

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 BRAKE FLUSH -VOC (AEROSOL)
Product use Aerosol Brake Parts Cleaner.
Product code L934
Date of issue 06/30/11 **Supersedes** 02/25/09

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.
Atlanta, GA 30318

Printing date: 06/30/11

Section 2. Hazards Identification

Emergency overview

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

DANGER !

1 4 0

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. KEEP AWAY FROM SOURCES OF IGNITION. NO SMOKING. CAUSES EYE AND SKIN IRRITATION. VAPOR HARMFUL. CONTENTS UNDER PRESSURE.

Extremely flammable. Flammable aerosol. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Avoid contact with skin and clothing. Contains material that may cause target organ damage, based on animal data. Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

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. Inhalation.

Eyes

Contact may cause eye irritation. Inflammation of the eye is characterized by redness, watering and itching.

Skin

Direct contact may cause irritation and redness. 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

Harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage. Vomiting increases risk of chemical pneumonia or pulmonary edema caused by aspiration of hydrocarbon solvents.

Chronic effects

Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Repeated or prolonged exposure to the substance can produce damage to kidneys, lungs, liver, heart, brain, central nervous system (CNS), .

Carcinogenicity

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

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Acetone	A4	-	-	-	-	-
Ethanol	A3	1	-	-	-	-

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

<u>Name of Hazardous Ingredients</u>	<u>CAS number</u>	<u>% by Weight</u>
ACETONE; dimethyl ketone	67-64-1	75 - 85
HEPTANE; n-heptane	142-82-5	10 - 20
CARBON DIOXIDE	124-38-9	5 - 15
ETHANOL; ethyl alcohol; grain alcohol	64-17-5	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	Immediately wash with water and soap and rinse thoroughly. 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.
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	Lower: 1.2% Upper: 6.7%
Flammability	Extremely flammable. (CSMA) Aerosol that may flash back.
Fire hazard	CONTENTS UNDER PRESSURE. 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 dry chemical or CO ₂ . Fire-fighters should wear appropriate protective equipment. Cool containers with water jet in order to prevent pressure build-up, auto-ignition or explosion.

Section 6. Accidental Release Measures

Spill Clean up Large spills are unlikely due to packaging.

Section 7. Handling and Storage

Handling	Extremely flammable liquid and vapor. 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**

ACETONE; dimethyl ketone

Exposure limits**ACGIH TLV (United States, 1/2009).**

TWA: 500 ppm 8 hour(s).

TWA: 1188 mg/m³ 8 hour(s).

STEL: 750 ppm 15 minute(s).

STEL: 1782 mg/m³ 15 minute(s).**OSHA PEL 1989 (United States, 3/1989).**

TWA: 750 ppm 8 hour(s).

TWA: 1800 mg/m³ 8 hour(s).

STEL: 1000 ppm 15 minute(s).

STEL: 2400 mg/m³ 15 minute(s).**NIOSH REL (United States, 6/2009).**

TWA: 250 ppm 10 hour(s).

TWA: 590 mg/m³ 10 hour(s).**OSHA PEL (United States, 11/2006).**

TWA: 1000 ppm 8 hour(s).

TWA: 2400 mg/m³ 8 hour(s).

HEPTANE; n-heptane

ACGIH TLV (United States, 2/2010).

TWA: 400 ppm 8 hour(s).

TWA: 1640 mg/m³ 8 hour(s).


STEL: 500 ppm 15 minute(s).
 STEL: 2050 mg/m³ 15 minute(s).
OSHA PEL 1989 (United States, 3/1989).
 TWA: 400 ppm 8 hour(s).
 TWA: 1600 mg/m³ 8 hour(s).
 STEL: 500 ppm 15 minute(s).
 STEL: 2000 mg/m³ 15 minute(s).
NIOSH REL (United States, 6/2009).
 TWA: 85 ppm 10 hour(s).
 TWA: 350 mg/m³ 10 hour(s).
 CEIL: 440 ppm 15 minute(s).
 CEIL: 1800 mg/m³ 15 minute(s).
OSHA PEL (United States, 11/2006).
 TWA: 500 ppm 8 hour(s).
 TWA: 2000 mg/m³ 8 hour(s).

