

Umetco Minerals Corporation

INTERNAL
CORRESPONDENCE



137 47TH STREET, P.O. BOX 55 • NIAGARA FALLS, NEW YORK 14302

To (Name) Mr. W. C. Thurber
Umetco Minerals Corp.
Division Section J1-398
Location Danbury CT

Date September 14, 1984
SEP 17 1984

Originating Dept.

Area

Answering Letter Date

Subject Final Draft - Material
Safety Data Sheet for
Calidria Asbestos and
Calidria Asbestos RG-244

Area

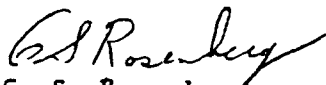
Copy to

Attached are copies of an MSDS for RG-244 Asbestos and one for all other asbestos products. These MSDS's have been developed to provide the information required to comply with the OSHA Hazard Communication Regulations due to go into effect in late 1985. You are requested at this time to approve them for publication and distribution. We seek final approval; you may provide editorial suggestions or comments for the record only, but please do not suggest substantive changes unless you feel strongly that they need to be made. Documentation will be required for any suggested changes to be made at this time.

An approval sheet is attached for both MSDS's; please sign and date in the appropriately marked spaces and return to me by September 28, 1984. This will speed the publication process to ensure Marketing can receive final copies early October.

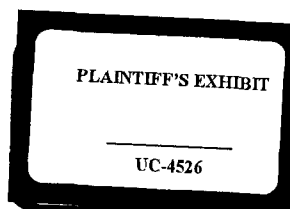
Modifications have been made in response to various suggestions received on the preliminary drafts. Where changes were involved, revisions have generally been discussed with the person making the suggestion. The two MSDS's differ only on the first page in Section I - Product Identification, Section II - Physical Data (size and density), and Section III - Hazardous Ingredients, Magnetite vs Amorphous Silica. It was judged to be easier to use separate MSDS's than try to combine them and still make the information clear.

Please review and return the approval sheet by September 28 to ensure dissemination to Marketing shortly thereafter.


G. S. Rosenberg

GSR:ew

Att.



X420818

FINAL DRAFTAPPROVAL FOR CALIDRIA ASBESTOS MSDS

Please sign and date in the appropriate place where you have supplied data or advice in the preparation of the attached MSDS. Your signature denotes approval.

MSDS Section	Date	Approved by
Section I Product Identification		
Section II Physical Data		
Section III Hazardous Ingredients		
Section IV Health Hazard Data		
Section V Fire and Explosive Hazard		
Section VI Reactivity Data		
Section VII Spill, Leak and Disposal Information		
Section VIII Special Protection Information		
Section IX Special Precautions		
Entire MSDS ✓	9/18/04	W. C. Thurber

Change address
from Danbury to King City

X420819



MATERIAL SAFETY DATA SHEET

FINAL - FOR APPROVAL 8/31/34

Do Not Duplicate This Form, Request an Original



Calidria Corporation requests that users of Calidria Asbestos study this data sheet to become aware of the product's hazards, and promote safe handling of the product by making this information available to its employees, agents, and contractors. If the material is resold, Calidria Corporation requests that the purchaser be furnished a copy of this data sheet and advised to provide the information herein to its employees, agents and contractors.

SECTION I PRODUCT IDENTIFICATION	
Product Name: Calidria Asbestos.®	C.A.S. Numbers: 1332-21-4, 1309-38-2
Chemical/Alloy Name: Chrysotile Asbestos.	Formula/Composition: $Mg_3(OH)_2Si_4O_{10} \cdot Fe_3O_4$
Synonyms: Asbestos, White Asbestos, Hydrated Magnesium Silicate.	

SECTION II PHYSICAL DATA	
Sizes: 3/8" pellets to powder.	Solubility in Water: Very slightly soluble.
Specific Gravity: 2.45 approximately. ($H_2O=1$).	Melting Point: °F (°C) Dehydrates above 1112 (600).
Odor: None.	Boiling Point: °F (°C) Not applicable.
Appearance: White fibrous solid or pellets.	Vapor Pressure: Not applicable.
Bulk Density: 15-45 lb/ft ³ , as packaged. (Depends on product form.)	Percent Volatile: Absorbed H_2O 1-4% by weight. Structural H_2O ~13% by weight.
Molecular Weight: Not applicable.	Evaporation Rate: Not applicable.

