

To: Jerry Timmons
cc: Distribution Below

From: S. V. Chamberlain

Subject: Material Safety Data Sheet
Libby Vermiculite Grade #4

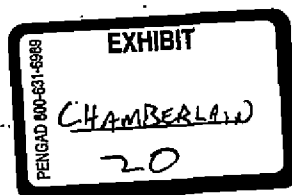
Date: September 1, 1977

I understand Jerry, you are the keeper of Material Safety Data Sheets. Attached is the newest MSD sheet for Libby vermiculite concentrate size #4. This sheet reflects the progress they have made to date to reduce the amount of tremolite in Libby vermiculite.

Sarge

DISTRIBUTION

- ✓ Dick Gruenbaum
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DOJ WRG 02253

U.S. DEPARTMENT OF LABOR

DATE: July 21, 1977 Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing
Shipbuilding and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME

W. R. Grace & Company-Construction Products Division

EMERGENCY TELEPHONE NO.

1-617-876-1400 X-457

ADDRESS (Number, Street, City, State, and ZIP Code)

62 Whittier Avenue, Cambridge, MA 02140

(Quality Assurance Manager)

CHEMICAL NAME AND SYNONYMS

VERMICULITE CONCENTRATE (Non-expanded)

TRADE NAME AND SYNONYMS

Vermiculite Concentrate-Libby Mine

CHEMICAL FAMILY

Magnesium Aluminosilicate Mineral

FORMULA

(Mg,Ca,K)-(Al,Fe,Mg)-(Si,Al)₂(OH)₂H₂O

SECTION II - HAZARDOUS INGREDIENTS

Contains less than 1.0% by weight of a naturally occurring contaminant tremolite. OSHA Regulation 1910.1001 defines tremolite as asbestos. Some forms of tremolite are platy. Other forms can be fibrillated by physical handling to release airborne "asbestos fibers." Regulation 1910.1001 places a limit of 2 "asbestos fibers"/cc; 8 hour time weighted average and a maximum of 10 "asbestos fibers"/cc/ at any one time for airborne fiber exposure.

The normal physical handling given to vermiculite concentrate can create an airborne fiber level in excess of OSHA Standards. Compliance with Standards can be assured by various methods: enclosure, exhaust ventilation and dust collection.

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	NA	SPECIFIC GRAVITY (H ₂ O=1)	NA
VAPOR PRESSURE (mm Hg.)	NA	PERCENT VOLATILE BY VOLUME (%)	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (Assumed at 70°F)	NA
SOLUBILITY IN WATER	Slight, if any	Bulk Density lbs./c.f.	45-65
APPEARANCE AND ODOR	Free flowing irregularly shaped flake-ranging in color from gold to dark gray		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

NOT APPLICABLE

FLASH POINT (Methods used)	FLAMMABLE LIMITS	Let	Uel
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

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Form OSHA-20
Rev. May 72

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SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

Airborne asbestos fiber 2f/cc T.W.A. - ceiling 10f/cc at one time.

Dust respirable fraction 5 mgm/m³, Total dust 15 mgm/m³

EMERGENCY AND FIRST AID PROCEDURES

NA

SECTION VI - REACTIVITY DATA NOT APPLICABLE

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

INCOMPATIBILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION

MAY OCCUR

WILL NOT OCCUR

CONDITIONS TO AVOID

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Dampen slightly or use other techniques which control airborne fibers and dust

within the TLV limits of Section V above.

WASTE DISPOSAL METHOD

Use disposal techniques which control airborne fibers and

dust within the TLV limits of Section V above. See OSHA Standard 1910.1001, Paragraph (h) (2) Waste Disposal.

SECTION VIII - SPECIAL PROTECTION INFORMATION

See OSHA 1910.1001 - Controls such as isolation, enclosure, exhaust ventilation and dust collection shall be used if necessary, to meet exposure limits. Also, see OSHA Standard 1910.1001 Personal Protective Equipment for dealing with work environments in excess of exposure limits.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

See OSHA Standard 1910.1001

OTHER PRECAUTIONS