



The Grasshopper Company

MATERIAL SAFETY DATA SHEET

Revised: 9/25/98

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Grasshopper Fluid - # 345050, # 345055

Supplier: The Grasshopper Company
Old Highway 81 South
Moundridge, Kansas 67107

Product and MSDS Information: (316) 345-8621 Monday - Friday, 8:00 am - 5:00 pm (CST)

INFOTRAC - 24hrs (800) 535-5053

Use or Description: Gear and Bearing Lubricant

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Names And Synonyms: HYDROCARBONS AND ADDITIVES

Ingredients Considered Hazardous to Health: This product is not formulated to contain ingredients which have exposure limits established by U.S. agencies. It is not hazardous to health as defined by the European Union Dangerous Substances/Preparations Directives. See Section 15 for a regulatory analysis of the ingredients.

See Section 15 for European Label Information

See Section 8 for exposure limits (if applicable)

3. HAZARDS IDENTIFICATION

US OSHA Hazard Communication Standard: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined not to be hazardous.

Effects of Overexposure: No significant effects expected.

Emergency Response Data: Amber Liquid. DOT ERG # - NA

4. FIRST AID MEASURES

Eye Contact: Flush thoroughly with water. If irritation occurs, call a physician.

Skin Contact: Wash contact areas with soap and water.

Inhalation: Not expected to be a problem.

Ingestion: Not expected to be a problem. However, if greater than ½ liter (pint) ingested, seek medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Carbon Dioxide, foam, dry chemical and water fog.

Special Fire Fighting Procedures: Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

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Special Protective Equipment: For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Flash Point C (F) : >214 (417) (ASTM D-92).

Flammable Limits - LEL: NA, UEL: NA.

NFPA Hazard ID: HEALTH: 0, Flammability: 1, Reactivity: 0

Hazardous Decomposition Products: Metal Oxides. Carbon Monoxide. Elemental Oxides.

6. ACCIDENTAL RELEASE MEASURES

Notification Procedures: Report spills as required to appropriate authorities. US Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spills to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

Procedures if Material if Released or Spilled: Adsorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

Environmental Precautions: Prevent spills from entering storm sewers or drains and contact with soil.

Personal Precautions: See Section 8

7. HANDLING AND STORAGE

Handling: No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.

Storage: Do not store in open or unlabelled containers. Store away from strong oxidizing agents or combustible material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: No special requirements under ordinary conditions of use and with adequate ventilation.

Respiratory Protection: No special requirements under ordinary conditions of use and with adequate ventilation.

Eye Protection: Normal industrial eye protection practices should be employed.

Skin Protection: No special equipment required. However, good personal hygiene practices should always be followed.

Exposure Limits: This product does not contain any components which have recognized exposure limits. However, a threshold limit value of 5.00 mg/m³ is suggested for oil mist.

9. PHYSICAL AND CHEMICAL PROPERTIES

Typical physical properties are given below. Consult Product Data Sheet for specific details.

Appearance: Liquid

Color: Amber

Odor: Mild

Odor Threshold - ppm: NE

pH: NA

Boiling Point C (F): > 316 (600)

Melting Point C (F): NA

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Flash Point C (F): > 214 (417) (ASTM D-92)

Flammability: NE

Auto Flammability: NE

Explosive Properties: NA

Oxidizing Properties: NA

Vapor Pressure-mmHg 20 C: < 0.1

Vapor Density: > 2.0

Evaporation Rate: NE

Relative Density, 15/4 C: 0.875

Solubility in Water: Negligible

Partition Coefficient: > 3.5

Viscosity at 40 C, cSt: 120.0

Viscosity at 100 C, cSt: > 17.6

Pour Point C (F): -51 (-60)

Freezing Point C (F): NE

Volatile Organic Compound: NE

NA= NOT APPLICABLE NE= NOT ESTABLISHED D= DECOMPOSES

10. STABILITY AND REACTIVITY

Stability (Thermal, Light, Etc.): Stable

Conditions to Avoid: Extreme Heat

Incompatibility (Materials to Avoid): Strong Oxidizers

Hazardous Decomposition Products: Metal Oxides. Carbon Monoxide. Elemental Oxides

Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL DATA

ACUTE TOXICOLOGY

Oral Toxicity (rats): Practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or the components.

Dermal Toxicity (rabbits): Practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or the components.

