




# Material Safety Data Sheet

NFPA	HMIS	PPE	Transport Symbol						
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Health Hazard	2*								
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Reactivity	1								

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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	ROCKIN FOAM®
Recommended Use	Waterfall Design and Construction
Supplier Address	Tierra Innovations, Inc. 5447 Laguna Park Drive Elk Grove, CA. 95758 TEL: (916) 606-6102
Emergency Telephone Number	Chemtrec 1-800-424-9300 (703) 527-3887 outside US

## 2. HAZARDS IDENTIFICATION

### WARNING!

#### Emergency Overview

Contents under pressure.

Flammable gas.

Harmful by inhalation, in contact with skin and if swallowed.

May cause allergic respiratory reaction.

May cause sensitization by skin contact

Irritating to eyes, respiratory system and skin.

Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.

May cause drowsiness and dizziness.

May cause adverse cardiovascular effects.

Appearance Black

Physical State Liquid Aerosol

Odor Faint hydrocarbon

### Potential Health Effects

Principle Routes of Exposure Inhalation, Skin contact, Eye contact.

### Acute Toxicity

#### Eyes

#### Skin

#### Inhalation

Irritating to eyes. Risk of serious damage to eyes.

Harmful in contact with skin. Will bond to skin. May cause sensitization by skin contact.

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Harmful by inhalation. Irritating to respiratory system. May cause allergic respiratory reaction.

Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.

Inhalation of vapors in high concentration may cause shortness of breath (lung edema). May

cause allergy or asthma symptoms or breathing difficulties if inhaled.

<b>Ingestion</b>	May be harmful if swallowed. May cause additional effects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Product may cure in the gastrointestinal tract and form an obstruction. May cause adverse cardiac effects, blood disturbances, and metabolic acidosis.
<b>Chronic Effects</b>	Repeated or prolonged exposure may cause central nervous system damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Chronic hydrocarbon abuse has been associated with irregular heart rhythms and potential cardiac arrest. Repeated or prolonged contact causes sensitization, asthma and eczemas.
<b>Aggravated Medical Conditions</b>	Allergies. Skin disorders. Respiratory disorders. Central nervous system. Preexisting eye disorders.
<b>Interactions with Other Chemicals</b>	Irritants. Sensitizers. Epoxies. Use of alcoholic beverages may enhance toxic effects.
<b>Environmental Hazard</b>	See Section 12 for additional Ecological information

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Dimethyl ether	115-10-6	1-5
Flame Retardant	Proprietary	10-30
Polymethylene polyphenylene isocyanate	9016-87-9	10-30
Methylene bisphenyl isocyanate (MDI)	101-68-8	10-30
Polyol blend	Proprietary	10-30
Polyol blend	Proprietary	5-10
Isobutane	75-28-5	5-10
Methylenediphenyl diisocyanate	26447-40-5	1-5
Black Color	Mixture	3-10
Propane	74-98-6	1-5

### 4. FIRST AID MEASURES

<b>General Advice</b>	Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.
<b>Eye Contact</b>	Call a physician immediately. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.
<b>Skin Contact</b>	Wash skin with soap and water. If symptoms persist, call a physician. Remove and wash contaminated clothing before re-use.
<b>Inhalation</b>	Move victim to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
<b>Ingestion</b>	Call a physician or Poison Control Center immediately. May produce an allergic reaction. Do not induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
<b>Notes to Physician</b>	Keep victim warm and quiet.
<b>Protection of First-aiders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Containers may explode when heated.
<b>Flash Point</b>	-104°C / -155°F

**Suitable Extinguishing Media**

Use extinguishing agent suitable for type of surrounding fire. Dry chemical or CO<sub>2</sub>. Water spray, fog or regular foam. Move containers from fire area if you can do it without risk. Damaged cylinders should be handled only by specialists.

**Explosion Data**

Sensitivity to mechanical impact	None
Sensitivity to static discharge	Yes

**Specific Hazards Arising from the Chemical**

Some may burn but none ignite readily. Ruptured cylinders may rocket.

**Protective Equipment and Precautions for Firefighters**

Wear self-contained breathing apparatus and protective suit.

