PRODUCT CATEGORY: FOAM ROOF INSULATION

DATE PREPARED: DECEMBER 23, 2002 *MSDS Number: CT-10058-1*

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL PRODUCT IDENTIFICATION

Product/Trade Name:	FlintBoard ISO Roof Insulation FlintBoard ISO-T Roof Insulation FlintBoard ISO Plus Roof Insulation FlintBoard ISO-T Plus Roof Insulation FlintBoard ISO Cold Roof Insulation FlintBoard Pre-Cut Crickets
Chemical Name:	None
CAS NO:	None Assigned
Common Name:	Polyisocyanurate Foam Roof Insulation
Product use:	Rigid Roof Insulation

MANUFACTURER INFORMATION

CertainTeed Corporation
P.O. Box 860
Valley Forge, PA USA
19482-0105

Phone: Main Number 800-274-8530
Safety and Environmental Affairs: 610-341-7482
9 am - 5 pm (Eastern Time - USA)

EMERGENCY TELEPHONE: CHEMTREC 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Polyisocyanurate Foam
CAS #: None Assigned
Percent In Product: 97%

Exposure Limits:	**OSHA PEL**	**ACGIH TLV**	**NIOSH REL**
PNOC:			
Inhalable	-	10 mg/m^3	-
Respirable	5 mg/m^3	3 mg/m^3	-
Total Particulate	15 mg/m^3	-	-

Chemical Name: Fiber Glass (continuous glass filament)
CAS #: 65997-17-3
Percent In Product: 1%

Exposure Limits:	**OSHA PEL**	**ACGIH TLV**	**NIOSH REL**
Fiber Glass:			
Inhalable	-	5 mg/m^3	-
Respirable	1 f/cc	1 f/cc	-
Total Particulate	-	-	5 mg/m^3

2. COMPOSITION/INFORMATION ON INGREDIENTS (Continued)

Chemical Name:	Pentane		
CAS #:	109-66-0		
Percent In Product:	2%		
Exposure Limits:	**OSHA PEL**	**ACGIH TLV**	**NIOSH REL**
Pentane	1000 ppm	600 ppm	120 ppm; 610 ppm (Ceiling)

FlintBoard ISO, ISO-T, ISO Plus and ISO-T Plus contain:

Chemical Name:	Carbon Black		
CAS #:	1333-86-4		
Percent In Product:	1%		
Exposure Limits:	**OSHA PEL**	**ACGIH TLV**	**NIOSH REL**
Carbon Black	3.5 mg/m^3	3.5 mg/m^3	3.5 mg/m^3

FlintBoard ISO Plus and ISO-T Plus contain:

Chemical Name:	Expanded Perlite		
CAS #:	None Assigned		
Percent In Product:	2%		
Exposure Limits:	**OSHA PEL**	**ACGIH TLV**	**NIOSH REL**
PNOC:			
Inhalable	-	10 mg/m^3	-
Respirable	5 mg/m^3	3 mg/m^3	-
Total Particulate	15 mg/m^3	-	-

Additional Information On Ingredients:
The products listed in this MSDS do not contain any form of Asbestos.

3. HAZARDS IDENTIFICATION

APPEARANCE AND ODOR

Cream to tan colored solid foam board with no significant odor, and with various facings and backings: FlintBoard ISO and FlintBoard ISO-T are faced with a fiber glass reinforced felt facing on both surfaces; FlintBoard Cold Roof Insulation is faced with a coated fiber glass mat on both surfaces; and FlintBoard ISO Plus and FlintBoard ISO-T Plus are faced with perlite board on one surface and fiber glass-reinforced felt facing on the other.

EMERGENCY OVERVIEW

	Health	**Flammability**	**Reactivity**
NFPA Rating:	1	1	0
HMIS Rating:	1	1	0

Degree of Hazard
0 - Minimal (Insignificant)
1 - Slight (Minor)
2 - Moderate
3 - Serious (High)
4 - Severe (Extreme)

(see section 16 for acronym definitions)

POTENTIAL HEALTH EFFECTS

Summary: Dust from this product is a mechanical irritant, which means that it may cause temporary irritation or scratchiness of the throat and/or itching of the eyes and skin.

Routes of Entry: Inhalation, skin and eye contact.

Acute Inhalation: Breathing dust from these products may cause mechanical irritation of the mouth, nose, throat and respiratory tract.

3. HAZARDS IDENTIFICATION (Continued)

Chronic Inhalation:

Fiber Glass: No chronic health effects are known to be associated with exposure to continuous filament fiber glass. Results from epidemiological studies have not shown any increase in respiratory disease or cancer. In 1987, the International Agency for Research on Cancer (IARC) has classified continuous filament fiber glass "Not Classifiable as to its Carcinogenicity to Humans" (Group 3; i.e., IARC-3). In 2002, IARC re-affirmed this designation. Because of the large diameter of continuous filament fibers, these fibers are not considered respirable.

Polyisocyanurate Foam: There is no evidence that polyisocyanurate foam dust causes disease in humans.

Acute Skin Contact: Contact with the skin may result in transient mechanical irritation, characterized by itching or redness.

Chronic Skin Contact: None identified.

Acute Eye Contact: Contact with the eye may result in mechanical irritation, characterized by itching or redness.

Chronic Eye Contact: None identified.

Acute Ingestion: Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

Chronic Ingestion: None identified.

Carcinogenicity:

Fiber Glass (continuous filament fiber glass)

ACGIH: A4 – Not Classifiable as a Human Carcinogen (related to continuous filament glass fibers)

IARC: Group 3 – Not Classifiable as to its carcinogenicity to humans

NTP: Reasonably anticipated to be a Human Carcinogen (respirable size fibers only)

Carbon Black

ACGIH: A4 – Not Classifiable as a Human Carcinogen

IARC: Group 2B – Possibly carcinogenic to humans (Vol. 65, 1996).

NIOSH: Carcinogen (in the presence of polycyclic aromatic hydrocarbons)

Medical Conditions Aggravated by Exposure: Any condition generally aggravated by mechanical irritants in the air or on the skin.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. Drink water to clear throat, and blow nose to remove dust. If symptoms persist, seek medical attention.

Skin: For skin contact, wash immediately with soap and water. If irritation persists, seek medical attention.

Eyes: Flush eyes with running water for at least 15 minutes. Do not rub or scratch eyes. Dust particles may cause eyes to be scratched. If irritation persists, seek medical attention.

Ingestion: Product is not intended to be ingested or eaten. If this product is ingested, irritation of the gastrointestinal (GI) tract may occur, and should be treated symptomatically. Rinse mouth with water to remove fibers, and drink plenty of water to help reduce the irritation. No chronic effects are expected following ingestion.

Fire: Remove to fresh air. Administer oxygen and get medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: Not Applicable

Method Used: Not Applicable

Upper Flammable Limit (UFL): Not Applicable

Auto Ignition: Not Determined

Lower Flammable Limit (LFL): Not Applicable

Flammability Classification: Not Determined

Extinguishing Media: CO_2, Dry Chemical, Water Spray and/or Fog

Special Fire-Fighting Procedures: This product will burn, and should not be left exposed to very high heat, open flame or other sources of ignition. Under certain fire conditions, combustible gases can be generated, creating rapidly-spreading, high-intensity flames and dense black smoke. Normal fire-fighting procedures should be followed under fire conditions to avoid inhalation of smoke and gases (self contained breathing apparatus).

Hazardous Decomposition Products: Primarily CO, CO_2. Some HCN possible under certain conditions.

6. ACCIDENTAL RELEASE MEASURES

Spills: Pick up large pieces; do not wash down drain. Sweep or vacuum material into a waste container for disposal. If needed, use water spray to wet down material to minimize dust generation. Do not dry sweep dust accumulation or use compressed air for clean-up. These procedures will help minimize potential exposures.

Personal Protective Equipment: Use appropriate safety equipment as necessary.

7. HANDLING AND STORAGE

Handling: Use protective equipment as described in Section 8 of this MSDS when handling uncontained material.

Avoid breathing dusts from this material. Wash thoroughly after handling.

Storage: Avoid direct exposure to very high heat, open flame or other sources of ignition. Keep material dry and protected from the elements.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Work Practices and Engineering Controls: Cutting of product should be done with a gypsum type knife; the use of rotary powered saws is not recommended. Any dust-generating process should be performed in an area provided with either natural or mechanical ventilation. The original continuous filament fibers are of non-respirable size and the use of powered saws may create smaller fibers and cause them to become airborne.

Personal Protective Equipment:

Eye: Safety glasses with side shields or goggles may be worn to reduce the risk of eye injury caused by abrasive dusts.

Respirators: If irritation occurs or if exposure limits are exceeded, use an approved respirator for protection against nuisance dusts. A NIOSH-certified particulate respirator (disposable filtering dust mask type) with an efficiency rating of N95 or higher may be used to lessen respiratory tract irritation and for exposures up to 10 times the established exposure limits (e.g. 3M's 8210, Moldex 2300). Tear out and sawing may generate airborne fiber concentrations requiring a higher level of respiratory protection.

Skin: Wear long-sleeved, loose fitting clothes, long pants and gloves to reduce irritation. Clothing should be washed separately from other clothes, and the water should be rinsed thoroughly (run empty for a complete wash cycle). This will reduce the chances of fiber glass being transferred to other clothing.

Other: None

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Cream to tan colored solid foam board with various facings and backings (See Section 3).

Odor: No Significant Odor

Physical State: Solid

pH: Not Applicable

Vapor Pressure: Not Applicable

Vapor Density: Not Applicable

Boiling Point: Not Applicable

Melting Point: Not Determined

Solubility (H_2O): Insoluble

Specific Gravity: Not Determined

Evaporation Rate: Not Applicable

Percent Volatile: Not Determined

Freezing Point: Not Applicable

10. REACTIVITY

Stability: This is a stable material; avoid sources of ignition.

Corrosivity: Not applicable

Incompatibility: Acetone, methyl ethyl ketone, tetrahydrofuran, chlorine, chloroform, hydrogen peroxide, ethylene dichloride, dimethyl sulfoxide, and dimethyl formamide.

Reactivity: Not applicable

Reactive with water: None under normal conditions of use.

Explosion: None expected

Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

This product has not been tested as a separate entity. Therefore, the hazards must be evaluated on the basis of the individual ingredients, and those hazards must be assumed to be additive in the absence of complete information. The hazards described in this document have been evaluated on a threshold of 1.0% for all hazardous ingredients and 0.1% for all carcinogens.

Acute Effects:

Dust from this product is a mechanical irritant, and may cause transitory irritation to exposed areas such as the eyes, skin and upper respiratory passages.

Pentane may be released at very low concentrations (well below its lower flammable limit) from these products when they are cut or crushed.

Chronic Effects:

Chronic health effects from this product are unlikely when used as intended.

Fiber Glass (continuous glass filament): No chronic health effects are known to be associated with exposure to continuous filament fiber glass. The International Agency for Research on Cancer (IARC) has classified continuous filament fiber glass as a Group 3 substance, not classifiable as to its carcinogenicity to humans. Because continuous filament fiber glass is a large diameter fiber, there is minimal risk of a respiratory hazard.

Polyisocyanurate Foam: There is no evidence that polyisocyanurate foam dust causes disease in humans. There are no known animal studies of the chronic health effects of breathing dusts from polyisocyanurate foam.

12. ECOLOGICAL INFORMATION

This product has not been tested. Based on information related to all raw materials in the finished product, it is not expected to harm ecosystems through its applied use.

13. WASTE DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions

A: General Product Information

This product, as supplied, is not regulated as a hazardous waste by the US Environmental Protection Agency (EPA) under its Resource Conservation and Recovery Act (RCRA) regulations. Comply with state and local regulation for disposal. If you are unsure of the regulations, contact your local Public Health Department or the local office of the EPA.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions: Dispose in accordance with federal, state and local regulations. The primary method of disposal is to place product waste in a municipal or industrial landfill.

14. TRANSPORTATION INFORMATION

US DOT Information: For domestic transportation purposes, this product is not regulated as a hazardous material by the US Department of Transportation (DOT) under Title 49 of the Code of Federal Regulations.

15 REGULATORY INFORMATION

Clean Air Act

This product is not manufactured with, nor does it contain, any Class I ozone-depleting chemicals, as defined by EPA in Title VI of the Clean Air Act Amendments of 1990 (40 CFR Part 82- Protection of Stratospheric Ozone).

SARA Title III Regulations

Based on the fact that this product contains fiber glass, which OSHA defines as a hazardous chemical, this product may be reportable under SARA sections 311 and 312, depending upon maximum on-site storage volumes.

This product does not contain any substance(s) subject to the reporting requirements (i.e., at or above de minimis quantities) of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA-40 CFR 372).

Component Analysis

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

Component	CAS #	CA	FL	MA	MN	NJ	PA
Pentane	109-66-0	✔	✔	✔	✔	✔	✔
Fiber glass mat, which is continuous filament fiber glass (encapsulated)	65997-17-3	✔	-	✔	✔	-	✔
Carbon black	1333-86-4	-	-	✔	-	✔	✔

15 REGULATORY INFORMATION (Continued)

Component Analysis: WHMIS IDL
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Pentane	109-66-0	1% English Item 1243; French Item 1348
Fiber glass mat, which is continuous filament fiber glass (encapsulated)	65997-17-3	1% English Item 768; French Item 884 (related to fibrous glass)

16. ADDITIONAL COMMENTS

Other Information
Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

Acronyms/definitions used in this MSDS:

ACGIH	American Conference of Governmental Industrial Hygienists;
CAS No:	Chemical Abstracts Services Number;
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act;
CFR	Code of Federal Regulations;
EPA	Environmental Protection Agency;
f/cc	Fibers per cubic centimeter;
g/cm^3	Grams per cubic centimeter;
HMIS	Hazardous Material Identification System;
IARC	International Agency for Research on Cancer;
LC_{50}	Lethal concentration that produces death in 50% of the test population;
LD_{50}	Lethal dose required to produce death in 50% of the test population;
LFL	Lower Flammable Limit;
mg/m^3	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;
PNOC	Particulates Not Otherwise Classified;
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:

Date	MSDS No.	Comments
12/23/2002	CT 10058-1	New MSDS

This is the end of MSDS # CT 10058-1