive results have been observed in the Ames test. In mammalian systems, responses have generally been negative.

IMMUNOTOXICITY: A study found there was no evidence of harm to the immune system of laboratory animals or reduced ability to combat disease.

NEUROTOXICITY: Tests in rats indicate no significant neurotoxic effects after exposure to concentrations up to 2,000 ppm for 90 days. No neurotoxic effects have been observed in humans at typical occupational exposure levels.

DEVELOPMENTAL/REPRODUCTIVE: No significant developmental effects were observed in female rats and mice exposed to 1,250 ppm during gestation. A similar result was observed in rats exposed to 4,500 ppm before and during gestation. A two-generation inhalation study showed no adverse reproductive effects in rats exposed to as much as 1,500 ppm for 14 weeks.

CARCINOGEN STATUS: Methylene chloride is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that are not considered relevant to worker exposure. Available epidemiological studies do not confirm an increased risk of cancer in humans. Available evidence suggests that this material is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

FISH TOXICITY: 310 mg/L 96 hour(s) LC₅₀ (Static) Fathead minnow;
220 mg/L 96 hour(s) LC₅₀ (Static) Bluegill sunfish.

INVERTEBRATE TOXICITY: 256 mg/L 96 hour(s) LC₅₀ Mysid Shrimp

FATE AND TRANSPORT:

BIODEGRADATION: Biodegradation may occur in groundwater, but will be very slow compared with evaporation.



PERSISTENCE: AIR: This material released to the atmosphere will degrade by reaction with hydroxyl radicals with a half-life of several months. It is not subject to direct photooxidation. SOIL: On land is expected to evaporate rapidly into the atmosphere due to its high vapor pressure. It is poorly adsorbed to soil and can leach into the groundwater. Calculated Adsorption Coefficient (log KOC) is 1. WATER: This material is subject to rapid evaporation, with estimated evaporative half-lives ranging from 3 to 5.6 hours under moderate mixing condition. This material has a negligible rate of hydrolysis.

BIOCONCENTRATION: Bioconcentration potential in aquatic organisms is low with BCF of 2.

13. DISPOSAL CONSIDERATIONS

Reuse or reprocess if possible. Keep out of water supplies, sewers and soil. Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s):U080. May be subject to disposal regulations: D002. D029. F002.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME: Dichloromethane
ID NUMBER: UN1593
HAZARD CLASS OR DIVISION: 6.1
PACKING GROUP: III
LABELING REQUIREMENTS: 6.1
DOT HAZARDOUS SUBSTANCE(S):
Dichloromethane 1000 lb(s) (454 kg(s))
Propylene oxide 100 lb(s) (45.4 kg(s))

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

SHIPPING NAME: Dichloromethane
UN NUMBER: UN1593
CLASS: 6.1
PACKING GROUP/RISK GROUP: III

15. REGULATORY INFORMATION

U.S. REGULATIONS:



CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

Dichloromethane (Methylene chloride): 1000 LBS RQ

1,1,2-Trichloroethane: 100 LBS RQ

VINYLLIDINE CHLORIDE: 100 LBS RQ

Propylene Oxide (SPECIAL, AEROSOL, AND DEGREASING GRADES ONLY): 100 lbs RQ

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):

Propylene Oxide (SPECIAL, AEROSOL, AND DEGREASING GRADES ONLY): 10000/lbs lbs TPQ

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: Yes

CHRONIC: Yes

FIRE: No

REACTIVE: No

SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65):

Dichloromethane (Methylene chloride)

Propylene Oxide (SPECIAL, AEROSOL, AND DEGREASING GRADES ONLY)

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372. Refer to Section 3.

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

OTHER U.S. REGULATIONS: OSHA Specifically Regulated Substances (29 CFR 1910.1052).

STATE REGULATIONS:

California Proposition 65:

Known to the state of California to cause the following:

Dichloromethane (Methylene chloride) Cancer (Apr 01, 1988)

1,1,2-Trichloroethane Cancer (Oct 01, 1990)

This product may contain contaminants known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. For additional information, contact Customer Service.

NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW:

REPORTING REQUIREMENT:

DICHLOROMETHANE 75-09-2 99.97-100%

RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST:

DICHLOROMETHANE 75-09-2 99.97-100%

1,1,2-TRICHLOROETHANE 79-00-5 <10 ppm



VINYLIDENE CHLORIDE 75-35-4 0-12.2 ppm
PROPYLENE OXIDE (SPECIAL, AEROSOL, AND DEGREASING GRADES ONLY) 75-56-9
Proprietary

SPECIAL HEALTH HAZARD SUBSTANCE LIST:

1,1,2-TRICHLOROETHANE 79-00-5 <10 ppm
VINYLIDENE CHLORIDE 75-35-4 0-12.2 ppm
PROPYLENE OXIDE (SPECIAL, AEROSOL, AND DEGREASING GRADES ONLY) 75-56-9
Proprietary

PENNSYLVANIA RIGHT TO KNOW:

REPORTING REQUIREMENT:

DICHLOROMETHANE 75-09-2 99.97-100%

HAZARDOUS SUBSTANCE LIST:

DICHLOROMETHANE 75-09-2 99.97-100%
PROPYLENE OXIDE (SPECIAL, AEROSOL, AND DEGREASING GRADES ONLY) 75-56-9
Proprietary

ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST:

DICHLOROMETHANE 75-09-2 99.97-100%
PROPYLENE OXIDE (SPECIAL, AEROSOL, AND DEGREASING GRADES ONLY) 75-56-9
Proprietary

SPECIAL HAZARDOUS SUBSTANCE LIST:

DICHLOROMETHANE 75-09-2 99.97-100%
PROPYLENE OXIDE (SPECIAL, AEROSOL, AND DEGREASING GRADES ONLY) 75-56-9
Proprietary

CANADIAN REGULATIONS:

CONTROLLED PRODUCTS REGULATIONS (CPR): This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS CLASSIFICATION: D1B, D2A, D2B.

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): Listed on inventory.

16. OTHER INFORMATION

	Health	Fire	Reactivity
NFPA Classification	2	1	0

	Health	Flammability	Reactivity
HMIS Classification	2*	1	0

*Rated using 2nd Edition HMIS Instructions.

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