

# Safety Data Sheet



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Atlanta, GA 30318  
1-877-I-BUY-ZEP (428-9937)  
www.zep.com

## Section 1. Chemical Product and Company Identification

**Product name** Super ECC  
**Product use** Contact & Circuit Board Cleaner  
**Product code** 3524  
**Date of issue** 02/27/14 **Supersedes** 06/15/10

## Emergency Telephone Numbers

**For MSDS Information:**  
Compliance Services 1-877-I-BUY-ZEP (428-9937)

**For Medical Emergency**  
(877) 541-2016 Toll Free - All Calls Recorded

**For Transportation Emergency**  
CHEMTREC: (800) 424-9300 - All Calls Recorded  
In the District of Columbia (202) 483-7616

**Prepared By**  
Compliance Services  
1259 Seaboard Industrial Blvd.  
Atlanta, GA 30318

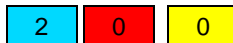
## Section 2. Hazards Identification

### Emergency overview

\*Hazard Determination System (HDS): Health, Flammability, Reactivity

WARNING!

CAUSES EYE AND SKIN IRRITATION. CONTENTS UNDER PRESSURE. VAPOR HARMFUL.



**NOTE:** MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

### Acute Effects

### Routes of Entry

Dermal contact. Eye contact. Inhalation.

- Eyes** Causes eye irritation. Inflammation of the eye is characterized by redness, watering and itching.
- Skin** Causes skin irritation. May cause burns and/or frostbite. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.
- Inhalation** Inhalation causes headaches, dizziness, drowsiness and nausea and may lead to unconsciousness. Over-exposure by inhalation may cause respiratory irritation. Can cause central nervous system (CNS) depression.
- Ingestion** May be harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.

### Chronic effects

Contains material which may cause damage to the following organs: blood, the reproductive system, liver, heart, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation.

### Carcinogenicity Classification

Not listed as a carcinogen by OSHA, NTP or IARC.

**Additional information: See toxicological information (Section 11)**

## Section 3. Composition/Information on Ingredients

Name	CAS number	%
Tetrafluoroethane; norflurane	811-97-2	75 - 85
trans-dichloroethylene	156-60-5	1 - 10
ethanol	64-17-5	1 - 10

## Section 4. First Aid Measures

- Eye Contact** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin Contact** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.
- Inhalation** Move exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion** Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)



**Flash Point** Not available.

**Flammable Limits** Not available.

**Flammability** Non-flammable.(CSMA Method)

**Fire hazard** CONTENTS UNDER PRESSURE. In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed.

**Fire-Fighting Procedures** Use an extinguishing agent suitable for the surrounding fire. Fire-fighters should wear appropriate protective equipment.

### Section 6. Accidental Release Measures

**Spill Clean up** Spills are unlikely due to packaging. Hazard of slipping on spilled product.

### Section 7. Handling and Storage

**Handling** Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Empty containers retain product residue and can be hazardous. Wash thoroughly after handling. Observe label precautions.

**Storage** CONTENTS UNDER PRESSURE Do not puncture, incinerate or store the container at temperatures above 120°F (49°C) or in direct sunlight. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep out of the reach of children.

### Section 8. Exposure Controls/Personal Protection

Ingredient	Exposure limits
Tetrafluoroethane; norflurane	<b>AIHA WEEL (United States, 10/2011).</b> TWA: 1000 ppm 8 hours.
trans-dichloroethylene	<b>ACGIH TLV (United States, 3/2012).</b> TWA: 200 ppm 8 hours. TWA: 793 mg/m <sup>3</sup> 8 hours.
ethanol	<b>ACGIH TLV (United States, 3/2012).</b> STEL: 1000 ppm 15 minutes. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 1/2013).</b> TWA: 1000 ppm 10 hours. TWA: 1900 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 6/2010).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m <sup>3</sup> 8 hours.

#### Personal Protective Equipment (PPE)

**Eyes** Safety glasses.

**Body** Wear appropriate protective clothing to prevent skin contact.  
Recommended: Nitrile gloves. Neoprene gloves. Rubber gloves.



**Respiratory** Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of below established levels. Wear appropriate respirator when ventilation is inadequate.

### Section 9. Physical and Chemical Properties

**Physical State** Liquid. [Aerosol.]

**pH** Not available.

**Boiling Point** Not available.

**Specific Gravity** 0.95

**Solubility** Very slightly soluble in the following materials: cold water and hot water.

**Color** Colorless.

**Odor** Solvent

**Vapor Pressure** Not available.

**Vapor Density** >1 [Air = 1]

**Evaporation Rate** >1 (Water = 1)

**VOC (Consumer)** 9 % (w/w) 0.713 lbs/gal (85.5 g/l)

**Section 10. Stability and Reactivity****Stability and Reactivity**

The product is stable.

**Incompatibility**

Reactive or incompatible with the following materials: oxidizing materials, metals and alkalis.  
Incompatible with alkali metals. Incompatible with finely-powdered metals.

**Hazardous Polymerization**

Under normal conditions of storage and use, hazardous polymerization will not occur.

**Hazardous Decomposition Products**

carbon oxides (CO, CO<sub>2</sub>), hydrochloric acid, Hydrofluoric Acid, Chlorine.

**Section 11. Toxicological Information**

Product/ingredient name	Result	Species	Dose	Exposure
Tetrafluoroethane; norflurane trans-dichloroethylene	LC50 Inhalation Vapor	Rat	1500 g/m <sup>3</sup>	4 hours
	LC50 Inhalation Gas.	Rat	24100 ppm	4 hours
ethanol	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	1235 mg/kg	-
	LC50 Inhalation Vapor	Rat	124700 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	7 g/kg	-

**Section 12. Ecological Information**

**Environmental Effects** Harmful to: May cause long-term adverse effects in the aquatic environment.

**Aquatic ecotoxicity**

Product/ingredient name	Result	Species	Exposure
trans-dichloroethylene ethanol	Acute LC50 220000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 µl/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks


**Section 13. Disposal Considerations****Waste Information**

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

**Waste Stream**

Classification: Non-hazardous waste  
Origin: RCRA waste.

**Section 14. Transport Information**

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
<b>DOT Classification</b>	-	Consumer commodity or Limited quantity	ORM-D	-	
<b>IMDG Class</b>	UN1950	AEROSOLS, non-flammable or Limited quantity	2.2	-	

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG\* : Packing group

**Section 15. Regulatory Information****U.S. Federal Regulations**

SARA 313 toxic chemical notification and release reporting:

No products were found.

**Clean Water Act (CWA) 307:** trans-dichloroethylene

**Clean Water Act (CWA) 311:** No products were found.

**Clean Air Act (CAA) 112 regulated toxic substances:** No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

**State Regulations**

**California Prop 65**

**Section 16. Other Information**

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.*

*Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*

*\*NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.*