

GUARDIAN ENERGY TECHNOLOGIES INC.
2033 MILWAUKEE AVE #136
RIVERWOODS, IL 60015 USA
1-800-516-0949

FOR EMERGENCY, CALL CHEMTREC:
OUTSIDE U.S.A., CALL COLLECT:

1-800-424-9300
001-(703) 527-3887

DATE OF PREPARATION:
PREPARED BY:

January 30, 2009
Mark Munns

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION

Name of product:

**FOAM IT GREEN Kits 12, 202, 602 ASTM E-84 Class I
Component A**

SECTION 2 - CHEMICAL COMPOSITION

<u>CHEMICAL</u>	<u>CAS #</u>	<u>CONCENTRATION</u>
Polymethylene polyphenyl isocyanate Containing 4,4 Methylene bisphenylisocyanate (MDI) (Approximately 40% - 50% MDI)	9016-87-9 101-68-8	80% to 100%
1,1,1,2 Tetrafluoroethane (134a)	811-97-2	>15%

SECTION 3 - HAZARDS IDENTIFICATION

CAUTION!! CONTENTS UNDER PRESSURE. Reacts slowly with water, releasing carbon dioxide, which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this process.

POTENTIAL HEALTH EFFECTS

Eyes:	May cause moderate eye irritation. May cause very temporary corneal injury.
Skin:	Prolonged or repeated exposure may cause slight irritation.
Ingestion:	No hazards anticipated from swallowing small amounts.
Inhalation:	At room temperature, there are minimal vapors. Excessive exposure may cause irritation to upper respiratory tract and lungs. May cause respiratory sensitization to susceptible individuals. Symptoms may include coughing, difficult breathing and tightness in the chest. Effects may be delayed.

SECTION 4 - FIRST AID PROCEDURES

In all cases, seek additional medical attention.

EYE CONTACT **SKIN CONTACT** **INHALATION** **INGESTION**

Flush with clean, low pressure water for 15 minutes while holding eyelids open.
Remove contaminated clothing. Immediately wash skin with soap and warm water.
Remove from contaminated area to fresh air. If not breathing, administer artificial respiration or oxygen.
In case of excessive ingestion, give large amounts of liquids. DO NOT INDUCE VOMITING

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point	>400°F/>204°C (estimated)
Extinguishing Media	Carbon dioxide, dry chemical, foam, water fog or fine spray.
Special Protective Equipment	Positive pressure self contained breathing apparatus (SCBA) and protective fire fighting clothing.
Hazardous Decomposition Products	During combustion, Carbon Monoxide and Carbon Dioxide, Nitrogen Oxides, Ammonia, Hydrochloric Acid, Hydrofluoric Acid, Chlorine, Fluorine, Phosgene, Phosphorous oxides and trace amounts of Hydrogen Cyanide are given off.

SECTION 6 - HANDLING AN ACCIDENTAL RELEASE OR SPILL

Provide adequate ventilation.
Wear suitable personal protective clothing and equipment.
Contain spill and collect using suitable absorbent material, such as sawdust or vermiculite. Shovel into waste container adding 10%-20% decontaminate solution (90% water, 7% ammonia and 3% liquid detergent). Leave uncovered for 24 hours prior to disposal. Dispose of as ordinary industrial waste in compliance with pertinent regulations.

SECTION 7 – HANDLING AND STORAGE

CAUTION!! Contents under pressure.
 Avoid open flames and contact with water.
 Storage temperature: <120° F (<49° C) ; 75° F (24° C) is ideal
 Do not puncture or incinerate.

SECTION 8 - PERSONAL PROTECTION

EYE PROTECTION Wear safety goggles.
SKIN PROTECTION Wear protective clothing and chemical resistant gloves.
RESPIRATORY PROTECTION Use only in well ventilated areas. When atmospheric levels may exceed exposure guideline, use a approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. In situations of insufficient ventilation, or in situations where the potential exists for exceeding the TLV, wear self-contained breathing apparatus.

EXPOSURE GUIDELINES: Methylene bisphenyl isocyanate (MDI): ACGIH TLV is 0.005 ppm TWA and OSHA PEL is 0.02 ppm ceiling.
 1,1,1,2 Tetrafluoroethane : TWA is 1000 ppm

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure(70°F/21°C)	<25 psi @ 25°C
Vapor Density	Heavier than air
Boiling Point	Not available
Specific Gravity	1.24
VOC Content (lb./gal)	0
Appearance and Color	Dark brown, frothy liquid with mild musty odor

SECTION 10 - REACTIVITY AND STABILITY

STABILITY Stable under recommended storage conditions
REACTIVITY Reacts with water. Avoid alkalis, acids, alcohol, ammonia, bases, moist air and strong oxidizers. Reaction may be violent at elevated temperatures. Avoid open flames and storage temperatures above 120° F (49°C). DO NOT INCINERATE CYLINDERS.

SECTION 11 – TOXICOLOGICAL INFORMATION

Concentration of components (Sec. 2) must be considered to determine effects of this mixture.
MDI: LD50 2000mg/kg (rats,); ingestion

SECTION 12 – ECOLOGICAL INFORMATION

SKIN: The LD50 for skin absorption in rabbits is >2000 mg/kg.
 INGESTION: The oral LD50 for rats is >10,000 mg.kg

SECTION 13 - DISPOSAL INFORMATION

Prior to disposal, cylinders must be properly vented. Do not puncture or incinerate cylinders. Once pressure has been relieved, empty cylinders can be disposed of as ordinary industrial waste in compliance with pertinent regulations. Dispose of leftover chemical by following instructions under Section 6 "Handling an accidental release or spill".

