FILE NAME: Quigley (QUIG)

DATE: 1971 June 30

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(W/Encls.)

Mr. R J Demaisonv
Mr. W Herberger

Mr. L J Dreyling

J J Marino June 30, 1971

Non-Asbestos Insulation

I am attaching for your information a copy of an article which appeared in the New York Times on June 29 which clearly indicates the trend of eliminating asbestos spraying insulations.

Also enclosed for your information is a flyer on Zonolite which is a product which contains no asbestos and is used for spraying steel beams, etc.

J. J. Marino

Encls.
JJM/sb

N.Y. TIMES
TUESDAY
JUNE 29, 1971

Cities Are Acting to Regulate Spraying of Asbestos

By MICHAEL KNIGHT

Several tons of it are sprayed into the air in American cities every year. Those who breathe its microscopic particles will carry it with them throughout life. And sometimes, 20 of 30 years later, the deadly effects —inability to breathe or rampant lung cancer—begin to be felt.

The substance is asbestos, a mineral whose fireproof fibers have long been matted into felt-like sheets. It is now increasingly being sprayed on the steel beams of high-rise buildings.

Cities around the country, often with the help of the asbestos workers unions, are beginning to regulate or ban the spraying of asbestos as the deadly and delayed effects of contact with it are becoming known.

Most endangered are the workers who install asbestos sheets around boilers and steam pipes or who spray it on automobile brakes or onto steel beams in construction.

But increasingly there is worry among health experts that the large amounts that are allowed to escape into the air during the spraying may affect thousands of residents.

Trouble in Kansas City

When the new Missouri State office building in Kansas City was sprayed recently, "the stuff blew all over the devil," said Richard Maupin, business manager of Asbestos Workers Local 27.

"Some of it went all the way downtown," he said. "The stuff is really dangerous. People can see it, but they don't know it's harmful."

Industry publications estimate that 50 per cent of the asbestos used in spraying is lost into the air.

Inhalation of the asbestos dust forms deposits on the lungs that are never absorbed tissues and blocking their ability to absorb oxygen. The resulting difficulty in breathing is a result of a condition called asbestosis, which is incurable and can be fatal.

According to Dr. Irving J. Selikoff, director of the Environmental Sciences Laboratory at Mount Sinai Medical Center here, people exposed to asbestos have much higher rate of lung and intestinal cancer than those never exposed to it. Smoking, Dr. Selikoff says, drastically increases the risk: people who smoke cigarettes and are exposed to the dust have a lung cancer rate 92 times higher than the statistical norm.

Even the wives of men who work with asbestos are endangered by the dust their husbands bring home on their clothes, according to Milton Goldberg, an environmental field engineer in the Allegheny County Department of Health in Pittsburgh.

"You can walk down a street where asbestos has been sprayed," he said, "and it may not affect you for 20 or 25 years."

Dr. Selikoff, probably the foremost national health authority on asbestos, said that as long ago as 1924 it was discovered that people who worked with asbestos developed scarred lungs. It took almost 30 more years of study, he said, to link it with cancer.

Boston and Chicago last May became the first cities in the country to ban the spraying of asbestos totally.

New York banned it from city projects a month later, and has severely restricted its use, as have Los Angeles, Detroit, and Philadelphia. Other areas throughout the country are considering bans or regulations on spraying.

The regulations of the cities enforced by fines and punishment, are basically similar. They call for enclosing the work area in a tarpaulin and installation of adequate ventilation systems or the use of effective respirator face masks. The entire area, including walls and ceilings, must be vacuum-cleaned afterward to remove any dust that is left over.

In Los Angeles, John N. Jepson, state senior safety engineer, said that on occasion it has been necessary to shut down a construction job for a few days when the regulations were not followed.

"A few shutdowns on a big job brings the picture into clear focus and they generaly refrain from any further violations," he said.

The Chicago ordinance, the most stringent totally bans asbestos spraying and calls for penalties, including six-month jail terms.