CARBON DIOXIDE

ACGIH TLV (United States).
 TWA: 5000 ppm 8 hour(s).
 STEL: 30000 ppm 15 minute(s).
NIOSH REL (United States, 6/2009).
 TWA: 1000 ppm 10 hour(s).
 TWA: 1900 mg/m³ 10 hour(s).
OSHA PEL (United States, 11/2006).
 TWA: 1000 ppm 8 hour(s).
 TWA: 1900 mg/m³ 8 hour(s).
ACGIH TLV (United States, 1/2009).
 STEL: 1000 ppm 15 minute(s).
OSHA PEL 1989 (United States, 3/1989).
 TWA: 1000 ppm 8 hour(s).
 TWA: 1900 mg/m³ 8 hour(s).

ETHANOL; ethyl alcohol; grain alcohol

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.]	Color	Clear , Colorless.
pH	Not applicable	Odor	Solvent.
Boiling Point	Not available.	Vapor Pressure	Not available.
Specific Gravity	0.7672	Vapor Density	>1 [Air = 1]
Solubility	insoluble in water.	Evaporation Rate	>1 (butyl acetate = 1)
		VOC (Consumer)	9.7%

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility	Keep away from heat, sparks and flame. Reactive or incompatible with the following materials: oxidizing materials.
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
Acetone	LC50 Inhalation Vapor	Rat	16000 ppm	4 hours
	LD50 Dermal	Rabbit	20000 mg/kg	-
	LD50 Oral	Mouse	9750 mg/kg	-
	LD50 Oral	Rat	5800 mg/kg	-
n-Heptane	LC50 Inhalation Gas.	Mouse	18295 ppm	2 hours
	LC50 Inhalation Vapor	Rat	103 g/m ³	4 hours
	LD50 Oral	Mouse	15000 mg/kg	-
Ethanol	LC50 Inhalation Vapor	Rat	20000 mg/m ³	4 hours
	LD50 Oral	Rat	7 g/kg	-

Section 12. Ecological Information**Environmental Effects**

Not available.

Aquatic Ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Acetone	-	Acute LC50 6900 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 5.54 ml/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 1 g	96 hours
	-	Acute LC50 12600000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 8300000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 5.3 to 7.2 cm - 3.5 to 3.9 g	96 hours
	-	Acute LC50 7550000 ug/L Fresh water	Crustaceans - Aquatic sowbug - Asellus aquaticus	48 hours
	-	Acute LC50 >100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 0.2 to 0.5 g	96 hours
n-Heptane	-	Acute LC50 10000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 4924000 ug/L Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours
	-	Acute LC50 375000 ug/L Fresh water	Fish - Mozambique tilapia - Tilapia mossambica - 99 mm - 10 g	96 hours
Ethanol	-	Acute EC50 >100 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 2000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 5680 mg/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate - <24 hours	48 hours
	-	Acute LC50 13 ml/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.8 g	96 hours
	-	Acute LC50 13480000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 4 to 8 weeks - 1.1 to 3.1 cm	96 hours
	-	Acute LC50 10000000 to 11500000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 cm	96 hours
	-	Acute LC50 5577000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 3715000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 42000 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	4 days
	-	Acute LC50 25500 ug/L Marine water	Crustaceans - Brine shrimp - Artemia franchiscana - LARVAE	48 hours
	-	Chronic NOEC <6.3 g/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

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, D003

Classification: - [Hazardous waste.]

Origin: - [RCRA waste.]

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification		Consumer commodity	ORM-D	-	
IMDG Class	Not determined.	Not determined.	3	I	

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

No products were found.

Clean Water Act (CWA) 307: No products were found.

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.

TSCA 4(a) final test rules: n-Heptane

TSCA 8(a) PAIR: n-Heptane

United States inventory (TSCA 8b): Not determined.

TSCA 12(b) one-time export: n-Heptane

State Regulations**California Prop 65**

WARNING: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. :
Toluene

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.