BIOCHEMICAL RESEARCH LABORATORY H 028126

THE DOW CHEMICAL COMPANY GENERAL
MIDLAND MICHIGAN OR-0027-0713

DATA SHEET OF PROPERTIES, HEALTH HAZARDS, AND PRECAUTIONS FOR SAFE HANDLING OF MATERIALS

K-28, 126
T34. 17-17

MOLECULAR FORMULA		NAME: Asbestos 7M
MOLECULAR WEIGHT	INDUSTRIAL HYGIENE STANDARD: 5 mppcf	SYNONYMS

STRUCTURAL FORMULA - OR COMPOSITION

very short-fibered asbesto

PLAINTIFF'S EXHIBIT
DOW-1999

SRM0004C2

PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT	EXPLOSIVE LIMITS (% VOL. IN AIR)	FLASH POINT	IGNITION TEMP.	MELTING POINT	VAPOR DENS. (AIR = 1)
°C	None	None °F	None °C	°C	None

CORROSIVENESS (To Common Metals)	PHYSICAL STATE	COLOR
Not corrosive	Solid	Gray

CHEMICAL REACTIVITY	SOLUBILITY IN WATER
Not reactive	Essentially none

STABILITY (To Air, Change, Heat, Light)
Excellent

TOXIC PROPERTIES

CLASSIFICATION OF TOXIC PROPERTIES

TYPE OF CONTACT			
EYE	☒	MAY CAUSE NO RESPONSE OR NO MORE THAN VERY SLIGHT TO SLIGHT TRANSITORY PAIN, [illegible] AND/OR IRRITATION OF THE EYELIDS.	☐ MAY CAUSE SOME PERMANENT LOSS OF VISION (THIS INCLUDES DA[illegible] TO CORNEA OR INTERNAL INJURY WHICH IS INCOMPLETELY HEAL[illegible] ONE WEEK.)
	☐	MAY CAUSE SUFFICIENT INJURY TO THE EYE TO RESULT IN LOSS OF THE FIRST ORDER. (THIS INCLUDES DAMAGE TO THE CORNEA WHICH HEALS OR NEARLY HEALS IN A WEEK AND/OR CONSIDERABLE CONJUNCTIVAL IRRITATION WITH EDEMA.)	☐ VAPOR EXPOSURE MAY CAUSE SEVERE PAIN, LACRYMATION OR SE[illegible] INJURY TO THE EYES.
SKIN	☒	SINGLE PROLONGED EXPOSURE OCCURS CAUSES NO EFFECT. SEVERAL REPEATED PROLONGED EXPOSURES MAY OR MAY NOT CAUSE THE DEVELOPMENT OF SOME SLIGHT IRRITATION.	☐ SINGLE SHORT EXPOSURE MINUTES MAY CAUSE CONSIDERA[illegible]LE I[illegible] TION AND/OR SINGLE PROLONGED OR FREQUENTLY REPEATED S[illegible] POSURES CAUSE A BURN AND/OR MAY CAUSE SYSTEMIC INJURY, E[illegible] DEATH.
	☐	SINGLE PROLONGED EXPOSURE MAY CAUSE SOME REDDENING OF THE SKIN. REPEATED PROLONGED CONTACTS MAY CAUSE APPRECIABLE IRRITATION, POSSIBLY A MILD BURN AND/OR MAY CAUSE APPRECIABLE SYSTEMIC INJURY DUE TO ABSORPTION.	☐ AN EXPOSURE RAPIDLY CAUSES SEVERE BURNS AND/OR SERIOUS SYSTEMIC INJURY, EVEN DEATH.
INHALATION — DUST OR MIST	☐	NO SYSTEMIC INJURY EXPECTED. NO IRRITATION TO NOSE AND THROAT IN DUSTY OR MISTY ATMOSPHERES.	☒ DUSTY OR MISTY ATMOSPHERE[illegible] AND/OR PROLONGED EXPOSURE MAY CAUSE SERIOUS [illegible] INJURY, EVEN DEATH.
	☐	THROAT AND NOSE IRRITATION IN A DUSTY OR MISTY ATMOSPHERE IS PAINFUL BUT NOT INTOLERABLE AND/OR PROLONGED OR REPEATED EXPOSURES MAY CAUSE SYSTEMIC INJURY.	☐ SHORT EXPOSURE MINUTES MAY CAUSE DEATH OR SERIOUS SYST[illegible] INJURY.
INHALATION — VAPOR (Toxicity at room temperature unless otherwise indicated.)	☐	EXPOSURES DO NOT CAUSE ANY EFFECTS OTHER THAN SOME VERY SLIGHT IRRITATION OR PAIN TO THE EYES OR RESPIRATORY PASSAGES AT THE NOSE.	☐ EXPOSURES MAY CAUSE EXTREME DISCOMFORT, AND/OR SERIOUS [illegible]NJURY, AND/OR MAY CAUSE INTOLERABLE IRRITATION TO T[illegible] RESPIRATORY PASSAGES.
	☐	SINGLE EXPOSURES EXCEEDING 1/2 HOUR, OR FREQUENTLY REPEATED EXPOSURES OF SHORTER DURATION, MAY CAUSE SLIGHT ANESTHESIA AND/OR SLIGHT SYSTEMIC INJURY, AND/OR CAUSE APPRECIABLE, BUT NOT INTOLERABLE, IRRITATION OF RESPIRATORY PASSAGES.	☐ SHORT EXPOSURES MAY CAUSE UNCONSCIOUSNESS, AND/OR SERIOUS [illegible]NJURY, INCLUDING DEATH.
		☐ EVEN VERY SHORT EXPOSURE WILL CAUSE SERIOUS SYSTEMIC INJURY OR DEATH.	
INGESTION	☒	AMOUNTS WHICH MAY BE SWALLOWED INCIDENTAL TO INDUSTRIAL HANDLING WILL NOT CAUSE INJURY. HOWEVER, IF SUBSTANTIAL QUANTITIES SHOULD BE SWALLOWED, MORE OR LESS SERIOUS EFFECTS MAY OCCUR.	☐ AMOUNTS WHICH MAY BE SWALLOWED INCIDENTAL TO INDUSTRIAL [illegible] AND USE MAY CAUSE SERIOUS INJURY.

COMMENTS

DOW CONFIDENTIAL

Asbestos 7M

DEGREES OF EXPOSURE RELATED TO TYPES OF OPERATION		PRECAUTIONS (SEE CODE BELOW)				
		EYES	SKIN	INHALATION* DUST OR MIST	INHALATION* VAPOR	INGESTION
I NO CONTACT	CHARACTERIZED BY REMOTE OPERATION WITH EQUIPMENT ISOLATED FROM THE WORK AREA. THE PERSONS ENTERING ISOLATED AREAS WILL REQUIRE THE PERSONAL PROTECTION OUTLINED FOR IV BELOW.	A	A	A		A
II MINOR CONTACT	CHARACTERIZED BY CLOSED SYSTEMS WITH EQUIPMENT VENTED OUTSIDE THE WORK AREA; IN-STRUMENT CONTROL; MECHANICAL HANDLING OF MATERIALS IN BULK. EXAMPLES ARE: CONTINUOUS REACTORS, STILLS AND FILTERS; ENCLOSED CONVEYORS; VENTILATED PACKAGING.	B	A	A		A
III OCCASIONAL DAILY CONTACT	CHARACTERIZED BY MANUAL HANDLING OF MATERIALS IN PACKAGES SUCH AS BAGS, DRUMS AND PIGGYBACKS. VENTILATION MAY BE PROVIDED FOR SPECIFIC JOBS. MANY BATCH OPERATIONS FALL INTO THIS CATEGORY.	B	A	D		A
IV GROSS CONTACT LIKELY	CHARACTERIZED BY HAND OPERATION. EXAMPLES ARE: EMERGENCY REPAIRS, CLEANING EQUIPMENT, CLEANING FILTERS, TAKING CARE OF SPILLS, PACKAGING VOLATILE OR DUSTY MATERIALS WITHOUT VENTILATION, UNLOADING AND TRAY DRYING.	C	A	E		A

EYE CONTACT

- A NO EYE PROTECTION NEEDED.
- B USE SAFETY GLASSES WITHOUT SIDE SHIELDS.
- C USE SAFETY GLASSES WITH SIDE SHIELDS.
- D USE CHEMICAL WORKERS GOGGLES.
- E USE GAS TIGHT GOGGLES OR A FULL FACE GAS MASK.