<u>SECTION III</u>		<u>HAZARDOUS INGREDIENTS</u>	
Material or Component (CAS #)	Weight %	PEL Data (TWA Unless Noted)	
Chrysotile Asbestos (1332-21-4)	95-98%	2 fibers/cc longer than 5 μ	(1)(2)(5)
		10 fibers/cc longer than 5 μ , ceiling	(1)(2)(5)
		2 fibers/cc longer than 5 μ , ceiling	(3)
		0.1 fibers/cc longer than 5 μ	(4)
		0.2-0.5 fibers/cc longer than 5 μ	(1) (Proposed)
Magnetite Fe ₃ O ₄ (1309-38-2)	0.5-2	5 mg/cu m respirable dust	(1)(2)(5)
		15 mg/cu m total dust	(1)
		10 mg/cu m total dust	(2)(3)
References: 1 OSHA Regulation 1910 2 MSHA Regulation 3 Current ACGIH 4 NIOSH Recommendation 5 California Internal Standard			

EMERGENCY H.E.L.P. TELEPHONE: 304-744-3487

CALIDRIA CORPORATION - OLD RIDGEBURY ROAD, DANBURY, CT 06817

X420820

SECTION IVHEALTH HAZARD DATAACUTE EFFECTS OF OVEREXPOSURE

Route of Exposure:

- Inhalation: Any dust (including asbestos) which is inhaled in substantial amounts, may irritate the respiratory tract. Extreme exposures can overwhelm the normal respiratory defense mechanisms and result in temporary difficulty in breathing.
- Skin Contact: Asbestos splinters may penetrate the skin and cause asbestos "corns."
- Skin Absorption: Not applicable.
- Eye Contact: May cause irritation and abrasions.
- Ingestion: No known effects.

CHRONIC EFFECTS OF OVEREXPOSURE

Route of Exposure:

- Inhalation: Overexposure to Chrysotile Asbestos has caused damage to lungs (asbestosis), lung cancer and mesothelioma of the pleura and peritoneum. Symptoms, which are usually not manifested until 15-20 years after exposure, include labored breathing, chest pains, weakness, and chest tightness. Pleural thickening, plaques and effusion are nondisabling conditions, seen separately or together, that have been associated with prolonged asbestos exposure. The risk of lung cancer is greatly increased for those who smoke cigarettes regularly in addition to having asbestos exposures.
- Skin Contact: Not applicable.
- Skin Absorption: Not applicable.
- Eye Contact: Same as acute effects. Usually reversible on removal from exposure.
- Ingestion: Most studies indicate that asbestos overexposure is not implicated as a cause of gastro-intestinal and laryngeal cancers, but the evidence is conflicting.

EMERGENCY AND FIRST AID PROCEDURES

Route of Exposure:

- Inhalation: No acute toxicity: Remove to fresh air. If breathing is difficult, oxygen may be administered. If breathing has stopped, administer artificial respiration. Call a physician.
- Skin Contact: Remove asbestos slivers promptly. If "asbestos corn" develops, surgical removal may be required.
- Eye Contact: Irrigate gently with water for 15 minutes. Refer to ophthalmologist to rule out possibility of damage to cornea or eyeball by fibers.
- Ingestion: None indicated.

NOTES TO PHYSICIAN

A medical surveillance program must be established for asbestos-exposed persons in accordance with the requirements of the Occupational Safety and Health Administration's standard for Asbestos (29 CFR Part 1910.1001).

