

# Material Safety Data Sheet

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>Health Hazard</td> <td>2*</td> </tr> <tr> <td>Fire Hazard</td> <td>1</td> </tr> <tr> <td>Reactivity</td> <td>1</td> </tr> </table>	Health Hazard	2*	Fire Hazard	1	Reactivity	1		
Health Hazard	2*								
Fire Hazard	1								
Reactivity	1								

Issuing Date 27-Feb-2007

Revision Date 03-Feb-2010

Revision Number 4

## 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Component A for Touch 'n Foam Professional System 15 / 200 / 600 (std) Touch 'n Seal Foam Kit 15 / 110 / 120 / 200 / 600 (std)
<b>Product ID No:</b>	MSDS – A Side Reg
<b>Recommended Use</b>	Insulation
<b>Supplier Address</b>	Convenience Products, Division of Clayton Corp. 866 Horan Drive Fenton, MO 63026-2416 USA TEL: (636) 349-5855
<b>Emergency Telephone Number</b>	Chemtrec 1-800-424-9300 (703) 527-3887 outside US

## 2. HAZARDS IDENTIFICATION

### WARNING!

#### Emergency Overview

Contents under pressure.  
May be harmful if swallowed, inhaled.  
May cause allergic skin reaction  
May cause allergic respiratory reaction.  
Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.  
Vapors may be irritating to eyes, nose, throat, and lungs.  
May cause drowsiness and dizziness.

**Appearance** Pale Amber

**Physical State** Liquid

**Odor** Faint hydrocarbon

### Potential Health Effects

#### Principle Routes of Exposure

Inhalation, Skin contact, Eye contact.

#### Acute Toxicity

##### Eyes

Irritating to eyes. May cause slight temporary corneal injury due to adhesive character.

##### Skin

Prolonged or repeated exposure may cause slight skin irritation. Material will stick to skin causing irritation upon removal. Animal studies have shown that skin contact with isocyanates may play a role in causing respiratory sensitization. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

##### Skin Absorption

A single prolonged exposure is unlikely to result in the material being absorbed in harmful amounts.

<b>Inhalation</b>	Maintain local exhaust ventilation system during use. If large concentrations of vapors build up they could cause upper respiratory tract and lung irritation. May cause allergic respiratory reaction. Inhalation of vapors in high concentration may cause shortness of breath (lung edema).
<b>Ingestion</b>	May be harmful if swallowed. May cause additional affects 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>	Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI / Polymeric MDI aerosols. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. 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. Kidney disorders. Liver disorders.
<b>Aggravated Medical Conditions</b>	Allergies. Skin disorders. Respiratory disorders. Preexisting eye disorders. Kidney disorders. Liver disorders.
<b>Interactions with Other Chemicals</b>	Irritants. Sensitizers. Epoxies. Use of alcoholic beverages may enhance toxic effects.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
1,1,1,2 – Tetrafluoroethane (HFC-134a, Fluorocarbon)	811-97-2	7-14
Polymethylene polyphenylene isocyanate	9016-87-9	30-60
Methylene bisphenyl isocyanate (MDI)	101-68-8	30-60
Methylenediphenyl diisocyanate	26447-40-5	5-10

### 4. FIRST AID MEASURES

<b>General Advice</b>	If emergency warrants call 911 or emergency medical service. Show this safety data sheet to the doctor in attendance. Remove and wash soiled clothing before reuse.
<b>Eye Contact</b>	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. Obtain medical attention, preferably from an ophthalmologist.
<b>Skin Contact</b>	Remove contaminated clothing; wash before reuse. Foam will stick to skin; studies demonstrate that cleaning very soon after exposure with corn oil or nail polish remover is most effective. If foam dries on skin, apply generous amounts of petroleum jelly or lanolin, put on plastic gloves and wait 1 hour. With a clean cloth, firmly wipe off petroleum jelly and repeat process if necessary. Do not attempt to remove dried foam with solvents.
<b>Inhalation</b>	Move victim to fresh air. Apply artificial respiration if victim is not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
<b>Ingestion</b>	Call a physician or Poison Control Center immediately. May produce an allergic reaction. Do not induce vomiting unless directed to do so by medical personnel. Drink plenty of water. Never give anything by mouth to an unconscious person.
<b>Notes to Physician</b>	Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. May cause respiratory sensitization or asthma-like symptoms. Respiratory symptoms, including pulmonary edema, may be delayed. Exposure may increase "myocardial irritability". No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

**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**

<b>Flammable Properties</b>	Foam cylinders exposed to fire can rupture.
<b>Flash Point</b>	None
<b>Suitable Extinguishing Media</b>	Isolate fire and deny unnecessary entry. Use an extinguishing agent suitable for type of surrounding fire. Dry chemical, CO <sub>2</sub> , water spray, fog or regular foam. Stay upwind. Keep out of low areas where gases fumes can accumulate. Move containers from fire area if you can do it without risk. Damaged cylinders should be handled only by specialists.
<b>Unsuitable Extinguishing Media</b>	Do not scatter spilled material with high pressure water streams.
<b>Explosion Data</b>	
<b>Sensitivity to mechanical impact</b>	None
<b>Sensitivity to static discharge</b>	None

