

CertainTeed

MSDS CT-2752 + 2753
(CT USE ONLY)
2/24/86
A-C FINES, A-C BATCH + SLURRY

To D. Hall J. McGinley	Mail Code 2125/2B	From <i>O. H. Kittilstad</i> O. H. Kittilstad	Mail Code 1125/4	Ext. 7505
Subject MSDS AND HAZARD EVALUATION FOR A/C BATCH (AND SLURRY) AND FINES				Date April 25, 1986

Attached is the proposed MSDS and Hazard Evaluation for A/C Batch (and Slurry) and A/C Fines at the Riverside and Hillsboro plants. The MSDS is for in-plant use only. The Hazard Evaluation is for our records.

Please provide any comments by April 30, for we need to get this into the MSDS file by the end of May.

Thanks.

OHK/lh

Attachments

RECEIVED APR 28 1986

note
Letter to D. Hall
4-28-86
ok - notified Kittilstad
5/14/86

PLAINTIFF'S EXHIBIT

CT-844

CTD007331

Material Safety Data Sheet

CertainTeed

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

 Date Prepared 2/24/86

 Product Identification (Label Name) Asbestos Cement Pipe and Fittings
 (Pulverized)

 Chemical Name N/A

 CAS No. N/A

 Common Name(s) A/C Fines

1. INGREDIENTS

Chemical Name (CAS No.)	Common Name	Exposure Limits	%
Asbestos (1332-21-4)		OSHA PEL 2 fibers > 5 um/cc (8 hr. TWA) 10 fibers > 5 um/cc (ceiling)	
		ACGIH TLV Chrysotile - 2 fibers > 5 um/cc Crocidolite - 0.2 fibers > 5 um/cc	
Quartz (14808-60-7)	Crystalline Silica	OSHA PEL Respirable Dust - $\frac{250 \text{ mppcf}}{\% \text{ SiO}_2 + 5}$ $\frac{10 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$ Total Dust - $\frac{30 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$	
		ACGIH TLV Respirable Dust - $\frac{300 \text{ mppcf}}{\% \text{ Quartz} + 10}$ $\frac{10 \text{ mg/m}^3}{\% \text{ respirable Quartz} + 2}$ Total Dust - $\frac{30 \text{ mg/m}^3}{\% \text{ Quartz} + 3}$	

2. PHYSICAL DATA

Boiling Point <u>N/A</u>	% Volatile By Volume <u>N/A</u>	Melt Point <u>N/A</u>
Vapor Density (Air = 1) <u>N/A</u>	% Solubility (H ₂ O) <u>Negligible</u>	Specific Gravity <u>2.35</u>
Vapor Pressure <u>N/A</u>	Appearance <u>Cement gray-colored particulates</u>	
Odor <u>None</u>		

CTD007332

3. FIRE AND EXPLOSION HAZARD DATA

Flash Point & Method N/A

Flammable Limits

LEL

N/A

UEL

N/A

Extinguishing Medi- Use that which is appropriate for surrounding fire. This material is non-combustible.

Special Fire Fighting Procedures None

Unusual Fire and Explosion Hazard None

4. HEALTH EFFECTS

Primary Routes of Entry Inhalation, skin and eye contact

Carcinogens Asbestos IARC Human/animal NTP Human/animal OSHA 29CFR1910.1001

ACUTE EFFECTS: Inhalation of dust may cause irritation and coughing. Skin contact with dusts may cause irritation and itching. Direct eye contact with 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 reduces lung capacity and efficiency. Main symptoms 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.

Eye Contact: Prolonged exposure to asbestos may cause conjunctivitis.

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

CTD007333

5. EMERGENCY AND FIRST AID PROCEDURES

Avoid the generation of dust.

FIRST AID

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

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

Upper Respiratory: Remove from exposure. If irritation persists, get medical help.

6. PHYSICAL HAZARDS

None

7. SPECIAL PROTECTION INFORMATION

Respiratory Protection: If dust is not controlled, use respirators approved by the Bureau of Mines, Department of the Interior, or NIOSH.

Reuseable or Single Use Air Purifying Respirator: When the ceiling or the 8 hour TWA airborne concentration of asbestos and/or silica are expected to exceed no more than 10 times those limits.

