

Material Safety Data Sheet



Zep, Inc.
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Atlanta, GA 30318
1-877-I-BUY-ZEP (428-9937)
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Section 1. Chemical Product and Company Identification

Product name ZEPSTART ENGINE STARTER
Product use Aerosol Engine Starting Fluid
Product code 0306
Date of issue 05/04/10 **Supersedes** 12/22/04

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: 05/04/10

Section 2. Hazards Identification

Emergency overview

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

DANGER !

2 4 0

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. HARMFUL OR FATAL IF SWALLOWED. CONTENTS UNDER PRESSURE. Do not smoke.

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

Causes skin irritation. Skin inflammation is characterized by itching, scaling, or reddening. May be harmful if absorbed through the skin.

Inhalation

Over-exposure by inhalation may cause respiratory irritation. Inhalation causes headaches, dizziness, drowsiness and nausea and may lead to unconsciousness. Can cause central nervous system (CNS) depression.

Ingestion

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

Chronic effects

Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Prolonged skin contact may cause dermatitis with drying and cracking of skin. Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation, leading to frequent attacks of bronchial infection. Contains material which may cause damage to the following organs: kidneys, liver, mucous membranes, heart, brain, upper respiratory tract, skin, eyes, central nervous system (CNS).

Carcinogenicity

No known significant effects or critical hazards.

Product/ingredient name

ACGIH

IARC

EPA

NIOSH

NTP

OSHA

ether

-

3

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Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients

CAS number

% by Weight

HEPTANE; n-heptane

142-82-5

65 - 75

ETHYL ETHER; diethyl ether; ethane; 1,1-oxybis-

60-29-7

30 - 35

CARBON DIOXIDE

124-38-9

1 - 10

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. 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 immediately.
Ingestion	Aspiration hazard if swallowed. Can enter lungs and cause damage. If vomiting occurs, keep head lower than hips to help prevent aspiration. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. 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	Not available.
Flammable Limits	Not available.
Flammability	Extremely flammable. (CSMA)
Fire hazard	CONTENTS UNDER PRESSURE. In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
Fire-Fighting Procedures	Use an extinguishing agent suitable for the surrounding fire.

Section 6. Accidental Release Measures

Spill Clean up	Large spills are unlikely due to packaging.
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Section 7. Handling and Storage

Handling	Put on appropriate personal protective equipment (see section 8). Store and use away from heat, sparks, open flame or any other ignition source. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wash thoroughly after handling. Empty containers retain product residue and can be hazardous. Watch for accumulation in low confined areas.
Storage	CONTENTS UNDER PRESSURE. Do not puncture or incinerate container. Do not store above the following temperature: 49°C (120.2°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection**Product name**

HEPTANE; n-heptane

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

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).

ETHYL ETHER; diethyl ether; ethane; 1,1-oxybis-

ACGIH TLV (United States, 1/2009).

TWA: 400 ppm 8 hour(s).
TWA: 1210 mg/m³ 8 hour(s).
STEL: 500 ppm 15 minute(s).
STEL: 1520 mg/m³ 15 minute(s).

OSHA PEL 1989 (United States, 3/1989).

TWA: 400 ppm 8 hour(s).
TWA: 1200 mg/m³ 8 hour(s).
STEL: 500 ppm 15 minute(s).
STEL: 1500 mg/m³ 15 minute(s).

OSHA PEL (United States, 11/2006).

TWA: 400 ppm 8 hour(s).
TWA: 1200 mg/m³ 8 hour(s).

CARBON DIOXIDE

ACGIH TLV (United States).

TWA: 5000 ppm 8 hour(s).
STEL: 30000 ppm 15 minute(s).

Personal Protective Equipment (PPE)

Eyes	Safety glasses.
Body	Wear appropriate protective clothing to prevent skin contact. Recommended: Nitrile gloves. Viton 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	Ethereal. [Strong]
Boiling Point	>35°C (>95°F)	Vapor Pressure	Not determined.
Specific Gravity	0.7	Vapor Density	>1 [Air = 1]
Solubility	Very slightly soluble in the following materials: cold water and hot water.	Evaporation Rate	>1 (butyl acetate = 1)
		VOC (Consumer)	700 g/l 100.00%

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 and acids.
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

n-Heptane	LC50 Inhalation Gas.	Mouse	18295 ppm	2 hours
	LC50 Inhalation Vapor	Rat	103 g/m3	4 hours
ether	LD50 Oral	Mouse	15000 mg/kg	-
	LD50 Oral	Rat	1215 mg/kg	-

Section 12. Ecological Information

Environmental Effects	Not available.
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Aquatic Ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
n-Heptane	-	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
ether	-	Acute LC50 >10000000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 33 to 75 mm	96 hours
	-	Acute LC50 2560000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 29 days - 17 mm - 0.069 g	96 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
	Classification: - [Hazardous waste.]
	Origin: - [RCRA waste.]

Section 14. Transport Information

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

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:

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: ether; n-Heptane**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.