**Specific Hazards Arising from the Chemical**  
 Ruptured cylinders may rocket.

**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.

<b><u>NFPA</u></b>	<b>Health Hazard 2</b>	<b>Flammability 1</b>	<b>Stability 1</b>	<b>Physical and Chemical Hazards -</b>
<b><u>HMIS</u></b>	<b>Health Hazard 2*</b>	<b>Flammability 1</b>	<b>Stability 1</b>	<b>Personal Precautions -B</b>

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Do not touch or walk through spilled material. Use appropriate safety equipment. Evacuate area. Keep personnel out of low areas, confined or poorly ventilated areas. Keep upwind of spill. Ensure adequate ventilation. No smoking in area. Only trained and properly protected personnel must be involved in clean-up operations.
<b>Methods for Containment</b>	If possible, turn leaking containers so that gas escapes rather than liquid. Allow substance to evaporate. Contain spilled materials if possible without risk. Absorb with materials such as Sawdust, dirt, and vermiculite. Collect in suitable and properly labeled open containers. Do not place in sealed containers. Wash what is left of the spill site with large quantities water.
<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. Curing foam gives off HFC-134a. Do not put curing foam in a sealed drum.

**7. HANDLING AND STORAGE**

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**Handling** Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product. Use only in area provided with appropriate exhaust ventilation. Avoid breathing vapors or mists. Contents under pressure. Do not puncture or incinerate cylinders. Container, even those that have been emptied, can contain vapors. Do not stick pin or any other sharp object into opening on top of cylinder.

**Storage** Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Keep in an area equipped with sprinklers. Keep out of the reach of children. Ideal storage temperature is 16-32 °C / 60 – 90 °F. Storage above 32 °C / 90 °F will reduce its shelf-life. Never keep at temperatures above 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>

NIOSH IDLH: *Immediately Dangerous to Life or Health*

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

**Personal Protective Equipment**  
**Eye/Face Protection** Tightly fitting safety glasses with side-shields.

**Skin and Body protection** Lightweight protective clothing. Impervious gloves.

**Respiratory Protection** Atmospheric levels of PMDI should be maintained below the exposure guidelines. If exposure limits are exceeded or irritation is experienced, use a NIOSH/MSHA approved air-purifying respirator equipped with an organic vapor absorbent and a particle filter. For situations where the atmospheric levels exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplied respirator. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene Measures** When using, do not eat, drink or smoke. Maintain regular cleaning of equipment, work area and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Pale Amber	<b>Odor</b>	Faint hydrocarbon
<b>Odor Threshold</b>	No information available	<b>Physical State</b>	Liquid (Frothable)
<b>pH</b>	No information available		
<b>Flash Point</b>	None	<b>Autoignition Temperature</b>	Not applicable
<b>Decomposition temperature</b>	No data available	<b>Boiling Point/Range</b>	-26°C / -15°F for HFC-134a
<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>	1.2	<b>Water Solubility</b>	Not Compatible
<b>Solubility</b>	No data available	<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>	0
<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

<b>Sensitization - Skin</b>	Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.
<b>Sensitization – Respiratory</b>	May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

### Product Information

#### Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polymethylene polyphenylene isocyanate	49 g/kg ( Rat )	9400 mg/kg ( Rabbit )	490 mg/m <sup>3</sup> ( Rat ) 4 h
Methylene bisphenyl isocyanate (MDI)	9200 mg/kg ( Rat )		
Methylenediphenyl diisocyanate		6200 mg/kg ( Rabbit )	0.369 mg/L ( Rat ) 4 h

**Chronic Toxicity**

**Chronic Toxicity** Repeated or prolonged exposure may cause central nervous system damage. Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Repeated or prolonged contact causes sensitization, asthma and eczemas. Repeated or prolonged contact may causes sensitization, asthma and eczemas.

**Carcinogenicity** There are no known carcinogenic chemicals in this product

**Mutagenicity** Contains no known mutagenetic chemicals

**Reproductive Toxicity** This product does not contain any known or suspected reproductive hazards

**Target Organ Effects** Contains component(s) that have been reported to cause effects on the following organs in animals: Kidney, Liver, Bone marrow.

**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)
Methylenediphenyl diisocyanate	EC50 = 3230 mg/L 96 h			EC50 > 1000 mg/L 24 h

Chemical Name	Log Pow
1,1,1,2,-Tetrafluoroethane HFC-134a	1.06

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method** This material, as supplied, is not 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.