Full Faced Piece Air Purifying Respirator or a Powered Air Purifying Respirator: When ceiling or 8 hour TWA concentration are reasonably expected to exceed 10 times, but not 100 times, those limits.

Type "C" Supplied Air Respirators, Continuous Flow, or Pressure-Demand Class: When the exposures can reasonably be expected to exceed 100 times the 8 hour TWA or ceiling concentrations.

Special Clothing: When airborne exposures exceed ceiling level, coveralls or similar whole body clothing, head coverings, gloves, dust coverings.

Eye Protection: Goggles or safety glasses to prevent dust in eyes.

8. REACTIVITY

This is a stable material.

9. STORAGE INFORMATION

See Section 11.

10. SPILL, LEAK, AND DISPOSAL INFORMATION

Steps to be Taken in Case Material is Released or Spilled: Pulverized Pipe (Fines) must be handled in a manner which avoids airborne dispersion of asbestos or silica dust. Use wet or vacuum method for cleanup. Avoid inhalation of dusts.

Waste Disposal Method

Dispose in accordance with Federal, state and local regulations.

11. ADDITIONAL COMMENTS

See the Occupational Safety and Health Administration Regulation 29 CFR 1910.1001 which regulates workplace exposure to asbestos dust and any state or local workplace codes regulating asbestos exposure.

Acronyms used in this MSDS:

OSHA PEL: Occupational Safety and Health Administration Permissible Exposure Limit.
ACGIH TLV: American Conference of Governmental Industrial Hygienists Threshold Limit Values.
mppcf: Millions of particulates per cubic foot.
mg/m³: Milligrams per cubic meter.
Fibers > 5 um/cc: Fibers greater than 5 microns per cc.
CAS No.: Chemical Abstracts Service No.
IARC: International Agency for Research on Cancer.
NTP: National Toxicology Program.
NIOSH: National Institute for Occupational Safety and Health.
TWA: Time weighted average.

HMIS RATING: Health - 1* Flammability - 0 Reactivity - 0

Material Safety Data Sheet

CertainTeeed

 CertainTeeed Corporation
 P.O. Box 860
 Valley Forge, PA 19482
 (215) 341-7000

 Date Prepared 2/24/86

 Product Identification (Label Name) A/C Batch (and Slurry)

 Chemical Name Mixture

A/C Batch Mix is an intermediate process mixture in the manufacture of asbestos cement pipe.

 CAS No. N/A

A/C Slurry is A/C Batch slurried with water, which greatly minimizes the airborne dust problem. The hazard and protective measures for caked A/C from slurried process equipment should be treated as described in this MSDS.

 Common Name(s) Asbestos Cement Batch
Mix (and Slurry)

1. INGREDIENTS

Chemical Name (CAS No.)	Common Name	Exposure Limits	%
Asbestos (1332-2104)		OSHA PEL 2 fibers > 5 um/cc (8 hr TWA) 10 fibers > 5 um/cc (Ceiling)	
Quartz (14808-60-7)	Chrystalline Silica	ACGIH TLV Chrysotile - 2 fibers > 5 um/cc Crocidolite - 0.2 fibers > 5 um/cc OSHA PEL Respirable dust - $\frac{250 \text{ mppcf}}{\% \text{ SiO}_2 + 5}$ $\frac{10 \text{ mg/m}^3}{\% \text{ SiO}_2 + 5}$ Total dust - $\frac{30 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$	

2. PHYSICAL DATA

Boiling Point	<u>N/A</u>	% Volatile By Volume	<u>N/A</u>	Melt Point	<u>N/A</u>
Vapor Density (Air = 1)	<u>N/A</u>	% Solubility (H ₂ O)	<u>Negligible</u>	Specific Gravity	<u>N/A</u>
Vapor Pressure	<u>N/A</u>	Appearance	<u>Gray, particulate mixture</u>		
Odor	<u>None</u>				

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3. FIRE AND EXPLOSION HAZARD DATA

Flash Point & Method Not combustible.

Flammable Limits

LEL

N/A

UEL

N/A

Extinguishing Medi- Use that which is applicable to surrounding fire.

Special Fire Fighting Procedures

None

Unusual Fire and Explosion Hazard

None

4. HEALTH EFFECTS

Primary Routes of Entry Inhalation, skin and eye contact

Carcinogens

Asbestos

IARC Humans/animals

NTP Humans/animals

OSHA 29 CFR 1910.1001

ACUTE EFFECTS

Ingestion: Not a problem under normal conditions of use.

Inhalation: Portland Cement and Quartz may irritate upper respiratory system. Portland Cement may inflame lining of nose.

Skin: Asbestos fibers can become imbedded in skin and in some cases result in asbestos "corns". Wet Portland Cement can dry the skin and cause alkali burns. Hyper-sensitive individuals may develop allergic dermatitis.

Eye Contact: Portland Cement may irritate eyes and inflame cornea.

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 reduces lung capacity and efficiency. Main symptoms 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.

Eye Contact: Prolonged exposure to asbestos may cause conjunctivitis.

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

INGREDIENTS (Continued)

Chemical Name
(CAS No.)

Common Name

Exposure Limits

Quartz (continued)

ACGIH TLV
Respirable dust - $\frac{300 \text{ mppcf}}{\% \text{ quartz} + 10}$

$\frac{10 \text{ mg/m}^3}{\% \text{ respirable quartz} + 2}$

Total dust - $\frac{30 \text{ mg/m}^3}{\% \text{ quartz} + 3}$

Portland Cement

Portland Cement
Silicate

ACGIH TLV (Nuisance dust)
30 mppcf or 10 mg/m³ total
dust or 5 mg/m³ respirable
dust

OSHA PEL
50 mppcf

5. EMERGENCY AND FIRST AID PROCEDURES

Avoid generation of dust.

First Aid

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

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

Upper Respiratory: Remove from exposure. If irritation persists, get medical help.

6. PHYSICAL HAZARDS

None

7. SPECIAL PROTECTION INFORMATION

Respiratory Protection: If dust is not controlled, use respirators approved by the Bureau of Mines, Department of the Interior, or NIOSH.

Reuseable or Single Use Air Purifying Respirator: When the ceiling or the 8 hour TWA airborne concentration of asbestos and/or silica are expected to exceed no more than ten times those limits.

Full Faced Piece Air Purifying Respirator or a Powered Air Purifying Respirator: When ceiling or 8 hour TWA concentration are reasonably expected to exceed ten times, but not 100 times, those limits.

Type "C" Supplied Air Respirators, Continuous Flow, or Pressure-Demand Class: When the exposures can reasonably be expected to exceed 100 times the 8 hour TWA or ceiling concentrations.

Special Clothing: When airborne exposures exceed ceiling level, coveralls or similar whole body clothing, head coverings, gloves, dust coverings.

Eye Protection: Goggles or safety glasses to prevent dust in eyes.

Special Note: Use barrier creams, gloves, boots and clothing to protect prolonged contact with wet cement. Shower with soap and water. Cement burns occur with little warning - little heat is sensed.

8. REACTIVITY

This is a stable material.

9. STORAGE INFORMATION

None

10. SPILL, LEAK, AND DISPOSAL INFORMATION

Use wet or vacuum methods for cleanup. Avoid inhalation of dusts.

Waste Disposal Method

Dispose in accordance with Federal, state and local regulations. Reuse if possible.

11. ADDITIONAL COMMENTS

Acronyms used in this MSDS:

OSHA PEL: Occupational Safety and Health Administration Permissible Exposure Limit.

ACGIH TLV: American Conference of Governmental Industrial Hygienists Threshold Limit Values.

mppcf: Millions of particles per cubic foot.

mg/m³: Milligrams per cubic meter.

Fibers > 5 um/cc: Fibers greater than 5 microns per cc.

CAS No.: Chemical Abstracts Service No.

IARC: International Agency for Research on Cancer.

NTP: National Toxicology Program.

NIOSH: National Institute for Occupational Safety and Health.

TWA: Time weighted average.

HMIS Rating: Health - 1*

Flammability - 0

Reactivity - 0

HAZARD EVALUATION NO.: _____ BY: O. H. Kittilstad DATE: 2/24/86IDENTITY: A/C Batch (and Slurry)IN-PLANT CONTAINER X INTERMEDIATE X MC _____

EMISSION _____ WASTE _____ PRODUCT _____

MANUFACTURER: CertainTeed CorporationLOCATION(S): Hillsboro, RiversideCHEMICAL NAME: MixtureCAS NO.: N/ACOMMON NAMES: Asbestos cement batch mix (and slurry)HMIS RATINGS: HEALTH 1* FLAMMABILITY 0 REACTIVITY 0

CHRONIC _____

INGREDIENTS

CHEMICAL NAME (CAS NO.)	COMMON NAME	EXPOSURE LIMITS	PERCENT (%)
Asbestos (1332-2104)		<u>OSHA PEL</u> 2 fibers > 5 um/cc (8 hr TWA) 10 fibers > 5 um/cc (Ceiling)	~15
		<u>ACGIH TLV</u> Chrysotile - 2 fibers > 5 um/cc Crocidolite - 0.2 fibers > 5 um/cc	
Quartz (14808-60-7)	Chrystalline Silica	<u>OSHA PEL</u> Respirable dust - $\frac{250 \text{ mppcf}}{\% \text{ SiO}_2 + 5}$ $\frac{10 \text{ mg/m}^3}{\% \text{ SiO}_2 + 5}$ Total dust - $\frac{30 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$	~35
		<u>ACGIH TLV</u> Respirable dust - $\frac{300 \text{ mppcf}}{\% \text{ quartz} + 10}$ $\frac{10 \text{ mg/m}^3}{\% \text{ respirable quartz} + 2}$ Total dust - $\frac{30 \text{ mg/m}^3}{\% \text{ quartz} + 3}$	

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Chemical Name (CAS No.)	Common Name	Exposure Limits	PerCent (%)
Portland Cement	Portland Cement Silica	<u>ACGIH TLV (Nuisance Dust)</u> 30 mppcf or 10 mg/m ³ total dust or 5 mg/m ³ respirable dust <u>OSHA PEL</u> 50 mppcf	50

CTD007342

2. PHYSICAL DATA

REFERENCE

BOILING POINT	N/A
VAPOR DENSITY	N/A
VAPOR PRESSURE	N/A
ODOR	None
APPEARANCE	Gray, particulate mixture.
% VOL BY VOLUME	None volatile.
% SOLUBILITY (H ₂ O)	Negligible
MELT POINT	N/A
SPEC GRAVITY	Unknown

3. FIRE & EXPLOSION DATA

REFERENCE

FP & METHOD	Non-combustible
FLAM. LIMITS	LEL <u>N/A</u> UEL <u>N/A</u>
EXTING. MEDIA	Use that which is appropriate to surrounding fire.

SPECIFIC FIRE FIGHT PROCEDURES

None

UNUSUAL FIRE/EXPLOSION HAZARDS

None

FLAMMABILITY CRITERIA

REFERENCE

- ☒ 0 MINIMAL HAZARD - Material that will not burn.
This degree should include:
Any material which will not burn in air when exposed to a temperature of 1500°F for a period of 5 minutes.
- ☐ 1 SLIGHT HAZARD - Materials that must be pre-heated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. This degree should include:
Materials which will burn in air when exposed to a temperature of 1500°F for a period of 5 minutes or less;
Liquids, solids, and semisolids having a flash point above 200°F; This degree includes most ordinary combustible materials.
- ☐ 2 MODERATE HAZARD - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This degree should include:
Liquids having a flash point above 100°F, but not exceeding 200°F;
Solids and semisolids which readily give off flammable vapors.
- ☐ 3 SERIOUS HAZARD - Liquids and solids that can be ignited under all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. This degree should include:
Liquids having a flash point below 73°F (22.8°C) and having a boiling point at or above 100°F (37.8°C) and those liquids having a flash point at or above 73°F (22.8°C) and below 100°F (37.8°C). (Class 1B and Class 1C flammable liquids.)

FLAMMABILITY CRITERIAREFERENCE

- ☐ 4 SEVERE HAZARD - Materials which will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or which are readily dispersed in air, and which will burn readily. This degree should include:

Gases;

Cryogenic materials;

Any liquid or gaseous material which is a liquid while under pressure and having a flash point below 73°F (22.8°C) and having a boiling point below 100°F (37.8°C). (Class 1A flammable liquids.)

Materials which on account of their physical form or environmental conditions can form explosive mixtures with air and which are readily dispersed in air, such as dust of combustible solids and mists of flammable or combustible liquid droplets.

