UNION CARBIDE

Material Safety Data

July 1, 1983 wrong date 1981, 1977, merely changed address from NY in 83

UNION CARBIDE CORPORATION • ROBINSON PLAZA II • ROUTE 60 • PITTSBURGH, PA 15205
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No Mass Mailing since NY

PRODUCT: Chrysotile Asbestos **CHEMICAL FORMULA:** $Mg_6(OH)_8Si_4O_{10}$

TRADE NAMES: "Calidria" Asbestos

PLAINTIFF'S EXHIBIT UC-794

I. PHYSICAL DATA

BOILING POINT AND MELTING POINT: Not Pertinent

SPECIFIC GRAVITY (H_20 = 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

Asbestos contains no hazardous ingredients. However, the material itself can be hazardous under certain conditions. (See V below.)

III. FIRE AND EXPLOSION HAZARD DATA

NON-COMBUSTIBLE MATERIAL: No Fire or Explosion Hazard.

IV. REACTIVITY DATA

INERT MATERIAL: No Decomposition or Polymerization Conditions.

V. HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE TO AIRBORNE CONCENTRATION:
The current Occupational Safety and Health Standard (CFR 29, 1910.1001) contains the following exposure limits:
"The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed 2 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the membrane filter method at 400-450 X magnification (4 millimeter objective) phase contrast illumination. No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method just noted."

EFFECTS OF EXPOSURE: CAUTION: Breathing asbestos may cause serious bodily harm.

EMERGENCY AND FIRST AID PROCEDURES: No acute toxicity. Use respirator if airborne asbestos fiber concentration exceeds OSHA limits.

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:
Bags and waste and scrap materials 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. Ensure that disposal complies with all applicable federal, state or local regulations.

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VII. SPECIAL PROTECTION INFORMATION

VENTILATION:
Local exhaust for each operation is preferable. (See American National Standards Institute booklet, Z9.2 — 1971.) General area exhaust is acceptable. No special considerations.

PROTECTIVE GLOVES: None	**EYE PROTECTION:** None

RESPIRATORY PROTECTION[1]
The current Occupational Safety and Health Standard CFR 29, 1910.1001 contains the following requirements for respiratory protection.

AIRBORNE CONCENTRATION[2]		
8-HOUR EXPOSURE[3]	**CEILING CONCENTRATION**	**MINIMUM REQUIRED MASK TYPE**[4]
2 maximum	10 maximum	Not required when allowable limits are not exceeded.
20 maximum	100 maximum	Reusable or single use air purifying respirator.
200 maximum	1000 maximum	Powered filter positive pressure.
Over 200	—	Type C positive pressure, air supplied.

(1) Allowed only during the time required for installation of engineering controls, when engineering controls are not technically feasible or adequate, and in emergencies. Current OSHA standards require that no employee shall be assigned to tasks requiring the use of respirators if, based upon his most recent examination an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by the use of a respirator.

(2) 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.

(3) 8-Hour time-weighted average.

(4) Only masks certified by NIOSH as acceptable for the exposures encountered may be used.

OTHER PROTECTIVE EQUIPMENT:
If the ceiling concentration limit is exceeded, clothing providing whole body covering shall be supplied and its use required.

VIII. SPECIAL PRECAUTIONS

Every place of employment where asbestos fibers are released must be monitored to determine exposure levels. If the permissible time-weighted average and ceiling concentration limits are not exceeded, no special precautions are required except:

a) Bag damage and dusting should be minimized and dust inhalation avoided.

b) A comprehensive medical examination is required for any employee exposed to airborne fibers within 30 days of first such employment, annually thereafter and on termination of employment.

c) Personal work clothing can become contaminated with asbestos and may constitute an exposure hazard. Such clothing should be handled and laundered in a manner to avoid airborne concentrations of asbestos.

d) Substantial medical evidence indicates that smoking will increase the risk from asbestos exposure. Those working with asbestos should not smoke.

Where exposure limits may be exceeded, reference should be made to the regulation CFR 29, 1910.1001 for details on caution signs, monitoring, change rooms, protective clothing laundering and record keeping.