



Material Safety Data Sheet # 323

Hercules Chemical Company Inc.
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NFPA	HMIS	PPE	Transport Symbol						
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Health Hazard	2								
Fire Hazard	2								
Reactivity	0								

Preparation Date 27-Jun-2006

Revision Date

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Power Flow
Recommended Use Fuel additive

Supplier Address
Hercules Chemical Company, Inc.
111 South St.
Passaic, NJ 07055
TEL: 973-778-5000

Company Emergency Phone Number 1-800-221-9330
Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

FLAMMABLE LIQUID AND VAPOR

May be harmful if swallowed, inhaled, or absorbed through skin

Harmful: may cause lung damage if swallowed

Irritating to eyes, respiratory system and skin

May cause drowsiness and dizziness

Appearance Light brown.

Physical State Liquid.

Odor Hydrocarbon-like.

Potential Health Effects

Principle Routes of Exposure

Inhalation, Skin contact, Eye contact.

Acute Effects

Eyes

Irritating to eyes.

Skin

May be harmful in contact with skin. May cause skin irritation and/or dermatitis.

Inhalation

May be harmful if inhaled. May cause drowsiness and dizziness.

Ingestion

Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Potential for aspiration if swallowed.

Chronic Effects

Repeated or prolonged overexposure to solvents may cause permanent damage to the nervous system.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions

Central nervous system.

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

Potential Environmental Effects

See Section 12 for additional Ecological information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Stoddard solvent	8052-41-3	60-100
2-Butoxyethanol	111-76-2	5-10

4. FIRST AID MEASURES

General Advice	Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.
Eye Contact	In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
Skin Contact	Wash skin with soap and water.
Inhalation	Move victim to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Ingestion	Call a physician immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
Notes to Physician	Keep victim warm and quiet.
Protection of First-aiders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Flammable liquid.
Flash Point	48°C / 118°F
Suitable Extinguishing Media	Dry chemical, CO2, water spray or regular foam. Water spray, fog or regular foam. Use water spray or fog; do not use straight streams. Move containers from fire area if you can do it without risk.
Unsuitable Extinguishing Media	CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient
Hazardous Combustion Products	Hydrocarbons, Carbon oxides.
Explosion Data	
Sensitivity to mechanical impact	Not sensitive
Sensitivity to static discharge	Yes

Specific Hazards Arising from the Chemical

Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a "P" may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Substance may be transported hot.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA
HMIS

Health 2
Health 2

Flammability 2
Flammability 2

Instability 0
Instability 0

Physical Hazard B

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk.
Methods for Containment	A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Methods for Clean-up	Use clean non-sparking tools to collect absorbed material. Dike far ahead of liquid spill for later disposal.
Other Information	Water spray may reduce vapor; but may not prevent ignition in closed spaces.

7. HANDLING AND STORAGE

Handling	Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in an area containing flame proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.
Storage	Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep away from heat and sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Stoddard solvent	TWA: 100 ppm	TWA: 100 ppm TWA: 525 mg/m ³	20000 mg/m ³
2-Butoxyethanol	TWA: 20 ppm	TWA: 120 mg/m ³ TWA: 25 ppm Skin	700 ppm

NIOSH IDLH: Immediately Dangerous to Life or Health

Engineering Controls	Showers Eyewash stations Ventilation systems
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Personal Protective Equipment

Eye/face Protection

Skin Protection

Respiratory Protection

Safety glasses with side-shields.

Wear fire/flame resistant/retardant clothing. Impervious gloves.

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

When using, do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light brown	Odor	Hydrocarbon-like
Physical State	Liquid	pH	No information available
Flash Point	48°C / 118°F	Autoignition Temperature	Not applicable
Boiling Point/Range	317-388	Melting Point/Range	No data available
Flammability Limits in Air	No data available		
Specific Gravity	0.8	Water Solubility	Insoluble in water
Solubility	No data available	VOC Content	9.02%

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides. Hydrocarbons.
Hazardous Polymerization	Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION**Acute Toxicity**

Product Information	Product does not present an acute toxicity hazard based on known or supplied information
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Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
2-Butoxyethanol	470 mg/kg (Rat)	220 mg/kg (Rabbit) 2270 mg/kg (Rat)	2.21 mg/L (Rat) 4 h 450 ppm (Rat) 4 h

Chronic Toxicity

Chronic Toxicity	Repeated or prolonged overexposure to solvents may cause permanent damage to the nervous system.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol	A3			

Reproductive Effects	This product does not contain any known or suspected reproductive hazards
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Target Organ Effects	Central nervous system (CNS), Skin, Respiratory system.
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Endocrine Disruptor Information	This product does not contain any known or suspected endocrine disruptors
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12. ECOLOGICAL INFORMATION**Ecotoxicity**

Ecotoxicity effects.

Chemical Name	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
2-Butoxyethanol				LC50 1698 - 1940 mg/L 24 h EC50 = 1720 mg/L 24 h

Chemical Name	log Pow
2-Butoxyethanol	0.81

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Should not be released into the environment. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of in accordance with local regulations

US EPA Waste Number D001

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDL	Complies
EINECS/ELINCS	Complies
ENCS	Does not Comply
CHINA	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values
2-Butoxyethanol	111-76-2	5-10	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
2-Butoxyethanol	X	X	X	X	X
Ligroine		X	X		

International Regulations

Mexico - Grade

Moderate risk, Grade 2

Chemical Name	Carcinogen Status	Exposure Limits
2-Butoxyethanol		STEL: 75 ppm STEL: 360 mg/m ³ TWA: 26 ppm TWA: 120 mg/m ³

Chemical Name	Carcinogen Status	Exposure Limits
Ligroine	A3	STEL: 400 ppm STEL: 1800 mg/m ³ TWA: 1350 mg/m ³ TWA: 300 ppm

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B2 Flammable liquid

D2B Toxic materials



Chemical Name	NPRI
2-Butoxyethanol	X

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION**Preparation Date** 27-Jun-2006**Revision Date****Revision Summary** No information available**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS