

# Material Safety Data Sheet

**CertainTeed**  
SAINT-GOBAIN

HEALTH	* 2
FLAMMABILITY	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	

MSDS Number: CT 10095-3  
DATE PREPARED: March 7, 2008

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product/Trade Name: CertaSpray® A-Side (MDI)**

**Chemical Name:** Not Applicable

**CAS #:** Not Applicable

**Common Name:** CertaSpray-A (MDI)

**Product Use:** CertaSpray spray foam is a two component HFC-blown spray foam. When CertaSpray-A is mixed with CertaSpray-B (Open Cell) under pressure in a 1:1 volumetric ratio, it expands into a high density open-cell foam. When CertaSpray-A is mixed with CertaSpray-B (Closed Cell) under pressure in a 1:1 volumetric ratio, it expands into a high density closed-cell foam.

### MANUFACTURER INFORMATION:

CertainTeed Corporation  
P.O. Box 860  
Valley Forge, PA 19482-0101

### TELEPHONE AND E-MAIL:

(610) 341-7000 9 AM – 5 PM  
(Eastern Time – USA)  
CertainTeed-EHS@saint-gobain.com

Revision Date: 10/19/2011  
Product Literature Code: 30-50-048

*EMERGENCY TELEPHONE: CHEMTREC (800) 424-9300*

## 2. HAZARD IDENTIFICATION

### Emergency Overview

APPEARANCE AND ODOR: Brown liquid, slightly musty odor.

This product is harmful by inhalation, when in contact with the skin and if swallowed. This product may cause sensitization by inhalation and skin contact. Repeated inhalation of vapors may cause allergic respiratory response, the onset of which may be delayed several hours after exposure. Avoid contamination. Water reacts with product liberating CO<sub>2</sub> gas.

### Summary

Do not ingest. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

**Routes of Exposure:** Inhalation, skin, and eye contact.

### Potential Health Effects: Eyes

This product is irritating to the eyes. Symptoms include itching, burning, redness and tearing.

**Potential Health Effects: Skin**

This product is irritating to the skin. This product may cause an allergic skin reaction.

**Potential Health Effects: Ingestion**

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Potential Health Effects: Inhalation**

Allergic lung reaction such as asthma, which includes coughing, wheezing, chest pain and tightness, difficulty breathing and shortness of breath; irritation of the upper respiratory tract, which includes burning of mouth, throat, and chest.

**Medical Conditions Aggravated by Exposure:** None.

**HMIS Ratings: Health: 2\* Fire: 1 Physical Hazard: 1**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

CAS #	Component	Percent
9016-87-9	Polymethylene polyphenylene isocyanate	40-70
101-68-8	Methylene bisphenol isocyanate (MDI)	30-60
5873-54-1	Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-	5-10

**Component Information/Information on Non-Hazardous Components**

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product is a controlled product under Canadian WHMIS regulations.

**4. FIRST AID MEASURES****First Aid: Eyes**

Immediately flush eyes with large amounts of water for at least 15 minutes. Seek medical attention at once.

**First Aid: Skin**

Remove contaminated clothing. Wash exposed areas with soap and water for at least 15 minutes. If irritation develops or persists, seek medical attention. Contaminated leather articles, including shoes, that cannot be decontaminated should be discarded. Launder contaminated clothing before reuse. Do not take clothing home to be laundered.

**First Aid: Ingestion**

If the product is ingested, seek immediate medical attention or advice. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth to a victim who is unconscious or is having convulsions. Have victim rinse mouth thoroughly with water.

**First Aid: Inhalation**

If the product is inhaled, remove the affected person to fresh air. If breathing is difficult, administer oxygen and/or artificial respiration if necessary and seek medical attention.

**Notes to physician:**

Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

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**5. FIRE FIGHTING MEASURES****General Fire Hazards:**

See Section 9 for Flammability Properties. Cool containers with water spray. Containers may burst if overheated. This product reacts with water producing CO<sub>2</sub> gas. Do not reseal contaminated containers as a hazardous pressure build up could result in container rupture.

**Hazardous Combustion Products:**

Combustion products may include carbon oxides, nitrogen oxides, hydrocarbons, HCN and isocyanates. Carbon Monoxide is the primary combustion byproduct of concern.