4. REACTIVITY

- ☒ 0 MINIMAL HAZARD - Materials which in themselves are normally stable, even under fire exposure conditions and which are not reactive with water.
- ☐ 1 SLIGHT HAZARD - Materials which in themselves are normally stable, but which can become unstable at elevated temperatures and pressures or which may react with water with some release of energy but not violently.
- ☐ 2 MODERATE HAZARD - Materials which in themselves are normally unstable and readily undergo violent chemical change but do not detonate. This degree should include materials which can undergo chemical change with rapid release of energy at normal temperatures and pressures or which can undergo violent chemical change at elevated temperatures and pressures. It should also include those materials which may react violently with water or which may form potentially explosive mixtures with water.
- ☐ 3 SERIOUS HAZARD - Materials which in themselves are capable of detonation or of explosive decomposition or explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation.

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REFERENCE

This degree should include materials which are sensitive to thermal or mechanical shock at elevated temperatures and pressures or which react explosively with water without requiring heat or confinement.

- ☐ 4 SEVERE HAZARD - Materials which in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. This degree should include materials which are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.

PHYSICAL HAZARDS:

None

5. HEALTH EFFECTS

PRIMARY ROUTES OF EXPOSURE

INGESTION X INHALATION X SKIN X EYE X

CARCINOGEN Asbestos IARC Asbestos NTP Asbestos OSHA Asbestos

ACUTE TOXIC PROPERTIESREFERENCE1. Oral LD₅₀ Rat

- ☒ 0 >5,000 mg/kg
☐ 1 >500-5,000 mg/kg
☐ 2 >50-500 mg/kg
☐ 3 >1-50 mg/kg
☐ 4 0-1 mg/kg
☐ Other _____

HEALTH EFFECTSACUTE TOXIC PROPERTIESREFERENCE1. Oral LD₅₀ Rat

Asbestos - No established relationship between gastrointestinal diseases and the ingestion of quantities of fiber found in environmental and current occupational situations.

CT 004-5

No information.

CT 379-1

No information.

CT 1257-2

No information.

CT 1902-2

No increased hazard evidenced (crocidolite).

CT 2241-1

No increased hazard evidenced (chrysotile).

CT 2546-1

Quartz - No data on any supplier MSDS as being hazardous by ingestion.

CT 085-1, 1730-3, 2580-1,
2581-1, 1803-1, 2153-1,
705-2, 704-2, 1436-3, 2129-1
1437-3

Silica in some forms is used as food additive in the feed and drinking water of animals and/or for treatment of food producing animals. It is also permitted in food for human consumption.

SAX

Portland Cement - No information.

CT 1243-1

No information.

CT 1912-2

No information.

CT 2319-2

2. Dermal LD₅₀ Rabbit

Asbestos - None, not applicable.

CT 004-5

No information.

CT 379-1

No information.

CT 1257-2

No information.

CT 1902-2

No information.

CT 2241-1, 2546-1

Quartz - Not applicable.

Portland Cement - No information.

CT 1243-1

No information.

CT 1912-2

No information.

CT 2319-2

3. Inhalation

Asbestos - Excessive exposure to high concentrations of airborne asbestos fiber can cause chronic pulmonary disease and cancer. Product is a known human carcinogen.

CT 004-5

Prolonged continuous exposure to asbestos dust may cause impairment to the respiratory system.

CT 379-1

See "Chronic."

CT 1257-2

See "Chronic."

CT 1902-2

Asbestosis, pleural thickening, effusion, plaques.

CT 2241-1, 2546-1

Cancer in humans (IARC).

Quartz - Chrystalline Silica - Moderately toxic as an acute irritant dust. SAX

Prolonged inhalation of dusts containing free silica may result in the development of a disabling pulmonary fibrosis known as silicosis. Characterized by general fibrotic changes and the development of miliary nodules in both lungs and clinically by shortness of breath, decreased chest expansion, lessened capacity for work, absence of fever, increased susceptibility to tuberculosis (some or all symptoms may be present) and characteristic x-ray findings.

Not an IARC, NTP, or OSHA carcinogen.

Pneumonoconiosis, silicosis from prolonged exposure.

All MSDS's

Portland Cement - Inflammation of lining of nose. Irritate upper respiratory system.

CT 1243-1

CT 1912-2, 2319-2

4. Skin Irritation

Asbestos - Fibers can become imbedded in skin and in some cases result in asbestos "corns."

CT 004-5

No information.

CT 379-1

Remove asbestos slivers from skin promptly.

CT 1257-2

No information.