SKIN CONTACT**

- A A BATH AND CLEAN CLOTHES ONCE PER WEEK ALONG WITH THE USUAL WASHING AT MEALTIMES SHOULD BE ADEQUATE PRECAUTIONS.
- B GREASILY CONTAMINATED CLOTHING AND SHOES MUST BE REMOVED NOT LATER THAN THE END OF THE WORK PERIOD AND MUST BE THOROUGHLY CLEANED BEFORE RE-USE.
- C REQUIRE SHOWER AT THE END OF THE WORK PERIOD AND CLEAN CLOTHING FROM THE SKIN BUT AT THE START OF EACH WORK DAY.
- D CLOTHING SHOULD BE CHANGED AND SKIN WASHED PROMPTLY UPON ANY DETECTABLE CONTACT. EACH USE WILL REQUIRE SPECIAL CONSIDERATION TO DETERMINE SUITABLE PROTECTIVE DEVICES AND STANDARDS OF PERSONAL CLEANLINESS.
- E IMPERVIOUS CLOTHING SUCH AS RUBBER BOOTS, RUBBER APRONS, AND RUBBER GLOVES WILL BE REQUIRED. SPECIFIC ITEMS WILL BE DICTATED A REQUIRED BY CIRCUMSTANCE.

INHALATION — DUST OR MIST

- A NO RESPIRATORY PROTECTION.
- B NO PROTECTION REQUIRED FOR EXPOSURE OF THIRTY MIN. DURATION OR LESS TO OBVIOUSLY DUSTY ATMOSPHERES. EXPOSURES OF LONGER DURATION WILL REQUIRE THE USE OF A DUST RESPIRATOR BEARING THE APPROVAL OF THE U.S. BUREAU OF MINES FOR THE USE WITH TOXIC DUSTS.
- D ANY EXPOSURE TO OBVIOUSLY DUSTY ATMOSPHERES WILL REQUIRE A DUST RESPIRATOR BEARING THE APPROVAL OF THE U.S. BUREAU OF MINES FOR USE WITH TOXIC DUSTS.
- E ANY EXPOSURE TO DUSTY ATMOSPHERES WILL REQUIRE THE USE OF AN AIR LINE RESPIRATOR, BLOWER MASK, OR CHEMIX MASK.

INHALATION — VAPOR

- A NO PRECAUTIONS NECESSARY.
- B NO PRECAUTIONS NECESSARY FOR SINGLE EXPOSURES OF LESS THAN 1/2 HOUR. LONGER SINGLE EXPOSURES, OR FREQUENTLY REPEATED EXPOSURES WILL REQUIRE A GAS MASK OR RESPIRATOR EQUIPPED WITH APPROPRIATE CANISTER.
- C NO PRECAUTIONS NECESSARY FOR SINGLE EXPOSURES OF NO MORE THAN TEN MINUTES. LONGER EXPOSURES EITHER SINGLE OR REPEATED, WILL REQUIRE GAS MASK OR RESPIRATOR EQUIPPED WITH APPROPRIATE CANISTER.
- D GAS MASK WITH APPROPRIATE CANISTER REQUIRED AT ALL TIMES.
- E EVACUATE AREA AT ONCE AND ENTER ONLY WITH AIRLINE RESPIRATOR, BLOWER MASK OR CHEMIX MASK.

INGESTION

- A NO UNUSUAL PRECAUTIONS REQUIRED.
- E FOOD AND TOBACCO SHOULD NOT BE PRESENT IN THE WORK AREA. HANDS AND FACE SHOULD BE WASHED BEFORE SMOKING AND EATING.

COMMENTS

**GOOD PRACTICE REQUIRES THAT GROSS AMOUNTS OF ANY CHEMICAL BE REMOVED FROM THE SKIN AS SOON AS IS PRACTICAL

*SUITABLE GAS MASK CANISTER

Dust respirator

ST0006433

SIGNED KJOlson CHECKED HRHoyle

DATE 3/26/58 DATE 6/26/68