

**FAX TRANSMITTAL**To *John Mc Ginley*From *Charlotte Catania*Location *FAX: 6837*Location *V.F.*Date/Time *2/7/96*Telephone *X7027*Number of pages (including cover page) *5*Fax *X7157*Message *MSOS for A/C Pipe (0629-5) discontinued 12/92.*

PLAINTIFF'S EXHIBIT

CT-836

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NLS continued 492

Material Safety Data Sheet

CertainTeed

 CertainTeed Corporation
 P.O. Box 860
 Valley Forge, PA 19482
 (215) 341-7000
 (24 Hour Telephone)

DATE PREPARED: September 14, 1990

PRODUCT IDENTIFICATION:

FLUID-TITE® Asbestos Cement Pipe and Fittings

Chemical Name: Asbestos Cement Pipe
 CAS No.: None
 Common Name (s): A/C Pipe and Fittings

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>Degree of Hazard</u>
NFPA Rating:	0	0	0	0 - Minimal (Insignificant)
HMIS Rating:	1*	0	0	1 - Slight
	(See Section 8 for acronyms/definitions.)			2 - Moderate
				3 - Serious (High)
				4 - Severe (Extreme)
				*Chronic Health Effect(s)—See section 5.

1. INGREDIENT INFORMATION:

Chemical Name: Asbestos (Chrysotile and Crocidolite)
 CAS No.: 1332-21-4 (12001-29-5 and 12001-28-4)
 Common Name:
 Exposure Limits:

<u>OSHA</u>	<u>ACGIH TLV</u>	<u>Other</u>
8 hr. PEL - 0.2 fibers	Chrysotile - 2 fibers	None
> 5 um/cc	> 5 um/cc	
30 min. EL - 1 fiber	Crocidolite - 0.2 fibers	
> 5 um/cc	> 5 um/cc	

This chemical is listed on EPA, SARA, Title III, Section 313 but not Section 302, and is listed on California's Proposition 65.

Chemical Name: Quartz
 CAS No.: 14808-60-7
 Common Name: Crystalline Silica
 Exposure Limits:

<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other</u>
Respirable Dust:	Respirable Dust:	None
0.1 mg/m ³	0.1 mg/m ³	

This chemical is not listed on EPA, SARA, Title III, Section 302 or 313, but Crystalline Silica is listed on California's Proposition 65, with a qualifier for airborne particles of respirable size.

2. PHYSICAL DATA

Boiling Point (°F): None	Specific Gravity (H ₂ O=1): 2.35
Melting Point (°F): None	Evaporative Rate (ethyl ether=1): N/A
Odor: None	Vapor Pressure (mmHg @ 20°C): N/A
Color: Cement Gray	% Volatile by Volume: N/A
Vapor Density (Air=1): N/A	% Solubility: Negligible

Appearance: Cement gray-colored pipe and fittings

3. FIRE AND EXPLOSION HAZARD DATA

Flash Point (°F) and Method: Does not support combustion. Flammable Limits: LEL: N/A UEL: N/A

Autoignition Temperature: Does not support combustion.

Extinguishing Media: Use that which is applicable to surrounding fire. This material is non-combustible.

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazard: None

4. PHYSICAL HAZARDS

Corrosivity: None

Reactivity: None

Reactivity with water: None

5. HEALTH HAZARD DATA

Health effects from storing and handling asbestos cement pipe and fittings should not be a problem if industry recommended work practices are used. (See section 7 for information on industry work practices.) Failure to follow these practices may result in the airborne release of the entrapped asbestos fibers and silica dust ingredients. Exposure to the ingredient dust and fiber may cause the following health effects:

Primary Routes of Entry: Inhalation, skin and eye contact.

Acute Effects:

Inhalation: Dust from cutting/grinding may cause irritation and coughing.

Skin contact: Dusts may cause irritation and itching.

Eye contact: Dust may cause redness and irritation.

Chronic Effects:

Inhalation: Excessive exposure to silica and asbestos dust causes a disabling scarring of the lungs, or pneumoconiosis, called "silicosis" and "asbestosis," which gradually reduce lung capacity and efficiency. Symptoms, which appear 15-20 years after the first exposure include coughing, decreased vital capacity, basal rales, cyanosis, cor pulmonale, clubbing of the fingers, anorexia, weakness and weight loss. Radiologic studies may show diffuse increase in lung opacities and pleural calcifications.

Asbestos is classified as a human carcinogen by the IARC and NTP and is regulated by OSHA as a human carcinogen. Asbestos-exposed workers show an increased incidence of pleural or peritoneal mesothelioma and high rates of respiratory cancer. The incidence of pulmonary fibrosis and lung cancer in asbestos-exposed workers is greatly increased by smoking. Reports associating cancer to other body organs exist, although the evidence is not clear.

Skin Contact: Prolonged exposure to asbestos may cause asbestos warts and dermatitis, usually confined to the hands and forearm.

Eye Contact: Prolonged exposure to asbestos may cause conjunctivitis.

Medical Conditions Which May be Aggravated: In groups of workers exposed to asbestos, 97.5% of asbestos-related lung cancers occur with those who also smoke cigarettes.

Carcinogenicity:

Ingredient: Asbestos

NTP: Human

IARC: Classified as Group 1,
Carcinogenic to Humans

OSHA: Regulated in 29CFR1910.1001

Ingredient: Silica, Crystalline

NTP: Not Listed

IARC: Classified as Group 2A,
Probably Carcinogenic to Humans

OSHA: Not Regulated as a Carcinogen

6. EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Upper respiratory - remove from exposure. Get medical help if irritation persists.

Skin Contact: Cleanse with soap and water. Get medical help if irritation persists.

Eye Contact: Flush well with running water for at least 15 minutes. Get medical help if irritation persists.

Ingestion: Unlikely. Consult physician if unusual reaction is noted.

Spills: Pipe fragments and installation debris must be handled in a manner which avoids airborne dispersion of asbestos or silica dust. Use wet or vacuum method with HEPA filter for cleanup. Avoid inhalation of dusts.

Fires: Does not support combustion.

Explosion: N/A

Accidental or Unplanned Releases: Avoid generation of dust from cutting or grinding.

7. SPECIAL PROTECTION INFORMATION

Personal Protective Equipment:

Respiratory: OSHA requires the establishment of a respirator program using NIOSH and MSHA approved respirators in emergencies and in work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the PEL.

The airborne concentration of asbestos dictates the appropriate respirators to be used:

Not in excess of 2 f/cc ($10 \times \text{PEL}$) - Half-mask air-purifying respirator equipped with high-efficiency filters;

Not in excess of 10 f/cc ($50 \times \text{PEL}$) - Full facepiece air-purifying respirator equipped with high-efficiency filters;

Not in excess of 20 f/cc ($100 \times \text{PEL}$) - Any powered air-purifying respirator equipped with high-efficiency filters, or any supplied-air respirator operated in continuous flow mode;

Not in excess of 200 f/cc ($1000 \times \text{PEL}$) - Full facepiece supplied-air respirator operated in pressure demand mode;

Greater than 200 f/cc ($> 1000 \times \text{PEL}$) or unknown concentration - Full facepiece supplied-air respirator operated in pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus.

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				3 - Serious (High)
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				*Chronic Health Effect(s)—See section 5.

1. INGREDIENT INFORMATION:

Chemical Name: Asbestos (Chrysotile and Crocidolite)
CAS No.: 1332-21-4 (12001-29-5 and 12001-28-4)
Common Name:
Exposure Limits:

OSHA
8 hr. PEL - 0.2 fibers
> 5 um/cc
30 min. EL - 1 fiber
> 5 um/cc

ACGIH TLV
Chrysotile - 2 fibers
> 5 um/cc
Crocidolite - 0.2 fibers
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Other
None

This chemical is listed on EPA, SARA, Title III, Section 313 but not Section 302, and is listed on California's Proposition 65.

Chemical Name: Quartz
CAS No.: 14808-60-7
Common Name: Crystalline Silica
Exposure Limits:

OSHA PEL
Respirable Dust:
0.1 mg/m³

ACGIH TLV
Respirable Dust:
0.1 mg/m³

Other
None

This chemical is not listed on EPA, SARA, Title III, Section 302 or 313, but Crystalline Silica is listed on California's Proposition 65, with a qualifier for airborne particles of respirable size.

2. PHYSICAL DATA

Boiling Point (°F): None
Melting Point (°F): None
Odor: None
Color: Cement Gray
Vapor Density (Air=1): N/A

Specific Gravity (H₂O=1): 2.35
Evaporative Rate (ethyl ether=1): N/A
Vapor Pressure (mmHg @ 20°C): N/A
% Volatile by Volume: N/A
% Solubility: Negligible

Appearance: Cement gray-colored pipe and fittings

3. FIRE AND EXPLOSION HAZARD DATA

Flash Point (°F) and Method: Does not support combustion. **Flammable Limits:** LEL: N/A UEL: N/A

Autoignition Temperature: Does not support combustion.

Extinguishing Media: Use that which is applicable to surrounding fire. This material is non-combustible.

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazard: None

4. PHYSICAL HAZARDS

Corrosivity: None

Reactivity: None

Reactivity with water: None

5. HEALTH HAZARD DATA

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Skin Contact: Prolonged exposure to asbestos may cause asbestos warts and dermatitis, usually confined to the hands and forearm.

Eye Contact: Prolonged exposure to asbestos may cause conjunctivitis.

Eye Protection: Wear eye protection (safety glasses or goggles) to prevent dust in eyes.

Special Clothing: When airborne exposures exceed the PEL, coveralls or similar full-body clothing, head and foot coverings and gloves must be worn.

Work Practices and Engineering Controls: Always use industry recommended work practices when handling or performing field operations with asbestos cement pipe. See Manufacturers' Installation Manual, American Waterworks Association Manual M-16, or Asbestos Cement Pipe Producers Association Publications for detailed information on industry recommended work practices.

See also the Occupational Safety and Health Administration Regulation 29CFR1910.1001 which regulates workplace exposure to asbestos dust and any state or local workplace codes regulating asbestos exposure.

Avoid generation of dusts, do not cut or bevel asbestos cement pipe or fittings with abrasive disc saws or abrasive disc sanders.

Storage: None

Waste Disposal Information: OSHA requires warning labels stating "DANGER, CONTAINS ASBESTOS FIBERS, AVOID CREATING DUST, CANCER AND LUNG DISEASE HAZARD" be affixed to all raw materials, mixtures, scrap, waste, debris and other products containing asbestos or their containers. Dispose of waste in accordance with federal, state and local regulations.

8. ADDITIONAL COMMENTS

Acronyms used in this MSDS:

A/C:	Asbestos/Cement
ACGIH:	American Conference of Governmental Industrial Hygienists
CAS No.:	Chemical Abstracts Service Number
EPA:	Environmental Protection Agency (USA)
f/cc:	Fibers per cubic centimeter
EL:	Excursion limit
Fibers > 5um/cc:	Fibers greater than 5 microns in length per cubic centimeter of air
HEPA:	High Efficiency Particulate Air
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
LEL:	Lower Explosive Limit
mg/m ³ :	Milligrams per cubic meter
mppcf:	Millions of particles per cubic foot
MSHA:	Mine Safety and Health Administration
N/A:	Not applicable
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible Exposure Limit
SARA:	Superfund Amendments and Reauthorization Act
Title III:	Emergency Planning and Community Right to Know Act Section 302: Extremely Hazardous Substances Section 313: Toxic Chemicals
TLV:	Threshold Limit Values
UEL:	Upper Explosive Limit

MSDS
