



MATERIAL SAFETY DATA SHEET

ZAK EMISSIONS STEP 2

PRODUCT CODE: EK2

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: ZAK Emissions Step 2
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
White Mineral Oil 8042-47-5	40-45	5 mg/m3	10 mg/m3	None Established	None Established
Methyl Alcohol 67-56-1	10-20	200 ppm	Not Known	200 ppm	250 ppm
Methyl ethyl ketone 78-93-3	10-20	200 ppm	300 ppm	200 ppm	300 ppm
Glycol Ether PM 107-98-2	6-10	100 ppm	150 ppm	100 ppm	150 ppm
4-methyl-2-pentanol 108-11-2	6-10	25 ppm	None Established	25 ppm	40 ppm
Propylene Glycol Monobutyl Ether 29387-86-8	5-10	None Established	None Established	None Established	None Established
Polyolefin amide alkeneamine proprietary	2-5	5 mg/m3 (as mist)	None Established	None Established	10 mg/m3 (as mist)

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: Only induce vomiting if instructed to do so by medical personnel. Seek medical attention immediately.
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): 25F (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

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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

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		
Odor:	Not Determined	pH Value:	Not Determined
Vapor Pressure:	Not Determined	Vapor Density (Air=1):	Not Determined
Boiling Point (°F):	175F	Melting/Freezing Point:	Not determined.
Solubility in Water:	APPRECIABLE	Bulk Density at 20°C:	Not Determined
Molecular Weight:	Not Determined	Evaporation Rate:	Not Determined
Viscosity:	Not determined.	Specific Gravity (H2O=1):	Not determined.
VOC Content(%):	100	Decomposition Temperature:	Not Known

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: Amines. Aldehydes. Ammonia. Chlorine compounds. Oxidizing agents.
Hazardous Decomposition Products: Carbon dioxide. Carbon monoxide.
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Ingredient/CAS No.	wt. %	Route	Species	Dose
White Mineral Oil 8042-47-5	40-45	Inhalation	Rats	Not known.
Methyl Alcohol 67-56-1	10-20	Inhalation	Rats	LC50 64,000 ppm
Methyl ethyl ketone 78-93-3	10-20	Inhalation	Rats	LC 50 >5000ppm/8hr
Glycol Ether PM 107-98-2	6-10	Inhalation	Rats	LC50 10000 ppm/5 hr
4-methyl-2-pentanol 108-11-2	6-10	Oral	Rats	LD50 2590 mg/kg
Propylene Glycol Monobutyl Ether 29387-86-8	5-10	Oral	Rats	LD50 3300 mg/kg
Polyolefin amide alkeneamine proprietary	2-5	Oral	Rats	LD50 >5000 mg/kg

Carcinogenicity:

Ingredient/CAS No.	wt. %	IARC	NTP	OSHA
White Mineral Oil 8042-47-5	40-45	Not Listed	Not Listed	Not Listed
Methyl Alcohol 67-56-1	10-20	Not Listed	Not Listed	Not Listed
Methyl ethyl ketone 78-93-3	10-20	Not Listed	Not Listed	Not Listed
Glycol Ether PM 107-98-2	6-10	Not Listed	Not Listed	Not Listed
4-methyl-2-pentanol 108-11-2	6-10	Not Listed	Not Listed	Not Listed
Propylene Glycol Monobutyl Ether 29387-86-8	5-10	Not Listed	Not Listed	Not Listed

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Ingredient/CAS No.	wt. %	IARC	NTP	OSHA
Polyolefin amide alkeneamine proprietary	2-5	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.

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: 3.2
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
White Mineral Oil 8042-47-5	40-45	Not Listed	Not Listed	NA	NA
Methyl Alcohol 67-56-1	10-20	Listed	Not Listed	5000 lb	NA
Methyl ethyl ketone 78-93-3	10-20	Listed	Not Listed	5000 lb	NA
Glycol Ether PM 107-98-2	6-10	Not Listed	Not Listed	NA	NA
4-methyl-2-pentanol 108-11-2	6-10	Not Listed	Not Listed	NA	NA
Propylene Glycol Monobutyl Ether 29387-86-8	5-10	Not Listed	Not Listed	NA	NA
Polyolefin amide alkeneamine proprietary	2-5	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
White Mineral Oil 8042-47-5	40-45	Not Listed	Not Listed	Not Listed	Not Listed
Methyl Alcohol 67-56-1	10-20	Not Listed	Not Listed	Not Listed	Not Listed

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Methyl ethyl ketone 78-93-3	10-20	Not Listed	Not Listed	Not Listed	Not Listed
Glycol Ether PM 107-98-2	6-10	Not Listed	Not Listed	Not Listed	Not Listed
4-methyl-2-pentanol 108-11-2	6-10	Not Listed	Not Listed	Not Listed	Not Listed
Propylene Glycol Monobutyl Ether 29387-86-8	5-10	Not Listed	Not Listed	Not Listed	Not Listed
Polyolefin amide alkeneamine proprietary	2-5	Not Listed	Not Listed	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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