

# CHEMTRONICS®

## Technical Data Sheet

**TDS # 2279**

### Max-Kleen™ Lectro-Solv™

The extra-strength, nonflammable heavy-duty degreaser with high dielectric

#### PRODUCT DESCRIPTION

Max-Kleen™ Lectro-Solv™ is ideal for removal of all types of soils including oxidized oil and grease from electrical motors and equipment. It is the ideal solvent for most electrical applications. This extra-strength degreaser evaporates quickly without leaving a residue behind. Max-Kleen™ Lectro-Solv™ is registered with the NSF as a K1, K2 cleaner/degreaser for use in food processing facilities.

- Best product for electrical applications
- Quickly removes all types of tough soils including oxidized oil and grease
- NSF K1, K2 registered
- Dielectric strength of 30 kV
- Contains trichloroethylene
- Nonflammable, no flash point
- Non-corrosive and non-conductive
- Leaves no residue
- Ozone safe

#### TYPICAL APPLICATIONS

Max-Kleen™ Lectro-Solv™ can be used for all repair, maintenance, and manufacturing applications including:

- Removes grease, oil, lubricants, wax and tar
- Cleans contacts, relays and switches, circuit breakers and fuse blocks
- All repair and maintenance cleaning including: controls, conveyors and gear drives
- Cleans electric motors and gasoline engines
- Removes tough soils from gears and pulleys
- Use for maintenance of air compressors

#### TYPICAL PRODUCT DATA AND PHYSICAL PROPERTIES

<b>Boiling Point</b>	189° F (Initial)
<b>Evaporation Rate (butyl acetate=1)</b>	>1
<b>Flash Point (TCC)</b>	None
<b>Specific Gravity</b>	1.46
<b>Vapor Pressure @68°F</b>	60 mmHg
<b>Appearance</b>	Clear, colorless liquid
<b>Odor</b>	Mild
<b>Solubility in Water</b>	Negligible
<b>Dielectric Breakdown (ASTM D-877)</b>	30 kV
<b>Kauri-Butanol (KB) Number</b>	128
<b>VOC content (Not for Sale in California)</b>	100%
<b>Shelflife</b>	5 years
<b>NSF-Registered K1, K2</b>	#139460 (aerosol) #139461 (bulk)

#### COMPATIBILITY

Max-Kleen™ Lectro-Solv™ is compatible with most metals. As with any solvent, compatibility with plastics should be determined on a non-critical area prior to use. Materials such as polystyrene, ABS, polycarbonate and PVC are not compatible with the cleaning solvent in Max-Kleen™ Lectro-Solv™.

**Material****Compatibility**

ABS	Poor
Buna-N	Poor
EPDM	Not Recommended
Graphite	Excellent
HDPE	Fair
PVDF	Excellent
LDPE	Poor
Lexan™	Poor
Neoprene	Poor
Noryl®	Poor
Nylon™ 66	Fair
Polycarbonate	Poor
Polypropylene	Fair
Polystyrene	Not Recommended
PVC	Poor
Silicone Rubber	Poor
Teflon™	Excellent
Viton™	Excellent

**AVAILABILITY**

ES2279	19 oz aerosol
ES179	1 gallon liquid
ES5579	55 gallon liquid

**SAFETY & ENVIRONMENTAL DATA**

SAFETY & ENVIRONMENTAL DATA			
CFC	0.0%	VOC	100%
HCFC-225	0.0%	HFC	0.0%
HCFC-141b	0.0%	nPB	0.0%

**NOTE:**

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. ITW CHEMTRONICS® does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.

Chemtronics® is a registered trademark of ITW Chemtronics. All rights reserved. Max-Kleen™, Lectro-Solv™ and Controlwipes™ are trademarks of ITW Chemtronics. All rights reserved. All other trademarks herein are trademarks or registered trademarks of their respective owners.

**USAGE INSTRUCTIONS****Read MSDS carefully prior to use.**

Spray 4-6 inches from surface to clean. Wash parts from top to bottom, allowing the liquid to flush away dirt and dissolved grease. For precise application use attached extension tube.

Dip applications - Allow the soiled article to soak in Max-Kleen™ Lectro-Solv™ for 5 - 10 minutes, then remove and loosen any remaining soils with a Controlwipes™ Wipe.

For wipe applications, wet a Controlwipes™ Wipe with Max-Kleen™ Lectro-Solv™ and wipe away soils.

When used to clean food equipment that will be returned to a food processing area, wash well with an acceptable detergent solution and rinse thoroughly with potable water.

**SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Information: 800-TECH-401

**Product Identification**

**Max-Kleen™ Lectro-Solv™**

Product Code: ES2279

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	Wt. % Range
Trichloroethylene	79-01-6	95.0-98.0
1,2 Epoxybutane	106-88-7	0.1-1.0
Carbon Dioxide	124-38-9	1.0-5.0
Ethyl acetate	141-78-6	<0.2%

**SECTION 3: HAZARD IDENTIFICATION**

Emergency Overview: Clear, colorless liquid with faint ethereal odor. This product is nonflammable. Liquid may irritate eyes and skin under repeated or prolonged exposure. Breathing high concentrations of product vapor may produce dizziness and nausea.

Potential Health Effects:

Eyes: Liquid, aerosols and vapors of this product may be irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation.

Skin: Prolonged contact can cause skin irritation, including redness, burning, drying and/or cracking of skin..

Ingestion: May be harmful if swallowed. Swallowing this material may result in nausea, vomiting and weakness followed by central nervous system depression.

