



THE DOW CHEMICAL COMPANY

MIDLAND, MICHIGAN 48674

April 1, 1987

PLAINTIFF'S EXHIBIT

DOW-577

F. D. Axe, Pittsburg, CA
D. E. Cragar, Freeport, B101
R. L. Daniel, Freeport, B101
J. B. Dudney, Texize
R. D. Egedahl, Mall Road, Sarnia
G. W. Engdahl, 1803
R. Esordi, 462
R. Goodman, 1534T
S. M. Gorgacz, 258

D. D. Hicks, Freeport, B101
J. Hopfinger, Merrell Dow
W. E. Ledford, Plaquemine
G. L. Meier, Strongsville
M. E. Nevill, Plaquemine
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S. K. Norwood, 1803
L. W. Rampy, 1803
A. W. Schaffer, 1803

cc: K. Burgess/D. Rausch, 1803
J. Gray, 2030

INVESTMENT RECOVERY

On March 13, John Gray and I met with Walt Noack, Dick Goodman, and Ray Esordi to talk about labels and MSDS's for scrap materials. This was done because of questions raised about asbestos packing in valves and pumps that may be sold as scrap.

The OSHA Hazard Communication Standard (HCS) requires that manufacturers selling materials which under foreseeable use may create a hazard, provide an MSDS with the initial shipment and label each shipment. The label need not be on the container, but the recipient of the shipment must be told where the label is, e.g., with the shipping papers.

During our discussion it became evident that investment recovery groups have been warning their scrap buyers of the potential that the scrap may contain some amount of asbestos. This is advisable from an OSHA HCS, as well as a liability, standpoint. Michigan Division has been able to obtain MSDS's for most metals. I'm enclosing an MSDS for asbestos at Walt's request. It is important to continue to address the potential hazards of asbestos in shipments which may contain it. In addition, the potential hazards from melting of the metals should be continued to be addressed with the materials. This is necessary because the OSHA Hazard Communication Standard requires that hazards be addressed if they may occur in "normal use" of the materials. It is certain that "normal use" of scrap metal would include melting.

One mechanism of providing labels which was discussed, could be that the label information is included on the GSI or MSI paperwork so that it is transferred with every load. If this is done the scrap

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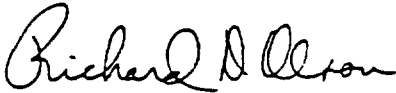
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purchaser must be informed where this information is, e.g. by letter. I'm enclosing some language that could be used on the paperwork. I'm also enclosing copies of interpretations. OSHA has given to the Institute for Scrap Iron and Steel pertaining to scrap materials.

I hope this aids your operations.



Richard D. Olson
Regulatory and Legislative Issues
1803 Building

lkr

enclosure

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LABELLING INFORMATION

This material contains scrap metal which may consist of iron, steel, stainless steel, copper, lead, etc., and may contain small amounts of asbestos. The metals may produce a dust hazard when handled and hazardous fumes when melted. These may cause metal fume fever and a variety of other illnesses. See the MSDS's for specifics. DANGER. The asbestos, as packing for valves, pumps, etc., may cause a cancer and lung disease hazard. Avoid handling in a manner which will create dust.

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MAIN OFFICE (802) 888-5716

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A Material Safety Data Sheet

DATE OF PREPARATION

December 1, 1986

EMERGENCY TELEPHONE NUMBER

CHEMTREC 1-800-424-9300

SECTION I -- PRODUCT IDENTIFICATION

Chemical Name & Synonyms:

Chrysotile Asbestos

Trade Name & Synonyms:

Asbestos

Chemical Family:

Fibrous Mineral Silicates

Typical Formula:

 $Mg_3(OH)_2Si_4O_{10}$ SECTION II -- HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>Percent</u>	<u>Occupational Exposure Limits</u>		<u>Vapor Pressure</u>
		<u>PEL</u>	<u>TLV</u>	
Chrysotile Asbestos	Approx. 100%	0.2 fibres/cc 8 hr. TWA Ceiling con- centration 10 fibres/cc	Chrysotile 0.2 fibres/cc ACGIH, Documentation of TLVS at 27	N/A
U.N. Shipping Number:		OSHA Standard at 29 CFR 1910.1001		
2590 (white asbestos)		Fibres measured are those longer than 5 microns.		

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SECTION III -- PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Range:	N/A	Vapor Density:	N/A
Vapor Pressure:	N/A	(AIR=1)	
(mm Hg.)		Evaporation Rate:	N/A
Specific Gravity:	2.4-2.6	(Butyl Acetate=1)	
(H ₂ O=1):		Solubility in Water:	Variable
Appearance and Odor:	White fibrous dry material - no odor	Melting Point:	N/A

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flammable Limits:	Non-Flammable		
Extinguishing Media:	Use that which is appropriate for surrounding fire		
Unusual Fire and Explosion Hazards:	N/A		
Special Fire Fighting Procedures:	None		
Flash Point:	N/A		
OSHA: N/A	DOT: N/A	LEL: N/A	UEL: N/A

SECTION V -- REACTIVITY DATA

Stability:	Stable
Hazardous Polymerization:	Will not occur
Hazardous Decomposition Products:	None
Conditions to Avoid:	Avoid creating and breathing dust
Incompatibility: (Materials to Avoid):	None

SECTION VI -- HEALTH HAZARD DATA

Effects of Overexposure:

- Acute - May cause eye and/or skin irritation.
- Chronic - Overexposure to Chrysotile Asbestos can cause damage to lungs, (asbestosis), lung cancer and mesothelioma of the pleura and peritoneum.

Primary Route of Entry: Inhalation

Signs and Symptoms of Overexposure:

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 non-disabling conditions, seen separately or together, that have been associated with prolonged asbestos exposure.

Medical Conditions Generally Aggravated by Exposure:

The risk of lung cancer is greatly increased for those smoke cigarettes regularly in addition to having asbestos exposure.

Emergency First Aid Procedures:

No acute toxicity. Remove asbestos slivers from skin promptly. In case of eye irritation, gently rinse with water. If irritation persists, get medical help.

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Special Note: 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)

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Respiratory Protection:

<u>Airborne Concentration of Asbestos</u>	<u>Required Respirator</u>
Not in excess of 2 f/cc (10 X PEL).	1. Half-mask air-purifying respirator equipped with high-efficiency filters.
Not in excess of 10 f/cc (50 X PEL).	1. Full facepiece air-purifying respirator equipped with high-efficiency filters.
Not in excess of 20 f/cc (100 X PEL).	1. Any powered air-purifying respirator equipped with high-efficiency filters. 2. Any supplied-air respirator operated in continuous flow mode.
Not in excess of 200 f/cc (1000 X PEL).	1. Full facepiece supplied-air respirator operated in pressure demand mode.
Greater than 200 f/cc (1000 X PEL). or unknown concentration	1. Full facepiece supplied-air respirator operated in pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus.

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- NOTE:
- Respirators assigned for higher environmental concentrations may be used at lower concentrations.
 - A high efficiency filter means a filter that is at least 99.97% efficient against mono-dispersed particles of 0.2 micrometers or larger.
 - All respirators must be NIOSH/MSHA approved under 30 CFR Part 11.
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SECTION VIII -- CONTROL MEASURES

Respiratory Protection: Use respirators as recommended by the OSHA standard for exposure to asbestos dust control with mechanical dust collection equipment to within TLV. See American National Standards Institute Booklet Z9.2-1971.

Protective Clothing
& Equipment:

Use special clothing as required by OSHA Standard
for exposure to asbestos dust (29CFR, 1910.1001)

Work/Hygienic Practices:

Do not create dust. Do not dry sweep or use air hose
for cleaning. Do not take protective equipment or
clothing home.

SECTION IX -- SPILL, LEAK, AND DISPOSAL INFORMATION

Steps to be taken in case material is spilled or released:

Avoid creating or breathing dust. Use wet methods or an HEPA
vacuum cleaning system to clean up spilled materials. Wear
approved respirators and protective clothing when cleaning up
material.

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
and such containers should be labeled in accordance with 29CFR1910.1200
and shall include the following information:

DANGER

CONTAINS ASBESTOS FIBRES

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

Deposit waste containers in a secured landfill in accordance with
Federal, State and Local regulations.

SECTION X -- SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing:

Use no hooks in loading and unloading.

Protect containers from damage.

Do not open containers in a manner that can release dust
without providing proper enclosure or control measures.

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Use dust suppression control measures, such as ventilation or wet-working, at all stages of asbestos handling, use and disposal.

Follow good housekeeping practices, such as wet-wiping dusty surfaces, to prevent accumulation of asbestos-containing dust.

Avoid inhalation of asbestos.

***NOTE: 29CFR 1910.1001 contains other specific requirements and should be consulted in its entirety prior to working with asbestos.

While the information and recommendations set forth herein are believed to be accurate as of the date hereof, VERMONT ASBESTOS GROUP, INC. MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

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