CT 1902-2

May cause acute skin irritation.

CT 2241-1, 2546-1

Quartz - No indication.

Patty, SAX, all MSDS's

Portland Cement - Wet cement can dry the skin and cause alkali burns.

CT 1243-1

CT 1912-2

Hypersensitive individuals - allergic dermatitis.

CT 2319-2

5. Eye Irritation

Asbestos - As with any dust, excessive exposure can cause transient irritation.

CT 004-5

No information.

CT 379-1

No information.

CT 1257-2

No information.

CT 1902-2

Eye: May cause irritation.

CT 2241-1, 2546-1

Quartz - Not a primary eye irritant but may cause mechanical irritation as any inert dust.

Many MSDS's

Portland Cement - Irritate eyes.

CT 1243-1

Inflammation of cornea.

CT 1912-2, 2319-2

ACUTE TOXIC PROPERTIESREFERENCE2. Dermal LD₅₀ Rabbit

- ☒ 0 > 5,000 mg/kg
☐ 1 > 1,000-5,000 mg/kg
☐ 2 > 200-1,000 mg/kg
☐ 3 > 20-200 mg/kg
☐ 4 0-20 mg/kg
☐ Other _____

3. Inhalation

A. Gases, vapors (ppm) LC₅₀ Rat
1-hour exposure

- ☐ 0 > 10,000 ppm
☐ 1 > 2,000-10,000 ppm
☐ 2 > 200-2,000 ppm
☐ 3 > 20-200 ppm
☐ 4 0-20 ppm
☐ Other _____

B. Dusts, fumes, mists (mg/l) LC₅₀ Rat
1-hour exposure

- ☐ 0 > 200 mg/l
* ☒ 1 > 20-200 mg/l Chronic silicosis, asbestosis, cancer.
☐ 2 > 2-20 mg/l
☐ 3 > 0.2-2 mg/l
☐ 4 0-0.2 mg/l
☐ Other _____

4. Skin Irritation
4-hour exposure

- ☐ 0 Essentially nonirritating
☒ 1 Slightly irritating Portland Cement
☐ 2 Primary irritant, sensitizer
☐ 3 Severely irritating and/or corrosive
☐ 4 Not applicable
☐ Other _____

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ACUTE TOXIC PROPERTIESREFERENCE

5. Eye Irritation

- ☐ 0 Essentially nonirritating
- ☒ 1 Slightly irritating but reversible within seven days Portland Cement
- ☐ 2 Irritating or moderately persisting more than seven days with reversible corneal opacity
- ☐ 3 Corrosive, irreversible corneal opacity
- ☐ 4 Not applicable
- ☐ Other _____

CHRONIC EFFECTS:

Asbestos - Chronic pulmonary disease and cancer. CT 004-5
 Prolonged continuous exposure - respiratory impairment. CT 379-1
 Over exposure to asbestos can cause asbestosis, a scarring of the lungs. Pleural thickening, effusion, and plaques are non-disabling conditions, seen separately or together. IARC sufficient evidence for cancer in humans. CT 1257-2
 Signs/symptoms: Labored breathing, chest pain, weakness and chest tightness. Symptoms not usually manifest until 15-20 years after exposure.
 Fibrosis, lung cancer, mesothelioma. CT 1902-2
 Asbestosis, cancer. CT 2241-1, 2546-1
 May aggravate respiratory ailments.

Quartz - Silicosis, pneumoconiosis. All MSDS's, SAX, Patty

Portland Cement - Inflammation of lining of interior of nose and inflammation of cornea. CT 1243-1
 Hypersensitive individuals - contact dermatitis. CT 1912-2
 CT 2319-2

SPECIAL PROTECTION INFORMATION:

Asbestos - Respiratory: Use respirators for protection against pneumoconiosis-producing dusts. CT 004-5
 Eye: Not normally required.
 Gloves: Not normally required.
 Other: Use special clothing as required by OSHA Standard for exposure to asbestos dust (29 CFR 1910.1001(d)).
 Ventilation: Control with mechanical dust collection equipment to within TLV (See American National Standard Institute booklet Z92-1971.
 Respiratory: DUSTFO No. 77 U. S. Bureau of Mines CT 379-1
 Approval No. 21B-97.
 Local exhaust: Sufficient to keep below TLV in Section V (2 f/cc).
 Gloves: Not required. Eye: Not required.