<b>NFPA</b>	Health Hazard 2	Flammability 4	Stability 1	Physical and Chemical Hazards -
<b>HMS</b>	Health Hazard 2*	Flammability 4	Stability 1	Personal Precautions -

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation. Take precautionary measures against static discharges. Use personal protective equipment. Keep people away from and upwind of spill/leak.
<b>Methods for Containment</b>	If possible, turn leaking containers so that gas escapes rather than liquid. Allow substance to evaporate. Dike to collect large liquid spills.
<b>Methods for Cleaning Up</b>	Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Do not direct water at spill or source of leak.
<b>Other Information</b>	Ventilate the area.

**7. HANDLING AND STORAGE**

<b>Handling</b>	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition. 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. Avoid breathing vapors or mists. Contents under pressure. Do not puncture or incinerate cans. Do not stick pin or any other sharp object into opening on top of can.
<b>Storage</b>	Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children. Keep at temperatures below 48.8 °C / 120 °F.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methylene bisphenyl isocyanate (MDI)	TWA: 0.005 ppm	Ceiling: 0.02 ppm Ceiling: 0.2 mg/m <sup>3</sup>	75 mg/m <sup>3</sup>
Isobutane	TWA: 1000 ppm	N/A	N/A
Propane	TWA: 1000 ppm	TWA: 1000 ppm	2100 ppm

NIOSH IDLH: Immediately Dangerous to Life or Health

**Engineering Measures**

Showers  
Eyewash stations  
Ventilation systems

**Personal Protective Equipment**  
**Eye/Face Protection**  
**Skin and Body protection**  
**Respiratory Protection**

Safety glasses with side-shields.  
 Impervious gloves. Lightweight protective clothing.  
 If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene Measures**

When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Black	<b>Odor</b>	Faint hydrocarbon
<b>Odor Threshold</b>	No information available	<b>Physical State</b>	Liquid Aerosol
<b>pH</b>	No information available		
<b>Flash Point</b>	-104°C / -155°F	<b>Autoignition Temperature</b>	Not applicable
<b>Decomposition temperature</b>	No data available	<b>Boiling Point/Range</b>	-42°C / -44°F
<b>Melting Point/Range</b>	No data available		
<b>Flammability Limits in Air</b>	No data available	<b>Explosion Limits</b>	No data available
<b>Specific Gravity</b>	1.01	<b>Water Solubility</b>	Not Compatible
<b>Solubility</b>	Compatible.	<b>Evaporation Rate</b>	No data available
<b>Vapor Pressure</b>	No data available	<b>Vapor Density</b>	No data available
<b>VOC Content</b>	Not applicable	<b>EPA VOC (g/l)</b>	155
<b>Partition Coefficient (n-octanol/water)</b>	No data available		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions
<b>Conditions to Avoid</b>	Keep away from open flames, hot surfaces and sources of ignition. Temperatures above 48.8 °C / 120 °F.
<b>Incompatible Products</b>	Water. Alcohols. Strong bases. Strong oxidizing agents. Finely powdered metals.
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Nitrogen oxides (NO <sub>x</sub> ), Hydrogen cyanide.
<b>Hazardous Polymerization</b>	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

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Dimethyl ether			308.5 mg/L ( Rat ) 4 h
Flame Retardant	500 mg/kg ( Rat )	1230 mg/kg ( Rabbit ) 5000 mg/kg ( Rat )	5 mg/L ( Rat ) 4 h
Polymethylene polyphenylene isocyanate	49 g/kg ( Rat )	9400 mg/kg ( Rabbit )	490 mg/m <sup>3</sup> ( Rat ) 4 h

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methylene bisphenyl isocyanate (MDI)	9200 mg/kg ( Rat )		
Polyol blend	2 g/kg ( Rat )		
Polyol blend	64 mL/kg ( Rat )	20 mL/kg ( Rabbit )	
Isobutane			658 mg/L ( Rat ) 4 h
Methylenediphenyl diisocyanate		6200 mg/kg ( Rabbit )	0.369 mg/L ( Rat ) 4 h
Propane		658 mg/kg ( Rat )	

**Subchronic Toxicity (28 days)****Chronic Toxicity****Chronic Toxicity**

Repeated or prolonged exposure may cause central nervous system damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Chronic hydrocarbon abuse has been associated with irregular heart rhythms and potential cardiac arrest. Repeated or prolonged contact causes sensitization, asthma and eczemas.

**Carcinogenicity**

There are no known carcinogenic chemicals in this product.

**Mutagenicity****Reproductive Toxicity**

This product does not contain any known or suspected reproductive hazards

**Target Organ Effects**

Central nervous system (CNS), Eyes, Respiratory system, Immune system, Skin, Cardiovascular system.