**Extinguishing Media:**

Use methods for the surrounding fire.

**Fire Fighting Equipment/Instructions**

Standard fire fighting protective equipment is recommended, including full-face, self-contained breathing apparatus and impervious protective clothing.

**NFPA Ratings: Health: 2 Fire: 1 Reactivity: 1**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

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**6. ACCIDENTAL RELEASE MEASURES****Containment Procedures**

Wear appropriate personal protective equipment. Stop the flow of material, if this can be done without risk.

**Clean-Up Procedures**

Ventilate the contaminated area. Contain and absorb large spillage onto an inert, non-flammable adsorbent carrier (such as earth or sand). Shovel into open-top drums or plastic bags for further decontamination, if necessary. Wash the spillage area clean with liquid decontaminant. Test atmosphere for MDI. Neutralize small spillages with decontaminant. Remove and properly dispose of residues. Dispose of in accordance with federal, state and local regulations in a permitted waste management facility.

**Evacuation Procedures**

Evacuate the area promptly. Keep upwind of the spilled material and isolate exposure.

**Special Procedures**

Avoid inhalation of vapors or mists. Surfaces may become slippery after spillage.

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**7. HANDLING AND STORAGE****Handling Procedures**

Avoid contact with skin and eyes. Do not breathe vapors. Wear proper personal protective equipment. Avoid contact with water. Do not re-seal contaminated product as a hazardous build-up of pressure may result from liberation of CO<sub>2</sub> gas. Keep stocks of decontaminant readily available.

**Storage Procedures**

It is recommended that the product drums should be stored between 50–100°F. Keep containers tightly closed. Keep container in a dry, well-ventilated area protected from freezing, rain, direct sunlight and excess heat. The storage life of chemicals is 6 months. Do not store material near food, feed or drinking water. Uncontaminated containers, free of moisture, may be resealed only after placing under a nitrogen blanket. Do not store in containers made of copper, copper alloys or galvanized surfaces.

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**8. EXPOSURE CONTROL / PERSONAL PROTECTION****A: Component Exposure Limits****Methylene bisphenol isocyanate (MDI) (101-68-8)**

ACGIH: 0.051 mg/m<sup>3</sup> TWA (0.005 ppm TWA)  
OSHA: 0.2 mg/m<sup>3</sup> Ceiling (0.02 ppm Ceiling)  
NIOSH: 0.05 mg/m<sup>3</sup> TWA (0.005 ppm TWA);  
0.2 mg/m<sup>3</sup> Ceiling (10 min) (0.020 ppm Ceiling (10 min))

**Engineering Controls**

Provide adequate local exhaust ventilation to maintain worker exposures below exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT****Personal Protective Equipment: General**

Use appropriate personal protective equipment when handling this product. Eye wash fountain and emergency showers are recommended in areas where this product may be handled/used.

**Personal Protective Equipment: Eyes/Face**

Wear chemical goggles; add face shield (if splashing is possible).

**Personal Protective Equipment: Skin**

Wear impervious gloves, such as neoprene, nitrile rubber, or butyl rubber at all times when handling this product. Thin latex disposable gloves should be avoided for repeated or long term use. Work clothing sufficient to prevent all skin contact should be worn.

**Personal Protective Equipment: Respiratory**

Use a NIOSH-approved organic vapor respirator with a P100 (HEPA) particulate filter to protect against inhalation of vapors. A respirator should be used if ventilation is unavailable, or is inadequate for keeping vapor levels below the applicable exposure limits.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Brown liquid.	<b>Odor:</b>	Slight musty.
<b>Physical State:</b>	Liquid.	<b>pH:</b>	Not Applicable.
<b>Vapor Pressure:</b>	0.000004 mm Hg	<b>Vapor Density:</b>	8.5
<b>Boiling Point:</b>	>300°C decomposes.	<b>Melting Point:</b>	Not Available.
<b>Solubility (H<sub>2</sub>O):</b>	Insoluble.	<b>Specific Gravity:</b>	1.23 g/ml at 25°C
<b>Flash Point:</b>	230°C (446°F)	<b>Flash Point Method:</b>	Open Cup.
<b>Lower Flammability Limit:</b>	Not Available.	<b>Upper Flammability Limit:</b>	Not Available.
<b>Auto Ignition Temp.:</b>	>600.	<b>Burning Rate:</b>	Not Available.

