Safety Data Sheet

Zep, Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-877-I-BUY-ZEP (428-9937)
www.zep.com

Section 1. Chemical Product and Company Identification

Product name **ZEP 2000**

Product use Aerosol Penetrating Grease

Product code **4164**

Date of issue **10/03/13** **Supersedes 07/18/08**

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
1420 Seaboard Industrial Blvd.
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Section 2. Hazards Identification

Emergency overview

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

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DANGER!

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. Keep away from sources of ignition - No smoking. CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION. HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL.

CONTENTS UNDER PRESSURE.

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 Direct contact may cause irritation and redness. Product may be dermal absorbed. Skin inflammation is characterized by itching, scaling, or reddening. Defatting properties, may aggravate an existing dermatitis.

Inhalation Avoid breathing vapors, spray or mists. Over-exposure by inhalation may cause respiratory irritation. Can cause central nervous system (CNS) depression. High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Ingestion Aspiration hazard if swallowed. Can enter lungs and cause damage.

Chronic effects

Contains material which may cause damage to the following organs: heart, upper respiratory tract, skin, central nervous system (CNS). 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 can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity

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

Product/ingredient name

Not available.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
Heptane, branched, cyclic and linear	426260-76-6	20 - 30
propane	74-98-6	10 - 20
Butane	106-97-8	5 - 15
heptane	142-82-5	5 - 15
Aluminum, benzoate C16-22-fatty acids hydroxy complexes	82980-55-0	1 - 10
Distillates (petroleum), hydrotreated light	64742-47-8	1 - 10

Section 4. First Aid Measures

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately.

Skin Contact Wash affected area with soap or mild detergent and water. Remove contaminated clothing and shoes. 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.

Ingestion ASPIRATION HAZARD. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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 Closed cup: <-18°C (<0°F) (Tagliabue.)

Flammable Limits Not available.

Flammability Extremely flammable. (CSMA) Aerosol that may flash back.

Fire hazard FLAMMABLE LIQUID AND VAPOR. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. 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 positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Cool closed containers exposed to fire with water.

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. Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Do not ingest. Wash thoroughly after handling. Wash contaminated clothing before reusing. Observe label precautions.

Storage CONTENTS UNDER PRESSURE. Do not puncture or incinerate. Do not store above the following temperature: 49°C (120.2°F). Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
Heptane, branched, cyclic and linear	**ACGIH TLV (United States, 3/2012).** TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes.
propane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **NIOSH REL (United States, 1/2013).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 6/2010).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2012).** TWA: 1000 ppm 8 hours.
Butane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 800 ppm 8 hours.

	TWA: 1900 mg/m³ 8 hours.
	NIOSH REL (United States, 1/2013).
	TWA: 800 ppm 10 hours.
	TWA: 1900 mg/m³ 10 hours.
	ACGIH TLV (United States, 3/2012).
	TWA: 1000 ppm 8 hours.
heptane	**ACGIH TLV (United States, 3/2012).**
	TWA: 400 ppm 8 hours.
	TWA: 1640 mg/m³ 8 hours.
	STEL: 500 ppm 15 minutes.
	STEL: 2050 mg/m³ 15 minutes.
	OSHA PEL 1989 (United States, 3/1989).
	TWA: 400 ppm 8 hours.
	TWA: 1600 mg/m³ 8 hours.
	STEL: 500 ppm 15 minutes.
	STEL: 2000 mg/m³ 15 minutes.
	NIOSH REL (United States, 1/2013).
	TWA: 85 ppm 10 hours.
	TWA: 350 mg/m³ 10 hours.
	CEIL: 440 ppm 15 minutes.
	CEIL: 1800 mg/m³ 15 minutes.
	OSHA PEL (United States, 6/2010).
	TWA: 500 ppm 8 hours.
	TWA: 2000 mg/m³ 8 hours.
Aluminum, benzoate C16-22-fatty acids hydroxy complexes	**OSHA PEL 1989 (United States, 3/1989).**
	TWA: 2 mg/m³, (as Al) 8 hours.
	NIOSH REL (United States, 1/2013).
	TWA: 2 mg/m³, (as Al) 10 hours.
Distillates (petroleum), hydrotreated light	**ACGIH TLV (United States, 3/2012). Absorbed through skin.**
	TWA: 200 mg/m³, (as total hydrocarbon vapor) 8 hours.

Personal Protective Equipment (PPE)

Eyes Safety glasses.

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

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Wear appropriate respirator when ventilation is inadequate.

Section 9. Physical and Chemical Properties

Physical State Liquid. [Aerosol.]
pH Not applicable.
Boiling Point Not available.
Specific Gravity 0.75
Solubility Insoluble in the following materials: cold water and hot water.

Color Clear. Amber. [Light]
Odor Solvent.
Vapor Pressure Not available.
Vapor Density >1 [Air = 1]
Evaporation Rate >1 (butyl acetate = 1)

VOC (Consumer) 50 % (w/w) 3.13 lbs/gal (375 g/l)

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.
Incompatibility Avoid contact with strong oxidizers, excessive heat, sparks or open flame.
Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.
Hazardous Decomposition Products carbon oxides (CO, CO_2)

Section 11. Toxicological Information

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m³	4 hours
heptane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	103 g/m³	4 hours
Distillates (petroleum), hydrotreated light	LC50 Inhalation Vapor	Rat	>6.8 mg/l	4 hours
	LD50 Dermal	Rabbit	2000 to 4000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Section 12. Ecological Information

Environmental Effects Not available.

Aquatic Ecotoxicity

heptane	-	Acute LC50 375000 µg/l Fresh water	Fish - Mozambique tilapia - Oreochromis mossambicus	96 hours
Distillates (petroleum), hydrotreated light	-	Acute LC50 2200 µg/l Fresh water	Fish - Bluegill - Lepomis macrochirus	4 days

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 Code: D001
Classification: Ignitable hazardous waste.
Origin: RCRA waste.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	-	Consumer commodity or Limited quantity	ORM-D	-	
IMDG Class	UN1950	AEROSOLS, flammable. Marine pollutant (Petroleum Distillates)	2.1	-	
		or Limited quantity	-	-	

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:
Product name

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

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

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.*

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