Inhalation Toxicity (rats): Not applicable - Harmful concentrations of mists and/or vapors are unlikely to be encountered through any customary or reasonably foreseeable handling, use or misuse of this product.

Eye Irritation (rabbits): Practically non-irritating. (Draize score: greater than 6 but 15 or less). - Based on testing of similar products and/or the components.

Skin Irritation (rabbits): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3). Based on testing of similar products and/or the components.

Other acute toxicity data: The acute toxicological results summarized above are based on testing of representative products. Representative formulations have shown no acute effects, administered via the inhalation route, when tested at maximum attainable oil mist or vapor concentrations.

SUBCHRONIC TOXICOLOGY (SUMMARY)

Representative formulations have been tested by dermal applications to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure.

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Extensive evaluations, including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.

REPRODUCTIVE TOXICOLOGY (SUMMARY)

Dermal exposure of pregnant rats to representative formulations did not cause adverse effects in either the mothers or their offspring.

SENSITIZATION (SUMMARY)

Representative formulations have not caused skin sensitization in guinea pigs.

OTHER TOXICOLOGY DATA

This product is formulated with a synthetic hydrocarbon as the base stock. Representative base stocks have been tested to assess their potential adverse effects on human health. Assessment of human health effects was based on acute oral, dermal, and inhalation toxicity; eye and skin irritation; subchronic dermal toxicity and reproductive studies; guinea pig sensitization; and mutagenicity and chromosomal damage assays. None of these base stocks appears to pose a health hazard to humans under conditions of expected use.

Used gasoline engine oils have shown evidence of skin carcinogenic activity in laboratory tests when no effort was made to wash the oil off between applications. Used oil from diesel engines did not produce this effect.

12. ECOLOGICAL INFORMATION

Environmental fate and effects: This product is expected to be inherently biodegradable. There is no evidence to suggest bio accumulation will occur.

Acute LC/EC50 Fish: Juvenile Rainbow Trout: Practically non-toxic - based on testing of similar products . Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.

13. DISPOSAL INFORMATION

Waste Disposal: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at the time of disposal.

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

14. TRANSPORT INFORMATION

USA DOT: Not Regulated by the USA DOT.

RID/ADR: Not Regulated by RID/ADR

IMO: Not Regulated by IMO

IATA: Not Regulated by IATA

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15. REGULATORY INFORMATION

Governmental Inventory Status: All components comply with TSCA, EINECS/ELINCS, and MITI.

EU Labeling: EU Labeling not required.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This product contains no Extremely Hazardous Substances.

SARA (311/312) Reportable Hazard Categories: None.

This product contains the following SARA (313) Toxic Release Chemicals:

| CHEMICAL NAME | CAS NUMBER | CONC. |
|--|------------|-------|
| PHOSPHORODITHIOIC ACID, O,O-DI C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP) | 68649-42-3 | 1.08% |

The following product ingredients are cited on the lists below:

| CHEMICAL NAME | CAS NUMBER | LIST CITATIONS |
|--|------------|-----------------------|
| BUTYL BENZYL PHTHALATE (>0.48%) | 85-68-7 | 22,24 |
| ZINC (ELEMENTAL ANALYSIS) (0.14%) | 7440-66-6 | 22 |
| CHLORINE (ELEMENTAL ANALYSIS) (0.02%) | 7782-50-5 | 22 |
| PHOSPHORODITHIOIC ACID, O,O-DI | 68649-42-3 | 18, 20, 21, 22, 24 |
| C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP) (1.08%) | | 25 |

Regulatory Lists Searched:

| | | | | |
|-------------|-------------|-------------|-----------------|-----------|
| 1=ACGIH ALL | 6=IARC 1 | 11=TSCA 4 | 16=CA P65 CARC | 21=LA RTK |
| 2=ACGIH A1 | 7=IARC 2A | 12=TSCA 5a2 | 17=CA P65 REPRO | 22=MI 293 |
| 3=ACGIH A2 | 8=IARC 2B | 13=TSCA 5e | 18=CA RTK | 23=MN RTK |
| 4=NTP CARC | 9=OSHA carc | 14=TSCA 6 | 19=FL RTK | 24=NJ RTK |
| 5=NTP SUS | 10=OSHA Z | 15=TSCA 12b | 20=IL RTK | 25=PA RTK |
| | | | | 26=RI RTK |

Code Key: CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductive

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.