



ZEP Manufacturing Company
 Acuity Specialty Products Group, Inc.
 P.O. Box 2015
 Atlanta, GA 30301
 1-877-I-BUY-ZEP (428-9937)
 www.zep.com

Material Safety Data Sheet and Safe Handling and Disposal Information

Section 1. Chemical Product and Company Identification

Product name ZEP ELEC II PLUS
Product Use Aerosol Electrical Contact Cleaner
Product Code 0283
Date of issue 08/19/05 **Supersedes**

Emergency For MSDS Information:
Telephone Numbers Acuity Specialty Products Group, Inc.
Compliance Services 1-877-I-BUY-ZEP (428-9937)

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

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

Printing date: 01/09/06

Prepared by Compliance Services Group
 Acuity Specialty Products Group
 1420 Seaboard Industrial Blvd.
 Atlanta, GA 30318

Section 2. Composition, Information on Ingredients

Name of Hazardous Ingredients	CAS #	% by Weight	Exposure Limits
1,1,1,2 - TETRAFLUOROETHANE; hfc-134a	811-97-2	50 - 60	AIHA WEEL (United States). TWA: 1000 ppm 8 hour(s).
1,2-DICHLOROETHYLENE (trans); trans-DCE	156-60-5	20 - 30	ACGIH TLV (United States). TWA: 200 ppm 8 hour(s).
1,1,1,2,2,3,4,5,5,5 - DECAFLUOROPENTANE; hfc-43-10 mee	138495-42-8	5 - 15	Not established
1,1,1,3,3 - PENTAFLUOROBUTANE; hfc-365mfc	406-58-6	1 - 10	Not established

Section 3. Hazards Identification

Acute Effects

Routes of Entry Absorbed through skin. Inhalation.

- Skin** Hazardous in case of skin contact (irritant). Causes skin irritation. Skin inflammation is characterized by itching, scaling, or reddening. Harmful if absorbed through the skin.
- Eyes** Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching, lacrimation, pain.
- Inhalation** Hazardous in case of inhalation. Can cause central nervous system depression. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. May cause heart beat irregularity (arrythmia). In confined spaces, the gas can cause asphyxiation.
- Ingestion** Harmful if swallowed. Ingestion may cause nausea, weakness and central nervous system effects.

HMIS

Health	1
Fire Hazard	0
Reactivity	1
Personal Protection	B

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

Carcinogenic Effects

Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Chronic Effects

Overexposure of this product by inhalation or absorption can produce central nervous system depression resulting in headache, nausea and/or dizziness. Prolonged or repeated contact may dry skin and cause irritation. The substance may be toxic to liver, heart, upper respiratory tract, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

See Toxicological Information (section 11)

Section 4. First Aid Measures

Eye Contact

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention.

Skin Contact

Wash affected area with soap or mild detergent and water. Remove contaminated clothing and shoes. Get medical attention.

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion

Aspiration hazard if swallowed- can enter lungs and cause damage. Do NOT induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head lower than hips to help prevent aspiration. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

Flash Point	Not applicable.	Flammable Limits	Not applicable.
Flammability	Non-flammable. (CSMA)		
Fire Hazard	May emit toxic fumes under fire conditions. Contents under pressure.		
Fire-Fighting Procedures	In case of fire, use water spray (fog), foam or dry chemicals. Wear special protective clothing and positive pressure, self-contained breathing apparatus.		


**Section 6. Accidental Release Measures**

Spill Clean up Large spills are unlikely due to packaging.

Section 7. Handling and Storage

Handling	Store and use away from heat, sparks, open flame, or any other ignition source. When heated it emits toxic fumes. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Wash thoroughly after handling. Wash contaminated clothing before reusing.
Storage	Keep container in a cool, well-ventilated area. Keep away from heat and direct sunlight. Do not store above 49°C (120°F). Keep away from incompatibles. Do not puncture or incinerate. Keep out of the reach of children.

Section 8. Exposure Controls, Personal Protection**Personal Protection****Protective Clothing (Pictograms)**

Eyes	Safety glasses.	
Body	Nitrile gloves.	
Respiratory	Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Wear appropriate respirator when ventilation is inadequate.	

Section 9. Physical and Chemical Properties

Physical State	Thin liquid (Aerosol.)	Color	Clear. Colorless.
pH	Not applicable	Odor	Ethereal.
Boiling Point	35°C (95°F) - Initial	Vapor Pressure	220 mmHg @ 70F
Specific Gravity	1.24 (Water = 1)	Vapor Density	Not available.
Solubility	Very slightly soluble in cold water, hot water.	Evaporation Rate	>1 compared to Butyl acetate.
		VOC (Consumer)	Federal: 22.8% 2.4lb/gal 282g/l. Cal/OTC: 45.0% 4.65lb/gal 557g/l.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility	Reactive with oxidizing agents, metals, acids, alkalis.
Hazardous Polymerization	Will not occur.
Hazardous Decomposition Products	Hydrogen Chloride (HCl), Hydrogen Fluoride (HF), carbon oxides (CO, CO ₂), and Phosgene Gas.

Section 11. Toxicological Information

Toxicity to Animals	1,2-DICHLOROETHYLENE (trans); trans-DCE:
	ORAL (LD50): Acute: 1275 mg/kg [Rat].
	DERMAL (LD50): Acute: >2000 mg/kg [Rat].
	VAPOR (LC50): Acute: 24100 ppm 4 hour(s) [Rat].
	1,1,1,2,2,3,4,5,5,5-Decafluoropentane:
	DERMAL (LD50): Acute: >2000 mg/kg [Rat].
	VAPOR (LC50): Acute: 11100 ppm 4 hour(s) [Rat].
	1,1,1,3,3-pentafluorobutane:
	DERMAL (LD50): Acute: >2000 mg/kg [Rat].

Section 12. Ecological Information

Ecotoxicity	Not available.
Biodegradable/OECD	Not available.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.	Waste Stream	Code: - (Not applicable.) Classification: - (Non-hazardous waste)
--------------------------	--	---------------------	--

Consult your local or regional authorities.

Section 14. Transport Information**Proper shipping name** Consumer Commodity**DOT Classification** ORM-D**UN number** Not regulated.

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.

Section 15. Regulatory Information**U.S. Federal Regulations** SARA 313 toxic chemical notification and release reporting:

No products were found.

Clean Water Act (CWA) 311: 1,2-Dichloroethylene (trans)

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: No products were found.

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.