X420821

<u>SECTION V</u> <u>FIRE AND EXPLOSION DATA</u>	
Combustibility: Not combustible.	Flammable Limits: Not applicable.
Flash Point (Test Method): Not applicable.	Autoignition Temperature: Not applicable.
Explosion Tendency: Not applicable.	
Extinguishing Media: Use media appropriate for surrounding material in fire situation.	
Special Fire-Fighting Procedures: Avoid media and procedures that cause airborne dust. Personnel involved in fire-fighting should use NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing.	
Unusual Fire and Explosive Hazard: See above.	

<u>SECTION VI</u> <u>REACTIVITY DATA</u>	
Stability:	Stable (Temperatures in excess of 1112 °F (600 °C) cause loss of bound water).
Conditions to Avoid:	None.
Hazardous Decomposition Products:	None.
Material to Avoid:	None.

<u>SECTION VII</u> <u>SPILL, LEAK, AND DISPOSAL INFORMATION</u>
Steps to be Taken if Material is Spilled or Released: Avoid breathing dust. Notify Safety personnel of spill. Permit only trained clean-up personnel in the spill area. Use wet methods or approved vacuum cleaning system to pick up spilled materials. Use water or other dust suppressants where sweeping is unavoidable. Do not stir up dust. Clean-up personnel should wear approved respirators and protective clothing. Waste and contaminated protective clothing must be placed in dust-tight containers and be properly labeled for disposal.
Neutralizing Agents: Not applicable.
Waste Disposal Method: Bags, friable asbestos, waste and scrap material should be disposed of in a manner which will avoid airborne concentrations of asbestos, such as the use of dust-tight trash bags or containers. Such containers should be labeled in accordance with 40 CFR 61.20. Asbestos is also classified as a hazardous material under CWA 307(a) and has a reportable quantity of one pound. Deposit waste containers in a secured landfill in accordance with Federal, State, and local regulations.

<u>SECTION VIII</u> <u>SPECIAL PROTECTION INFORMATION</u>
Ventilation: Provide adequate exhaust ventilation and capture filtration to remove asbestos particulate from the workplace and minimize its dispersion into the environment. Isolate work areas and post signs where asbestos contamination may exceed PEL. Hand- or power-operated tools which may release asbestos in excess of the PEL must be equipped with local exhaust systems.

X420822

SECTION VIII

SPECIAL PROTECTION INFORMATION (Continued)

Personal Protective Equipment:

Respiratory Protection (Type): Where asbestos exposure in excess of the permissible limits is anticipated, wear a NIOSH/MSHA-approved respirator; a reusable or single-use air purifying respirator up to 10 times the PEL; a powered air purifying respirator up to 100 times the PEL; a continuous-flow or pressure-demand Type C supplied air respirator for greater than 100 times the PEL.

Eye Protection: Goggles are recommended. Follow Safety Rules.

Gloves/Clothing: Gloves are recommended during handling.

Other: For concentrations in excess of the ceiling limit special clothing, such as coveralls, whole-body clothing, head coverings, gloves, and foot coverings are required under CFR 1910.1001.

SECTION IX

SPECIAL PRECAUTIONS

Precautionary Statements:

WARNING

CANCER HAZARD

Breathing asbestos dust can cause lung damage and cancer. The risk of lung cancer is greatly increased for smokers.

Do not create or breathe dust.

Do not dry-sweep or use air hose for cleaning.

Do not take protective equipment or clothing home.

Do follow recommended work practices.

Do wear approved respiratory protection and protective clothing as required by applicable regulations.

Do use vacuum or wet cleaning methods.

Do dispose of dust, friable waste materials and contaminated protective equipment in dust-tight containers.

FOR INDUSTRIAL USE ONLY

Precautions for Handling and Storage: Store asbestos in closed containers (dust-tight) in a clean, dry, secure area. Protect containers from damage. Do not open containers in a manner that can release dust without providing proper enclosure or control measures. Use dust suppression control measures at all stages of asbestos handling, use and disposal. Follow good housekeeping practices to prevent accumulation of asbestos-containing dusts. Avoid inhalation of asbestos.

Other Precautions:

Material Listed as Carcinogen in:

National Toxicology Program Annual Report (NTP): Known carcinogen.

International Agency for Research on Cancer (IARC): Group I - Carcinogenic to humans.

OSHA 29 CFR Part 1910, Subpart Z: Occupational Exposure to Asbestos, Notice of Proposed Rulemaking, F.R. Vol. 49 No. 70, p. 14116 et seq. Tues., Apr. 10, 1984.

Effective Date: August 31, 1984.

Calidria Corporation believes that the data herein are current as of the effective date of this data sheet, and that the opinions herein are those of qualified experts. Since the product and the information herein will be used outside the control of Calidria Corporation, it is the user's responsibility to establish conditions for safe use of the product.

X420823

W. C. Thurber

FINAL DRAFT

APPROVAL FOR CALIDRIA RG-244 ASBESTOS MSDS

Please sign and date in the appropriate place where you have supplied data or advice in the preparation of the attached MSDS. Your signature denotes approval.

MSDS Section	Date	Approved by
Section I Product Identification		
Section II Physical Data		
Section III Hazardous Ingredients		
Section IV Health Hazard Data		
Section V Fire and Explosive Hazard		
Section VI Reactivity Data		
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Section IX Special Precautions		
Entire MSDS ✓	9/18/84	W.C. Thurber

Change address from
Danbury to King City

X420824

MATERIAL SAFETY DATA SHEET

FINAL - FOR APPROVAL 8/31/84

Do Not Duplicate This Form. Request an Original



Calidria Corporation requests that users of Calidria Asbestos study this data sheet to become aware of the product's hazards, and promote safe handling of the product by making this information available to its employees, agents, and contractors. If the material is resold, Calidria Corporation requests that the purchaser be furnished a copy of this data sheet and advised to provide the information herein to its employees, agents and contractors.

SECTION I PRODUCT IDENTIFICATION

Product Name: Calidria Asbestos,® RG-244.	C.A.S. Numbers: 1332-21-4, 7631-86-9
Chemical/Alloy Name: Chrysotile Asbestos.	Formula/Composition: $Mg_3(OH)_2Si_2O_5 \cdot 4H_2O$ amorphous SiO_2
Synonyms: Asbestos, White Asbestos, Hydrated Magnesium Silicate.	

SECTION II PHYSICAL DATA

Sizes: Powder.	Solubility in Water: Very slightly soluble.
Specific Gravity: 2.45 approximately. ($H_2O=1$).	Melting Point: $^{\circ}F$ ($^{\circ}C$) Dehydrates above 1112 (600).
Odor: None.	Boiling Point: $^{\circ}F$ ($^{\circ}C$) Not applicable.
Appearance: White fibrous solid or pellets.	Vapor Pressure: Not applicable.
Bulk Density: Approximately 5 lb/ft ³ (As packaged)	Percent Volatile: Absorbed H_2O 1-4% by weight. Structural H_2O ~13% by weight.
Molecular Weight: Not applicable.	Evaporation Rate: Not applicable.

SECTION III HAZARDOUS INGREDIENTS

Material or Component (CAS #)	Weight %	PEL Data (TWA Unless Noted)
Chrysotile Asbestos (1332-21-4)	89-93%	2 fibers/cc longer than 5 μ (1)(2)(5)
		10 fibers/cc longer than 5 μ , ceiling (1)(2)(5)
		2 fibers/cc longer than 5 μ , ceiling (3)
		0.1 fibers/cc longer than 5 μ (4)
		0.2-0.5 fibers/cc longer than 5 μ (1) (Proposed)
Silica (amorphous) (7631-86-9)	7-10	20 million particles per cu.ft. (1)(2)(3)(4)
		5 mg/cu m respirable dust (3) (Proposed)
		10 mg/cu m total dust (3) (Proposed)

References: 1 OSHA Regulation 1910 2 MSHA Regulation 3 Current ACGIH 4 NIOSH Recommendation 5 Calidria Internal Standard

EMERGENCY H.E.L.P. TELEPHONE: 304-744-3487

CALIDRIA CORPORATION - OLD RIDGEBURY ROAD, DANBURY, CT 06817

X420825

SECTION IV HEALTH HAZARD DATA

ACUTE EFFECTS OF OVEREXPOSURE

Route of Exposure:

- Inhalation:** Any dust (including asbestos) which is inhaled in substantial amounts, may irritate the respiratory tract. Extreme exposures can overwhelm the normal respiratory defense mechanisms and result in temporary difficulty in breathing.
- Skin Contact:** Asbestos splinters may penetrate the skin and cause asbestos "corns."
- Skin Absorption:** Not applicable.
- Eye Contact:** May cause irritation and abrasions.
- Ingestion:** No known effects.

CHRONIC EFFECTS OF OVEREXPOSURE

Route of Exposure:

- Inhalation:** Overexposure to Chrysotile Asbestos has caused damage to lungs (asbestosis), lung cancer and mesothelioma of the pleura and peritoneum. Symptoms, which are usually not manifested until 15-20 years after exposure, include labored breathing, chest pains, weakness, and chest tightness. Pleural thickening, plaques and effusion are nondisabling conditions, seen separately or together, that have been associated with prolonged asbestos exposure. The risk of lung cancer is greatly increased for those who smoke cigarettes regularly in addition to having asbestos exposures.
- Skin Contact:** Not applicable.
- Skin Absorption:** Not applicable.
- Eye Contact:** Same as acute effects. Usually reversible on removal from exposure.
- Ingestion:** Most studies indicate that asbestos overexposure is not implicated as a cause of gastro-intestinal and laryngeal cancers, but the evidence is conflicting.

EMERGENCY AND FIRST AID PROCEDURES

Route of Exposure:

- Inhalation:** No acute toxicity: Remove to fresh air. If breathing is difficult, oxygen may be administered. If breathing has stopped, administer artificial respiration. Call a physician.
- Skin Contact:** Remove asbestos slivers promptly. If "asbestos corn" develops, surgical removal may be required.
- Eye Contact:** Irrigate gently with water for 15 minutes. Refer to ophthalmologist to rule out possibility of damage to cornea or eyeball by fibers.
- Ingestion:** None indicated.

NOTES TO PHYSICIAN

A medical surveillance program must be established for asbestos-exposed persons in accordance with the requirements of the Occupational Safety and Health Administration's standard for Asbestos (29 CFR Part 1910.1001).

X420826

<u>SECTION V</u> <u>FIRE AND EXPLOSION DATA</u>	
Combustibility: Not combustible.	Flammable Limits: Not applicable.
Flash Point (Test Method): Not applicable.	Autoignition Temperature: Not applicable.
Explosion Tendency: Not applicable.	
Extinguishing Media: Use media appropriate for surrounding material in fire situation.	
Special Fire-Fighting Procedures: Avoid media and procedures that cause airborne dust. Personnel involved in fire-fighting should use NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing.	
Unusual Fire and Explosive Hazard: See above.	

<u>SECTION VI</u> <u>REACTIVITY DATA</u>
Stability: Stable (Temperatures in excess of 1112 °F (600 °C) cause loss of bound water).
Conditions to Avoid: None.
Hazardous Decomposition Products: None.
Material to Avoid: None.

<u>SECTION VII</u> <u>SPILL, LEAK, AND DISPOSAL INFORMATION</u>
Steps to be Taken if Material is Spilled or Released: Avoid breathing dust. Notify Safety personnel of spill. Permit only trained clean-up personnel in the spill area. Use wet methods or approved vacuum cleaning system to pick up spilled materials. Use water or other dust suppressants where sweeping is unavoidable. Do not stir up dust. Clean-up personnel should wear approved respirators and protective clothing. Waste and contaminated protective clothing must be placed in dust-tight containers and be properly labeled for disposal.
Neutralizing Agents: Not applicable.
Waste Disposal Method: Bags, friable asbestos, waste and scrap material should be disposed of in a manner which will avoid airborne concentrations of asbestos, such as the use of dust-tight trash bags or containers. Such containers should be labeled in accordance with 40 CFR 61.20. Asbestos is also classified as a hazardous material under CWA 307(a) and has a reportable quantity of one pound. Deposit waste containers in a secured landfill in accordance with Federal, State, and local regulations.

