



MATERIAL SAFETY DATA SHEET

ZAK EMISSIONS STEP 3

PRODUCT CODE: EK3

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: ZAK Emissions Step 3
Synonyms: None
Supplier: ZAK Products, 720 Industrial Blvd. #400, Grapevine, TX 76051
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300
Information Telephone: ZAK Products 1-800-514-5011 During normal business hours CST 817-645-5088

Date Printed: 09/15/2003

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient/CAS No.	wt. %	OSHA PEL TWA	OSHA PEL Ceiling Limits	ACGIH TLV TWA	ACGIH TLV STEL
Ethylene Glycol 107-21-1	15-25	50 ppm	50 ppm	50 ppm	None Established
Glycol Ether PM 107-98-2	25-35	100 ppm	150 ppm	100 ppm	150 ppm
4-methyl-2-pentanol 108-11-2	20-30	25 ppm	None Established	25 ppm	40 ppm
ethyl alcohol 64-17-5	25-35	1000 ppm	None Established	1000 ppm	None Established

3. HAZARDS IDENTIFICATION

Emergency Overview: Harmful or fatal if swallowed. Harmful if inhaled. Harmful if absorbed through the skin. May cause irritation to skin and eyes. May irritate the lungs. Affects central nervous system.

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
Ingestion: If swallowed, induce vomiting immediately by giving two glasses of water and sticking fingers down throat; never give anything to an unconscious person. Get medical attention.
Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.
Skin Contact: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point °F(°C): 58F (lowest component)
Flash Point Method: TAG Closed Cup
Flammable Limits in Air - Lower (%): NT
Flammable Limits in Air - Upper (%): Not Determined
Autoignition Temperature °F(°C): Not Determined
Extinguishing Media: Carbon dioxide. Dry chemical. Alcohol foam.

Protection Of Fire-Fighters:

Special Fire-Fighting Procedures: Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Vapor may cause flash fire. Cool container with water spray.

Hazardous Combustion Products: Carbon Dioxide. Carbon Monoxide.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment to prevent skin and eye contact.
Spill Procedures: Wear protective equipment specified. Only trained and qualified personnel should handle any spilled or leaked product. Avoid all sources of ignition; heat, sparks and open flames. Ventilate spill area. Soak up material with absorbent and place in chemical waste container. Use non-sparking tools and equipment. Increase area ventilation. Remove sources of ignition. Wear proper protective equipment as specified in the protective equipment section. Use non-sparking tools and equipment. Isolate hazard area, keeping unnecessary and unprotected personnel from entering.
Environmental Precautions: Keep away from drains.

7. HANDLING AND STORAGE

Handling and Storage: Use ground strap. Avoid contact with skin and eyes. Use only in a well ventilated area. Warning: Flammable. Do not inhale vapors. Keep away from heat and open flame. Avoid excessive storage temperature

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Exhaust ventilation.
Eyes: Wear safety glasses or goggles to protect against exposure.
Skin Protection: Use chemical resistant gloves for prolonged skin contact.
Respiratory Protection: Use in a well ventilated area. Use approved NIOSH respiratory protection if TLV exceeded..... Or over exposure is likely.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid	pH Value:	Not Determined
Odor:	Not Determined	Vapor Density (Air=1):	Not Determined
Vapor Pressure:	Not Determined	Melting/Freezing Point:	Not determined.
Boiling Point (°F):	172.9F	Bulk Density at 20°C:	Not Determined
Solubility in Water:	APPRECIABLE	Evaporation Rate:	Not Determined
Molecular Weight:	Not Determined	Specific Gravity (H2O=1):	Not determined.
Viscosity:	Not determined.	Decomposition Temperature:	Not Known
VOC Content(%):	100		

10. STABILITY AND REACTIVITY

Chemical Stability: STABLE.
Conditions to Avoid: Keep away from heat, sparks and flame. Extreme heat. Avoid contact with heat, sparks, open flame, and static discharge.
Materials to Avoid: Contact with oxidizing agents.
Hazardous Decomposition Products: Carbon dioxide. Carbon monoxide. Will not occur
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Ingredient/CAS No.	wt. %	Route	Species	Dose
Ethylene Glycol 107-21-1	15-25	Inhalation	Rats	LC50 10876 mg/kg
Glycol Ether PM 107-98-2	25-35	Inhalation	Rats	LC50 10000 ppm/5 hr
4-methyl-2-pentanol 108-11-2	20-30	Oral	Rats	LD50 2590 mg/kg
ethyl alcohol 64-17-5	25-35	Inhalation	Rats	LC50 20000 ppm/10H

Carcinogenicity:

Ingredient/CAS No.	wt. %	IARC	NTP	OSHA
Ethylene Glycol 107-21-1	15-25	Not Listed	Not Listed	Not Listed
Glycol Ether PM 107-98-2	25-35	Not Listed	Not Listed	Not Listed
4-methyl-2-pentanol 108-11-2	20-30	Not Listed	Not Listed	Not Listed
ethyl alcohol 64-17-5	25-35	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATION

Waste Classification: Not determined.

Waste Management: Not determined.

Disposal should be made in accordance with federal, state and local regulations.

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14. TRANSPORTATION INFORMATION

U.S. DOT:
Proper Shipping Name: ORM-D CONSUMER COMMODITY
Hazard Class: ORM-D
UN/NA Number: Not Applicable
DOT Packing Group: Not Applicable

IMDG:
Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.
Hazard Class: 3.3
Hazard Subclass: not determined
UN No.: UN 1993
Packing Group: II
Marine Pollutant: Not determined.

15. REGULATORY INFORMATION

US Federal Regulations:

Ingredient/CAS No.	wt. %	SARA 313	SARA 302	RQ	TPQ
Ethylene Glycol 107-21-1	15-25	Listed	Not Listed	5000 lbs	NA
Glycol Ether PM 107-98-2	25-35	Not Listed	Not Listed	NA	NA
4-methyl-2-pentanol 108-11-2	20-30	Not Listed	Not Listed	NA	NA
ethyl alcohol 64-17-5	25-35	Not Listed	Not Listed	NA	NA

SARA 311/312 Hazard Categories: Not Determined.

State Regulations:

Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
Ethylene Glycol 107-21-1	15-25	Not Listed	Not Listed	Not Listed	Not Listed
Glycol Ether PM 107-98-2	25-35	Not Listed	Not Listed	Not Listed	Not Listed
4-methyl-2-pentanol 108-11-2	20-30	Not Listed	Not Listed	Not Listed	Not Listed
ethyl alcohol 64-17-5	25-35	Not Listed	Listed Initial Date 10/1/87	Not Listed	Not Listed

U.S. TSCA: The components of this product are listed on the TSCA Inventory.

16. OTHER INFORMATION

General Notes: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

Disclaimer:

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