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(Asbestos, continued)

Respiratory: Reusable or single-use air purifying respirator <10x PEL. Powered air purifying respirator >10x PEL, < 100 PEL. CT 1257-2
Type "C" continuous flow or pressure demand supplied air respirator for exposures >100x PEL. All NIOSH/MSHA approved.
Ventilation: Local ventilation if engineering controls inadequate. CT 1257-2
Gloves: See other protective equipment.
Eyes: See other protective equipment.
Other protective equipment: If ceiling concentrations limit exceeded, clothing providing whole body covering shall be provided and use required. Hygiene practices: Do not create or breathe dust.
Do not sweep or use air hose for cleaning.
Do not take protective equipment or clothing home.
Same as 1257-2. CT 1902-2
Same as 1257-2. CT 2241-1, 2546-1

Quartz - Respiratory: Dust mask up to 5x PEL. Dust mask except single use up to 10x PEL. High efficiency particulate respirator with full facepiece or self-contained breathing apparatus with full facepiece up to 50x PEL. Powered air purifying with high efficiency filter or supplied air respirator. Operated in pressure demand mode or positive pressure continuous mode. NIOSH/OSHA Pocket Guide Chemical Hazards

Portland Cement - Skin: Use barrier creams, gloves, boots and clothing to protect prolonged contact with wet cement. Shower with soap and water. Cement burns occur with little warning - little heat is sensed. CT 1243-1, 1912-2, 2319-2
Eye: Tight fitting goggles.
Respiratory: In dusty environments.

STORAGE INFORMATION:

Asbestos - Repair all broken bags immediately. CT 004-5
Care to avoid asbestos dust becoming airborne.
Use no hook in loading, unloading. Protect containers from damage. Open containers to prevent dust release. Use ventilation, wet working.
Good housekeeping - wet wiping. Avoid inhalation.
Smoking greatly increases risk.
Same as above. CT 1902-2
Same as above. CT 2241-1, 2546-1

Quartz - None.

Portland Cement - Keep dry. CT 1243-1
No information. CT 1912-2
None. CT 2319-2

SPILL, LEAK AND DISPOSAL INFORMATION:

Asbestos - Vacuum clean spillage. Repair broken bags. If sweeping is necessary, wet down spillage. Use approved respiratory equipment. CT 004-5
 Remove spillage and clean storage area by aspiration. CT 379-1
 Waste disposal: 40 CFR 61 (copy attached). CT 1257-2
 Hepa vacuum or wet stage cleanup.
 Same as above. CT 2241-1, 2546-1

Quartz - Scoop and clean up. Avoid inhaling dust. Vacuum area.

Portland Cement - Use dry cleanup methods that do not disperse dust. Avoid breathing dust. CT 1243-1
 Reuse or dispose as common waste. CT 1912-2
 CT 2319-2

FIRST AID AND EMERGENCY INFORMATION:

Asbestos - Inhalation: Remove to fresh air. CT 004-5
 Avoid inhalation of tobacco smoke. Ingestion: N/A. Eye contact: Flush with copious amounts of water. Skin: Wash or shower thoroughly using soap and warm water.
 Not applicable. CT 379-1
 No information. CT 1257-2
 Respiratory protection available. CT 1902-2
 Eyes: Wash as dust. Do not rub. Skin/ingestion: N/A
 Inhalation: Avoid breathing dust. Use respirator if exposure > PEL. CT 2241-1
 CT 2546-1
 Eye: If eye irritation, gently rinse with water. Get medical help if irritation persists.
 Skin: Remove slivers promptly. Get medical help if irritation persists.

Quartz - None.

Portland Cement - No information. CT 2319-2, 1243-1, 1912-2

HMIS RATINGS ON MSDS's:

Asbestos	0*-0-0	CT 1257-2
Quartz	None	
Portland Cement	None	

CORPORATE HEALTH AND SAFETY HMIS RATINGS:

	<u>Oral</u>	<u>Dermal</u>	<u>Inhalation</u>	<u>Skin</u>	<u>Eye</u>
Asbestos	0	0	0*	0	0
Quartz	0	0	0*	1	0
Portland Cement	0	0	1	1	1
A/C Batch	0	0	1*	1	1
HMIS	Health - 1*		Flammability - 0		Reactivity - 0

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