<u>SECTION VIII</u> <u>SPECIAL PROTECTION INFORMATION</u>
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X420827

SECTION VIII

SPECIAL PROTECTION INFORMATION (Continued)

Personal Protective Equipment:

Respiratory Protection (Type): Where asbestos exposure in excess of the permissible limits is anticipated, wear a NIOSH/MSHA-approved respirator; a reusable or single-use air purifying respirator up to 10 times the PEL; a powered air purifying respirator up to 100 times the PEL; a continuous-flow or pressure-demand Type C supplied air respirator for greater than 100 times the PEL.

Eye Protection: Goggles are recommended. Follow Safety Rules.

Gloves/Clothing: Gloves are recommended during handling.

Other: For concentrations in excess of the ceiling limit special clothing, such as coveralls, whole-body clothing, head coverings, gloves, and foot coverings are required under CFR 1910.1001.

SECTION IX

SPECIAL PRECAUTIONS

Precautionary Statements:

WARNING

CANCER HAZARD

Breathing asbestos dust can cause lung damage and cancer. The risk of lung cancer is greatly increased for smokers.

Do not create or breathe dust.

Do not dry-sweep or use air hose for cleaning.

Do not take protective equipment or clothing home.

Do follow recommended work practices.

Do wear approved respiratory protection and protective clothing as required by applicable regulations.

Do use vacuum or wet cleaning methods.

Do dispose of dust, friable waste materials and contaminated protective equipment in dust-tight containers.

FOR INDUSTRIAL USE ONLY

Precautions for Handling and Storage: Store asbestos in closed containers (dust-tight) in a clean, dry, secure area. Protect containers from damage. Do not open containers in a manner that can release dust without providing proper enclosure or control measures. Use dust suppression control measures at all stages of asbestos handling, use and disposal. Follow good housekeeping practices to prevent accumulation of asbestos-containing dusts. Avoid inhalation of asbestos.

Other Precautions:

Material Listed as Carcinogen in:

National Toxicology Program Annual Report (NTP): Known carcinogen.

International Agency for Research on Cancer (IARC): Group I - Carcinogenic to humans.

OSHA 29 CFR Part 1910, Subpart Z: Occupational Exposure to Asbestos, Notice of Proposed Rulemaking, F.R. Vol. 49 No. 70, p. 14116 et seq. Tues., Apr. 10, 1984.

Effective Date: August 31, 1984.

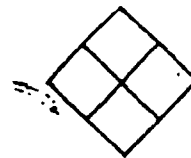
Calidria Corporation believes that the data herein are current as of the effective date of this data sheet, and that the opinions herein are those of qualified experts. Since the product and the information herein will be used outside the control of Calidria Corporation, it is the user's responsibility to establish conditions for safe use of the product.

X420828



MATERIAL SAFETY DATA

UNION CARBIDE CORPORATION
4625 ROYAL AVENUE • NIAGARA FALLS, NEW YORK 14302
TELEPHONE: (716) 285 - 3311 Ext. 6567



PRODUCT: Chrysotile Asbestos

CHEMICAL FORMULA: $Mg_6(OH)_8 Si_4 O_{10}$

TRADE NAMES: Calidria Asbestos

I. PHYSICAL DATA

BOILING POINT AND MELTING POINT: Not Pertinent

SPECIFIC GRAVITY ($H_2O = 1$): 2.45

VOLATILE CONTENT: Absorbed Water 1 - 4% By Weight.

Structural Water Approximately 13% by Weight.

APPEARANCE: Pellets or Fine White Powder. No odor.

Very Slight Solubility in Water.

II. HAZARDOUS INGREDIENTS

Not Applicable.

III. FIRE AND EXPLOSION HAZARD DATA

Material is not Combustible. No Fire or Explosion Hazard.

IV. REACTIVITY DATA

INERT MATERIAL: No Decomposition or Polymerization Conditions.