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## 10. CHEMICAL STABILITY AND REACTIVITY INFORMATION

### Chemical Stability

Stable at room temperature. Reaction with water (moisture) produces CO<sub>2</sub> gas. Exothermic reaction with materials containing active hydrogen groups.

### Chemical Stability: Conditions to Avoid

Avoid high temperatures.

### Incompatibility

Water, alcohols, amines, bases and acids.

### Hazardous Decomposition

Carbon oxides, nitrogen oxides, hydrocarbons, HCN and isocyanates.

### Possibility of Hazardous Reactions

Polymerization will occur at elevated temperatures in the presence of alkalies, tertiary amines and metal compounds.

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## 11. TOXICOLOGICAL INFORMATION

### Acute Dose Effects

#### A: General Product Information

This product is harmful by inhalation, when in contact with the skin and if it is swallowed. This product may cause sensitization by inhalation and skin contact. Repeated inhalation of vapors may cause an allergic respiratory response, the onset of which may be delayed several hours after exposure. This product is irritating to the eyes. Symptoms include itching, burning, redness and tearing. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

#### B: Component Analysis

##### **Polymethylene polyphenylene isocyanate (9016-87-9)**

Inhalation LC<sub>50</sub> Rat: 490 mg/m<sup>3</sup>/4H; Oral LD<sub>50</sub> Rat: 49 g/kg; Dermal LD<sub>50</sub> Rabbit: >9400 mg/kg

##### **Methylene bisphenol isocyanate (MDI) (101-68-8)**

Oral LD<sub>50</sub> Rat: 9200 mg/kg

#### C: Repeated Dose Effects

Repeated or prolonged exposure to MDI may result in isocyanate sensitization (chemical asthma) in some individuals, causing them to react to isocyanate exposure at concentrations below the established exposure limits. Symptoms include chest tightness, wheezing, coughing, and shortness of breath. Effects can be delayed. Overexposure can cause lung damage, including decreased lung function. Prolonged or repeated skin contact may cause irritation leading to dermatitis. Skin sensitization may also occur. Lung injury has been observed in laboratory animals after repeated excessive exposure to MDI/polymeric MDI aerosol droplets. Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/polymeric MDI (6 mg/m<sup>3</sup>) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects.

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**Carcinogenicity**

**A: General Product Information:** None identified.

**B: Polymethylene polyphenylene isocyanate (9016-87-9)**

IARC: Supplement 7 [1987], Monograph 19 [1979] (Group 3 (not classifiable))

**C: Methylene bisphenol isocyanate (MDI) (101-68-8)**

IARC: Monograph 71 [1999], Supplement 7 [1987], Monograph 19 [1979] (Group 3 (not classifiable))

**Mutagenicity:** There is no substantial evidence of mutagenic potential.

**Teratogenicity / Reproductive Toxicity:**

No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in these studies were maximal, respirable concentrations, which are well in excess of defined occupational exposure limits

**Developmental Effects:** No information available for the product.

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

**A: General Product Information**

Taking into consideration the production and use of the substance, it is unlikely that significant environmental exposure in the air or water will arise. Product is immiscible with water

**B: Component Analysis – Ecotoxicity – Aquatic Toxicity**

No EPA Listed Waste Numbers are being shown for this product's components.

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**13. WASTE DISPOSAL CONSIDERATIONS****US EPA Waste Number & Descriptions**

**A: General Product Information**

Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

**B: Component Waste Numbers**

No EPA-listed Waste Numbers are being shown for this product's components.

**Disposal Instructions**

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Dispose of waste material according to Federal, State, local and Provincial environmental regulations. See Section 7 for Handling Procedures; see Section 8 for Personal Protective Equipment recommendations.