**14. TRANSPORT INFORMATION**

**DOT**

**UN-No** UN1956  
**Proper Shipping Name** Compressed gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)  
**Hazard Class** 2.2  
**Description** Nonflammable gas (Fluorinated Hydrocarbon, Nitrogen)

**TDG**

**UN-No** UN1956  
**Proper Shipping Name** Compressed gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)  
**Hazard Class** 2.2  
**Description** Nonflammable gas (Fluorinated Hydrocarbon, Nitrogen)

**MEX**

**UN-No** UN1956  
**Proper Shipping Name** Compressed gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)  
**Hazard Class** 2.2  
**Description** Nonflammable gas (Fluorinated Hydrocarbon, Nitrogen)

**ICAO**

**UN-No** UN1956

## 14. TRANSPORT INFORMATION

<b>Proper Shipping Name</b>	Compressed gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)
<b>Hazard Class</b>	2.2
<b>Description</b>	Nonflammable gas (Fluorinated Hydrocarbon, Nitrogen) (Foam Kit 15 aerosol UN-No is UN1950)

### IATA

<b>UN-No</b>	UN1956
<b>Proper Shipping Name</b>	Compressed gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)
<b>Hazard Class</b>	2.2
<b>ERG Code</b>	2L
<b>Description</b>	Nonflammable gas (Fluorinated Hydrocarbon, Nitrogen) (Foam Kit 15 aerosol UN-No is UN1950)

### IMDG/IMO

<b>UN-No</b>	UN1956
<b>Proper Shipping Name</b>	Compressed gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)
<b>Hazard Class</b>	2.2
<b>EmS No.</b>	F-D, S-U
<b>Description</b>	Nonflammable gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen) (Foam Kit 15 aerosol UN-No is UN1950)

### RID

<b>UN-No</b>	UN1956
<b>Proper Shipping Name</b>	Compressed gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)
<b>Hazard Class</b>	2
<b>Classification Code</b>	5A
<b>Description</b>	Nonflammable gas (Fluorinated Hydrocarbon, Nitrogen)
<b>ADR/RID-Labels</b>	2 (Foam Kit 15 aerosol UN-No is UN1950)

### ADR

<b>UN-No</b>	UN1956
<b>Proper Shipping Name</b>	Compressed gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)
<b>Hazard Class</b>	2
<b>Classification Code</b>	5A
<b>ADR/RID-Labels</b>	2 (Foam Kit 15 aerosol UN-No is UN1950)

### ADN

<b>UN-No</b>	UN1956
<b>Proper Shipping Name</b>	Compressed gas, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)
<b>Hazard Class</b>	2
<b>Classification Code</b>	5A
<b>Special Provisions</b>	63, 190, 191, 277, 913
<b>Description</b>	Nonflammable gas (Fluorinated Hydrocarbon, Nitrogen)
<b>Hazard Labels</b>	2 (Foam Kit 15 aerosol UN-No is UN1950)

## 15. REGULATORY INFORMATION

### International Inventories

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	30-60	1.0
Methylene bisphenyl isocyanate (MDI)	101-68-8	30-60	1.0
Methylenediphenyl diisocyanate	26447-40-5	5-10	1.0



**SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
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 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
Methylene bisphenyl isocyanate (MDI)	X	X	X	X	X
Chlorodifluoromethane	X	X	X		X

**International Regulations**

**Mexico - Grade**

The exposure limits values for 101-68-8 are listed under two synonyms:  
 Diphenylmethane diisocyanate - 0.02 ppm TWA; 0.2 mg/m<sup>3</sup> TWA  
 Methylene bisphenyl isocyanate - 0.005 ppm TWA; 0.051 mg/m<sup>3</sup> TWA

Chemical Name	Carcinogen Status	Exposure Limits
Methylene bisphenyl isocyanate (MDI)		Mexico: TWA= 0.2 mg/m <sup>3</sup> Mexico: TWA= 0.02 ppm
Diphenylmethane diisocyanate		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
- D2B Toxic materials



Chemical Name	NPRI
Methylene bisphenyl isocyanate (MDI)	X
Polymethylene polyphenylene isocyanate	X
1,1,1,2- Tetrafluoroethane, HFC-134a	X

**Legend**

NPRI - National Pollutant Release Inventory  
WHMIS – Workplace Hazardous Materials Information System  
TSCA – Toxic Substance Control Act  
DSL – Domestic Substance List  
EINECS – European Inventory of Existing Commercial Chemical Substances  
ENCS – Japan, Existing and New Chemical Substances  
KECL- Korean Existing Chemical List  
PICS – Philippine Inventory of Chemicals and Chemical Substances  
AICS – Australian Inventory of Chemical Substances  
TDG – Transportation of Dangerous Goods Act  
ICAO – International Civil Aviation Organization  
IATA – International Maritime Dangerous Goods Code  
IMDG – International Maritime Dangerous Goods Code

**16. OTHER INFORMATION**

**Issuing Date** 27-Feb-2007  
**Revision Date** 03-Feb-2010  
**Revision Note** Revised format. Change Rev Date. Revised by Clayton Corporation EHS Department

**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**