

CHEMTRONICS[®]

Technical Data Sheet

TDS # 7200

Flux-Off[®] CZ Flux Remover

PRODUCT DESCRIPTION

Flux-Off[®] CZ Flux Remover is a highly effective cleaner for removing rosin-based fluxes from electronic components and assemblies. Utilizing Cirozane[™], which is based on new **HFE technology**, this nonflammable, non-ozone depleting aerosol quickly removes flux without harming sensitive materials.


- Quickly removes all rosin-based flux residues
- Excellent material compatibility
- Evaporates quickly
- Leaves no residues
- Has low odor
- Penetrates tight tolerance areas
- Also removes oil, grease, and ionic residues
- Contains no CFCs, HCFCs or 1,1,1 Trichloroethane

TYPICAL APPLICATIONS

Flux-Off[®] CZ Flux Remover eliminates flux residues and cleans:

- Through-hole Circuit Boards
- Surface Mount Pads
- Chip Carriers
- Ball Grid Arrays
- Switches
- SMT Components
- Metal or Plastic Housings

TYPICAL PRODUCT DATA AND PHYSICAL PROPERTIES

| | |
|---|---|
| Boiling Point | 90°F (Initial) |
| Specific Gravity (water = 1 @ 77°F) | 1.50 |
| Flash Point (TCC) | None to Boiling |
| Evaporation Rate (Butyl acetate=1) | >1 |
| Kauri-Butanol (KB) Number | 36 |
| Appearance | Clear, colorless liquid |
| Odor | Ethereal Odor |
| Surface Tension (dynes/cm @ 25°C) | 12.2 |
| Solubility in Water | Negligible |
| Dielectric Breakdown (ASTM D-877) | 7 kV |
| Shelflife | Aerosols 5 years Liquids 2 years after opening |
| RoHS/WEEE Status |  |

COMPATIBILITY

Flux-Off[®] CZ Flux Remover is generally compatible with most materials used in the electronics industry. With any cleaning agent compatibility solvent/component must be determined on a non-critical area prior to use.

| <u>Material</u> | <u>Compatibility</u> |
|-----------------|----------------------|
| ABS | Excellent |
| Buna-N | Excellent |
| EPDM | Excellent |
| Graphite | Excellent |
| HDPE | Excellent |
| Kynar™ | Excellent |
| LDPE | Excellent |
| Lexan™ | Good |
| Neoprene | Excellent |
| Noryl | Excellent |
| Nylon™ 66 | Excellent |
| Cross-Linked PE | Excellent |
| Polypropylene | Excellent |
| Polystyrene | Good |
| PVC | Excellent |
| Silicone Rubber | Excellent |
| Teflon™ | Excellent |
| Viton™ | Excellent |

AVAILABILITY

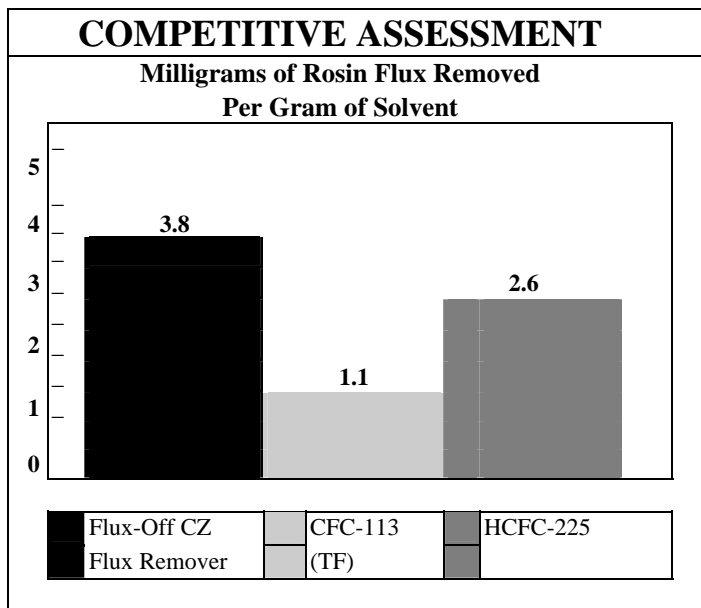
| | |
|---------|--------------------------|
| ES7200 | 12 oz. Aerosol |
| ES7208B | 5 oz. Brush Clean System |
| ES7201 | 1 Gallon Liquid |

USAGE INSTRUCTIONS

For industrial use only.

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 flux residues, dirt and dissolved oil. For precise application use attached extension tube.



Flux-Off® and Chemtronics® are registered trademarks of ITW Chemtronics. All rights reserved.

Cirozane™, is a trademark of ITW Chemtronics. All rights reserved.

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.

CHEMTRONICS® does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Information: 800-TECH-401

Product Identification**FLUX-OFF® CZ**

Product Code: ES7200, ES7208B, ES7200C, ES7208BC

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS# | Wt. % Range |
|----------------------------|----------|-------------|
| Cirozane™ | Mixture | 45.0-80.0 |
| trans-1,2-dichloroethylene | 156-60-5 | 10.0-50.0 |
| 1,1,1,2-Tetrafluoroethane | 811-97-2 | 10.0-40.0 |
| n-Propanol | 71-23-8 | 1.0-10.0 |
| Methylcyclohexane | 108-87-2 | 1.0-10.0 |

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.

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 and vomiting.

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 persists. 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)

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 | OTHER |
|----------------------------|-----------|----------|-------------------|
| Cirozane™ | NE | NE | 750 ppm* |
| trans-1,2-dichloroethylene | 200 ppm | 200 ppm | |
| 1,1,1,2-Tetrafluoroethane | NE | NE | 1000 ppm (Dupont) |
| n-propanol | 100 ppm | 200 ppm | 400 ppm STEL |
| Methylcyclohexane | 400 ppm | 500 ppm | |

NE = Not Established

* Chemtronics Recommended Threshold Limit Value

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 when handling this material.

NFPA and HMIS Codes:

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIESPhysical State: Clear, colorless liquidOdor: Ethereal OdorpH: NAVapor Pressure: 220 mmHg@ 70FPercent Volatile: 100%Boiling Point: 90°F (32C)Solubility in Water: NegligibleSpecific Gravity: 1.50

(Water =1)

Evaporation Rate: >1

(Butyl acetate=1)

Viscosity: NA**SECTION 10: STABILITY AND REACTIVITY**Stability: This product is stable.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 chemically active metals such as potassium, magnesium, zinc and powdered aluminum, strong base, caustic soda, caustic potash or oxidizing.Products of Decomposition: Thermal decomposition may release carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride.Hazardous Polymerization: Will not occurConditions to Avoid: Finely divided active metals, alkali and alkaline earth metals**SECTION 11: TOXICOLOGICAL INFORMATION**Inhalation:

trans-1,2-dichloroethylene LC50 Rats 24,100 ppm/4hrs

Tetrafluoroethane Rats ALC 567,000ppm/4hrs

Methylcyclohexane LC50/mouse 41,500 mg/m³/2 hrsIngestion:

Methylcyclohexane LD50 Mouse 2,250 mg/kg

trans-1,2-dichloroethylene LD50 rats >5,000 mg/kg

Skin

trans-1,2-dichloroethylene LD50 rabbit >5,000 mg/kg

Methylcyclohexane LD50 rabbit >86,700 mg/kg

Eye:

trans-1,2-dichloroethylene MOD-SEV

Cancer Information: No ingredients listed as human carcinogens by NTP or IARC

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 Gas | 203 Y203 | 75 k.g; 150k.g. 30 kg |
| <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 no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

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.

WHMIS: Class A; 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.

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.