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**14. TRANSPORTATION INFORMATION****US DOT Information**

**Shipping Name:** Other Regulated Substances, Liquid, N.O.S (Polymethylene polyphenylene isocyanate, Methylene bisphenol isocyanate (MDI)) Reportable quantity is 5000lbs (2268 kg) Single container less than 5,000 lbs are not regulated.

**UN/NA #:** NA3082  
**Hazard Class:** 9  
**Packing Group:** III

**TDG Information**

**Shipping Name:** Not regulated.

**15. REGULATORY INFORMATION**

**US Federal**

**A: General Product Information**

Components of this product have been checked against the non-confidential TSCA inventory by CAS Registry Number. Components not identified on this non-confidential inventory are either exempt from listing (i.e. polymers, hydrates) or are listed on the confidential inventory as declared by the supplier.

**B: CERCLA**

This material contains one or more of the following chemicals required to be identified under CERCLA (40 CFR 302.4).

**Methylene bisphenol isocyanate (MDI) (101-68-8)**

CERCLA: 5000 lb final RQ; 2270 kg final RQ

**Acute Health:** Yes **Chronic Health:** Yes **Fire:** No **Pressure:** Yes **Reactive:** Yes  
**State Regulations**

**A: General Product Information**

Other state regulations may apply. Check individual state requirements.

**B: Component Analysis - State**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Methylene bisphenol isocyanate (MDI)	101-68-8	Yes	Yes	Yes	Yes	Yes	Yes

**C: California Safe Drinking Water and Toxics Enforcement Act (Proposition 65)**

None of the components in this product are known to the State of California to cause cancer or developmental and reproductive toxicity. (Check the Prop 65 List)

**Canadian WHMIS Information**

**A: General Product Information**

WHMIS Class D1A, D2A, D2B

**B: Component Analysis - WHMIS IDL**

Component	CAS #	Minimum Concentration
Methylene bisphenol isocyanate (MDI)	101-68-8	0.1 %

**WHMIS Classification:**

WHMIS Class D1A, D2A, D2B

**Additional Regulatory Information**

**A: General Product Information**

No additional information available.

**B: Component Analysis - Inventory**

Component	CAS #	TSCA	DSL	EINECS
Polymethylene polyphenylene isocyanate	9016-87-9	Yes	Yes	No
Methylene bisphenol isocyanate (MDI)	101-68-8	Yes	Yes	Yes
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-	5873-54-1	Yes	Yes	Yes

**16. ADDITIONAL COMMENTS**

**Other Information**

Disclaimer: Supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Material Safety Data Sheet before handling product.

**Acronyms/definitions used in this MSDS:**

ACGIH	American Conference of Governmental Industrial Hygienists;
CAS #	Chemical Abstracts Services Number;
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act;
CFR	Code of Federal Regulations;
EPA	Environmental Protection Agency;
HMIS	Hazardous Material Identification System;
IARC	International Agency for Research on Cancer;
LFL	Lower Flammable Limit;
mg/m <sup>3</sup>	Milligrams per cubic meter;
NFPA	National Fire Protection Association;
NIOSH	National Institute for Occupational Safety and Health;
NTP	National Toxicology Program;
OSHA	Occupational Safety and Health Administration;
ppm	Parts per million;
PEL	Permissible Exposure Limit;
REL	Recommended Exposure Limit;
SARA	Superfund Amendments and Reauthorization Act;
RCRA	Resource Conservation and Recovery Act;
Title III	Emergency Planning and Community Right to Know Act; Section 302- Extremely Hazardous Substances; Section 313- Toxic Chemicals;
TLV	Threshold Limit Value;
TWA	Time Weighted Average;
UFL	Upper Flammable Limit.

**MSDS History**

MSDS Revision Summary:

<u>Date</u>	<u>MSDS No.</u>	<u>Comments</u>
05/21/2007	CT 10095-1	New MSDS
06/08/2007	CT 10095-1	Formatting changes



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06/27/2007	CT 10095-1	Additional property information
08/31/2007	CT 10095-1	Additional component information
09/07/2007	CT 10095-1	Minor grammatical change
03/07/2008	CT 10095-2	Product name update
04/21/2010	CT 10095-2	CT Logo updated
10/19/2011	CT 10095-3	Product Name Change

This is the end of MSDS # CT 10095-3