SECTION 14 – TRANSPORTATION INFORMATION

UN1956, Compressed Gas n.o.s. (Fluorinated Hydrocarbons, Nitrogen), Class 2.2

SECTION 15 - REGULATORY INFORMATION

SARA 313: Contains: Methylene Bisphenylisocyanate (MDI) CAS Number 101-68-8
 Polymeric Diphenylmethane Diisocyanate CAS Number 9016-87-9

SARA 311/312 Categories: An immediate health hazard
 A delayed health hazard

All ingredients are on the TSC Inventory

This product is defined as a "Hazardous Chemical" under OSHA Hazard Communication Standard, 29 CFR 1910.1200

SECTION 16 – OTHER INFORMATION

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MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION

Name of product:

**FOAM IT GREEN Kits 12, 202, 602 ASTM E-84 Class I
Component B**

SECTION 2 - CHEMICAL COMPOSITION

<u>CHEMICAL</u>	<u>CAS #</u>	<u>CONCENTRATION</u>
Polyols	Mixture ²	40% - 70%
Amine polyol reaction product of the Mannich condensation	52019-35-9	9% - 15%
1,1,1,2 Tetrafluoroethane (134a)	811-97-2	10% - 30%

² Different raw materials sources - proprietary mixture

SECTION 3 - HAZARDS IDENTIFICATION

<u>POTENTIAL HEALTH EFFECTS</u>	CAUTION!!	CONTENTS UNDER PRESSURE
Eyes:	May cause slight eye irritation	
Skin:	Not likely to cause significant skin irritation.	
Ingestion:	Swallowing small amounts not likely to cause injury. Larger amounts may cause injury	
Inhalation:	Single exposure is not likely to be hazardous. High concentrations may cause respiratory irritation	

SECTION 4 - FIRST AID PROCEDURES In all cases, seek additional medical attention.

<u>EYE CONTACT</u>	Flush with clean, low pressure water for 15 minutes while holding eyelids open.
<u>SKIN CONTACT</u>	Remove contaminated clothing. Wash skin with soap and warm water.
<u>INHALATION</u>	Remove from contaminated area to fresh air.
<u>INGESTION</u>	In case of excessive ingestion, give large amounts of liquids. DO NOT INDUCE VOMITING.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point	>300°F/>149° C (estimated)
Extinguishing Media	Carbon dioxide, dry chemical, foam, water fog or fine spray
Special Protective Equipment	Positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing
Hazardous Decomposition Products	During combustion, Carbon Monoxide and Carbon Dioxide, Nitrogen Oxides, Ammonia, Hydrochloric Acid, Hydrofluoric Acid, Chlorine, Fluorine, Phosgene, Phosphorus oxides and trace amounts of Hydrogen Cyanide are given off.

SECTION 6 - HANDLING AND ACCIDENTAL RELEASE OR SPILL

Provide adequate ventilation.
Wear suitable personal protective clothing and equipment. Contain spill and collect using a suitable absorbent material such as sawdust or vermiculite. Dispose of as ordinary industrial waste in compliance with pertinent regulations. Wash areas with residue with warm water and soap.

SECTION 7 – HANDLING AND STORAGE

CAUTION!! Contents under pressure.
Keep away from sparks, flame and sources of heat.
Protect containers from physical abuse. Do not puncture or incinerate.
Avoid direct sunlight.
Storage temperature: <120° F (<49°C), 75° F (24° C) is ideal

SECTION 8 - PERSONAL PROTECTION

EYE PROTECTION Wear safety goggles.
SKIN PROTECTION Wear protective clothing and chemical resistant gloves
RESPIRATORY PROTECTION Use only in well-ventilated areas. With insufficient ventilation, wear suitable respiratory protection. When used with Component "A", follow recommendation for respiratory protection for Component "A".

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Flash Point >300° F (149° C)
Vapor Pressure (70°F/21°C) 2500 mmHg
Specific Gravity 1.28
Appearance and Color Brown to light yellow frothy liquid with mild odor

SECTION 10 - REACTIVITY AND STABILITY

STABILITY Stable under normal use and recommended storage conditions
REACTIVITY Avoid open flames, storage temperatures above 120°F/49°C. DO NOT INCINERATE CYLINDERS.

SECTION 11 - TOXICOLOGICAL INFORMATION

Concentration of components (Sec.2) must be considered to determine effects of this mixture.
LD50 >2000 mg/kg (rats), skin and ingestion

SECTION 12 – ECOLOGICAL INFORMATION**SECTION 13 - DISPOSAL INFORMATION**

Prior to disposal, cylinders must be properly vented. Do not puncture or incinerate. Once pressure has been relieved, empty cylinders can be disposed of as ordinary industrial waste in compliance with pertinent regulations. Cylinders containing chemical must be emptied prior to disposal, and chemicals should be disposed of by following instructions in Section 6

SECTION 14 – TRANSPORTATION INFORMATION

UN1956, Compressed Gas n.o.s. (Fluorinated Hydrocarbons, Nitrogen), Class 2.2

SECTION 15- REGULATORY INFORMATION

SARA 313:

SARA 311/312 Categories: Immediate health hazard

All ingredients are on the TSC Inventory.

This product is defined as a "Hazardous Chemical" under OSHA Hazard Communication Standard, 29 CFR 1910.1200

SECTION 16 – OTHER INFORMATION