**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Ecotoxicity effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Flame Retardant	EC50 = 4 mg/L 96 h EC50 = 45 mg/L 72 h		EC50 = 295 mg/L 30 min	EC50 = 63 mg/L 48 h
Methylenediphenyl diisocyanate	EC50 = 3230 mg/L 96 h			EC50 > 1000 mg/L 24 h

Chemical Name	Log Pow
Dimethyl ether	-0.18
Flame Retardant	2.59
Isobutane	2.88
Propane	2.3

(Cured foam is non-toxic and safe for fish and plants.)

**13. DISPOSAL CONSIDERATIONS****Waste Disposal Method**

This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Should not be released into the environment. Dispose of in accordance with local regulations. Allow foam to cure before disposal.

**Contaminated Packaging**

Dispose of in accordance with local regulations

**US EPA Waste Number**

D001

**14. TRANSPORT INFORMATION****DOT**

Proper Shipping Name  
Hazard Class

Consumer commodity  
ORM-D

**14. TRANSPORT INFORMATION**

<b>Description</b>	Consumer commodity,ORM-D,
<b>TDG</b>	
<b>Proper Shipping Name</b>	Aerosols
<b>Hazard Class</b>	2.1
<b>UN-No</b>	UN1950
<b>Description</b>	AEROSOLS,2.1,UN1950
<b>MEX</b>	
<b>Proper Shipping Name</b>	Aerosols
<b>Hazard Class</b>	2.1
<b>UN-No</b>	UN1950
<b>Description</b>	UN1950 Aerosols,2.1
<b>ICAO</b>	
<b>UN-No</b>	UN1950
<b>Proper Shipping Name</b>	Aerosols
<b>Hazard Class</b>	2.1
<b>Description</b>	Aerosols,UN1950
<b>IATA</b>	
<b>UN-No</b>	UN1950
<b>Proper Shipping Name</b>	Aerosols, flammable
<b>Hazard Class</b>	2.1
<b>ERG Code</b>	10L
<b>Description</b>	UN1950,Aerosols, flammable,2.1
<b>IMDG/IMO</b>	
<b>Proper Shipping Name</b>	Aerosols
<b>Hazard Class</b>	2
<b>UN-No</b>	UN1950
<b>EmS No.</b>	F-D, S-U
<b>Description</b>	UN1950, Aerosols,2
<b>RID</b>	
<b>Proper Shipping Name</b>	Aerosols
<b>Hazard Class</b>	2
<b>UN-No</b>	UN1950
<b>Classification Code</b>	5A
<b>Description</b>	UN1950 Aerosols,2,,RID
<b>ADR/RID-Labels</b>	2
<b>ADR</b>	
<b>Proper Shipping Name</b>	Aerosols
<b>Hazard Class</b>	2
<b>UN-No</b>	UN1950
<b>Classification Code</b>	5A
<b>ADR/RID-Labels</b>	2
<b>ADN</b>	
<b>Proper Shipping Name</b>	Aerosols
<b>Hazard Class</b>	2
<b>Classification Code</b>	5A
<b>Special Provisions</b>	63, 190, 191, 277, 913
<b>Description</b>	UN1950 Aerosols,2,
<b>Hazard Labels</b>	2
<b>Limited Quantity</b>	See SP277

## 15. REGULATORY INFORMATION

### International Inventories

TSCA	Complies
DSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
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
Polymethylene polyphenylene isocyanate	9016-87-9	10-30	1.0
Methylene bisphenyl isocyanate (MDI)	101-68-8	10-30	1.0
Methylenediphenyl diisocyanate	26447-40-5	1-5	1.0

#### SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	Yes
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, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Methylene bisphenyl isocyanate (MDI)	5000 lb	

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Methylene bisphenyl isocyanate (MDI)	X	X	X	X	X
Propane	X	X	X		X
Isobutane	X	X	X		
Dimethyl ether	X	X	X		X

**International Regulations****Mexico - Grade**



Chemical Name	Carcinogen Status	Exposure Limits
Methylene bisphenyl isocyanate (MDI)		Mexico: TWA= 0.005 ppm Mexico: TWA= 0.051 mg/m <sup>3</sup>

## 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

A Compressed gases  
B5 Flammable aerosol  
D2A Very toxic materials



Chemical Name	NPRI
Methylene bisphenyl isocyanate (MDI)	X

## Legend

NPRI - National Pollutant Release Inventory

## 16. OTHER INFORMATION

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Revision Note 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**