V. HEALTH HAZARD DATA

8 Hr. Time Weighted Average -
THRESHOLD LIMIT VALUE: AIRBORNE CONCENTRATION

The 8-hour time-weighted average airborne concentration of asbestos dust to which employees are exposed shall not exceed 5 fibers per milliliter greater than 5 microns in length, as determined by the membrane filter method at 400-450X magnification (4 millimeter objective) phase contrast illumination. Concentrations above 5 fibers per milliliter but, not to exceed 10 fibers per milliliter, may be permitted up to a total of 15 minutes in an hour for up to 5 hours in an 8-hour day. (Per Emergency Standards of OSHA, Federal Register, Volume 36, December 7, 1971, Pages 23207-23208)---

EFFECTS OF OVEREXPOSURE: Prolonged over exposure may result in lung damage.

EMERGENCY AND FIRST AID PROCEDURES: Not applicable. Material has no acute toxicity.

No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers per milliliter. (Federal Register Vol. 37, June 7, 1972 pages 11318-11322)
Legal responsibility is assumed only for the fact that all studies reported here and all opinions are those of qualified experts.

X420829

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Avoid inhalation of dust. Remove spilled material by vacuum cleaner, or by water wash.

WASTE DISPOSAL METHOD: Waste and scrap ~~should~~ be collected and disposed of in sealed bags or other ~~sealed~~ ^{in excess of exposure limits} closed impermeable containers. Burial or landfill suggested. ^{impermeable}

VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *

AIRBORNE CONCENTRATION ⁽¹⁾		REQUIRED MASK TYPE	TYPICAL MASK
8 HOUR EXPOSURE ⁽²⁾	15 MINUTE EXPOSURE ⁽³⁾		
5 maximum	10 maximum	None required.	—
50 25 maximum	100 50 maximum	U.S. Bureau of Mines Schedule 21B. Negative pressure on breathing. Covers nose and mouth.	Willson Model 100S with R-520 Filter and M-S-A No. 86432 with Type H, Ultra Filter and others.
500 250 maximum	500 1000 maximum	U.S. Bureau of Mines Schedule 21B Powered filter positive pressure.	Personal Environment Systems, Inc. Hood 330 or 351 with 1900 Series filter.
Over 250 500	—	U.S. Bureau of Mines Schedule 19B Type C positive pressure, air supplied.	Willson GA2H M-S-A Lead-Foe and others.

(1) Fibers per milliliter greater than 5 microns in length, as determined by the membrane filter method at 400-450X magnification (4 millimeter objective) phase contrast illumination.

(2) 8-Hour time weighted average.

(3) ~~15 Minutes in an hour for up to 6 hours in an 8 hour day.~~ 11318-11322, June 7, 1972.

Reference - Federal Register, Volume 36, Pages 23207-23208, December 7, 1971.

VENTILATION

Local exhaust for each operation is preferable. General area exhaust is acceptable. No special considerations.

PROTECTIVE GLOVES: None

EYE PROTECTION: None

OTHER PROTECTIVE EQUIPMENT:

~~NOTE: IF TWA or ceiling exposures are exceeded, clothing protection while body protective suit be provided and its use required.~~

VIII. SPECIAL PRECAUTIONS

MINIMIZE DUSTING AND BAG DAMAGE.

AVOID INHALATION OF DUST.

X420830

* Allowed ^{only} during the time required for installation of engineering controls, when engineering controls are not technically feasible or adequate and in emergencies. Employee may not be assigned to task requiring respirator if most recent medical exam indicates he will be unable to function properly.

VIII SPECIAL PRECAUTIONS

If TWA and ceiling exposure limits are not exceeded, there are no special precautions except:

- a) Dust and big damage should be minimized and dust inhalation avoided.
- b) Every place of employment where any asbestos fibers are released must be monitored by Dec. 7, 1971 to determine exposure.
- c) A comprehensive medical exam is required for any employee exposed to air-borne fiber within 30 days of first such employment, annually thereafter and on termination.

If exposure limits are exceeded, please refer to the regulations for details on change rooms, caution signs, clothes laundering, and monitoring and record keeping.

X420831