Inhalation: Can be harmful if inhaled. High concentrations of vapors in immediate area can cause dizziness, nausea, vomiting, unconsciousness and death.

**SECTION 4: FIRST AID MEASURES**

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel if irritation develops or persists.

Skin: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persist. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting. If conscious, give 2 glasses of water. Never give anything by mouth to an unconscious person. Keep head below knees to minimize chance of aspirating material into the lungs. Get medical attention immediately.

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention.

**SECTION 5: FIRE FIGHTING MEASURES**

Flash Point: None to boiling (TCC) Flammable/Explosion limits: LEL 8.0 / UEL 10.5 (% volume in air)

Extinguishing Media: Use water spray or fog, CO2, dry chemical or water stream when fighting fires involving this material.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

Spills: Shut off leak if possible and safe to do so. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container for proper disposal. Do not flush to sewer. Avoid runoff into storm sewers and ditches which lead to waterways.

**SECTION 7: HANDLING AND STORAGE**

Avoid prolonged or repeated contact with eyes, skin, and clothing. Wash hands before eating. Use with adequate ventilation. Avoid breathing product vapor or mist. Do not reuse this container. Store in a cool dry place away from heat, sparks and flame. Keep container closed when not in use. Do not store in direct sunlight.

**KEEP OUT OF REACH OF CHILDREN.**

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure Guidelines:

CHEMICAL NAME	ACGIH TLV	OSHA PEL	ACGIH STEL
Trichloroethylene	10 ppm	100 ppm; C 200	25 ppm
Ethyl acetate	400 ppm	400 ppm	
1,2 Epoxybutane	NE	NE	NE

**NE = Not Established**

Work/Hygienic Practices: Good general ventilation should be sufficient to control airborne levels. If vapor concentration exceeds TLV, use NIOSH approved organic vapor cartridge respirator. Wear safety glasses with side shields (or goggles) and rubber or other chemically resistant gloves.

NFPA and HMIS Codes:

	NFPA	HMIS
Health	2	2
Flammability	1	1
Reactivity	0	0
Personal Protection	-	B

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Physical State: Clear, colorless liquid  
Odor: Characteristic Odor  
pH: NA  
Vapor Pressure: 60 mmHg@ 68F  
Boiling Point: 189°F (87C)

Solubility in Water: Negligible  
Specific Gravity: 1.46  
 (Water =1)  
Evaporation Rate: >1 (Butyl acetate=1)  
Percent Volatile: 100%

**SECTION 10: STABILITY AND REACTIVITY**

Stability: This product is stable under normal conditions.  
Conditions to Avoid: Steam, oxidizers, elevated temperatures. Do not spray near open flames, red hot surfaces or other sources of ignition.  
Incompatibility: Do not mix with strong oxidizers and strong bases.  
Products of Decomposition: Thermal decomposition may release hydrogen chloride, carbon monoxide and carbon dioxide.  
Hazardous Polymerization: Will not occur  
Conditions to Avoid: Keep away from ignition source.

**SECTION 11: TOXICOLOGICAL INFORMATION**

Inhalation:  
 trichloroethylene LC50 rats 12 500 ppm/ 4 hr\*      Skin: trichloroethylene      LD50 rabbits 10 000 mg/kg\*  
 Carbon Dioxide LCLo/Human 9pph/5min  
Ingestion:  
 trichloroethylene LD50/rats      4920 mg/kg\*  
 \*Information provided by manufacturer.  
 Cancer Information: NTP: Suspect Carcinogen; IARC: Group 2A ACGIH: A2  
 Reproductive effects: none      Teratogenic effects: none      Mutagenic effects: none

**SECTION 12: ECOLOGICAL INFORMATION**

Avoid runoff into storm sewers and ditches which lead to waterways. Water runoff can cause environmental damage.

**REPORTING**

US regulations require reporting spills of this material that could reach any surface waters.  
 The toll free number for the US Coast Guard National Response Center is: **1-800-424-8802**

**SECTION 13: DISPOSAL CONSIDERATIONS**

Dispose of in accordance with all federal, state and local regulations. Water runoff can cause environmental damage.

**SECTION 14: TRANSPORTATION INFORMATION**

Proper Shipping Name	UN Number	Class	Sub. Risk	Pkg. Group	Hazard Label	Pkg. Instr.	Max. Quantity
<u>Air:</u> Aerosols non-flammable	UN 1950	2.2	NA	NA.	Non-flammable	203	75 k.g; 150k.g.
<u>Ground:</u> Consumer Commodity ORM-D	NA	ORM-D	NA	NA	ORM-D	Pkg. Auth.	173.306

**SECTION 15: REGULATORY INFORMATION**

**SECTION 313 SUPPLIER NOTIFICATION**

This product contains the following chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

Chemical Name	CAS No.	Wt. % Range
Trichloroethylene	79-01-6	95.0-98.0
1,2 Epoxybutane	106-88-7	0.1-1.0

This information should be included on all MSDSs copied and distributed for this material.

**TOXIC SUBSTANCES CONTROL ACT (TSCA)**

All ingredients of this product are listed on the TSCA Inventory.

**CALIFORNIA PROPOSITION 65:** This product contains trichloroethylene, a chemical known to the state of California to cause cancer.

**WHMIS:** Class A; Class D1B, Class D2A; Class D2B

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**VOC Restrictions:** NOT FOR SALE OR USE IN CALIFORNIA

**SECTION 16: OTHER INFORMATION**

This product is a Level 1 aerosol. Do not puncture or incinerate containers. Normal ventilation for standard manufacturing practices is usually adequate. Local exhaust should be used when large amounts are released.

To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.