Also causing worry is the practice of lining the inside of air-conditioning ducts with asbestos to prevent the spread of fire. Dust, picked up by the moving air, is borne throughout the building. While there are as yet no regulations in this field, contractors are beginning to put the asbestos on the outside of the ducts or to use specially coated asbestos that locks the dust in.

Substitutes for abestos are being found in cement and fiberglass products.

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ZONOLITE

Fireproofing

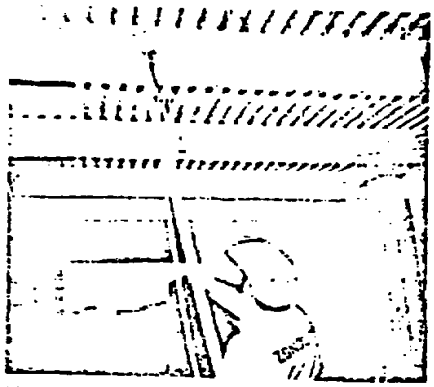
Zonolite®
Mono-Kote®

CONSTRUCTION PRODUCTS DIVISION
W. R. GRACE & CO.

MONO-KOTE SPRAY-ON FIREPROOFING
Vermiculite Perlite and Plaster Aggregate

W. R. GRACE & CO.
GRACE
ZONOLITE
CONSTRUCTION PRODUCTS DIVISION

Mono-Kote is the trade name for a fire protection material developed by Construction Products Division, W. R. Grace & Co., specifically for fast application, high fire resistance, and low cost. The material is spray applied by any one of several plastering machines. Mono-Kote is a cementitious (plaster), mill-mixed material requiring only the addition of water at the job. It is applied directly to steel, concrete and other surfaces requiring fire protection.



Machine-applied cementitious Mono-Kote withstands air erosion, prevents "dusting" in air-conditioning and ventilating systems.

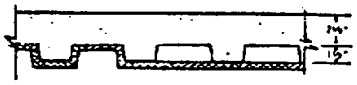
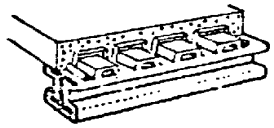
Technical Data

FIRE RESISTANCE: Mono-Kote has been tested and rated according to ASTM E-119 by the Underwriters' Laboratories, Inc. The material bears the U. L. label under a quality control inspection program. Fire resistance ratings and details for varied structural systems are available on request. Mono-Kote has been tested for other properties such as corrosion resistance, deflection, bond-impact, surface hardness. These tests comply with G.S.A. requirements and are available upon request.

FIRE HAZARD: Tested and reported in accordance with ASTM E-84 by Underwriters' Laboratories, Inc. Flame

Zonolite Mono-Kote FIRE RESISTANCE RATINGS

(PARTIAL SUMMARY)

SYSTEM	DESCRIPTION	RATING	Underwriters' Laboratories, Inc. Number	Retardant Report
 1½" DECK	2½" Concrete Fill Mono-Kote ⅞" Thick following Contour.	3 hrs.	21-3	4374
	2½" Concrete Fill Mono-Kote ⅜" Thick Following Contour.	2 hrs.	294-2	4374-31
 3" DECK	2½" Concrete Fill Mono-Kote 1⅜" in flute and 1⅛" on flat plate.	3 hrs.	52-3	4374-18
	2½" Concrete Fill Mono-Kote ⅜" Thick Following Contour.	2 hrs.	294-2	4374-31
 COMPOSITE FLOOR - BEAM	2½" Concrete Fill Mono-Kote 1" in flute and ¾" on flat plate.	3 hrs.	205-3	4374-26
	2½" Concrete Fill Mono-Kote ½" in flute and ⅜" on flat plate.	2 hrs.	257-2	4374-25
 ROOF DECKS	Two layers ½" UL Listed roof insulation on steel deck. Fireproofing —1⅜" vermiculite Type-MK following contour.	1½ hrs.	RC5-1½	4374
	One layer 1" UL Listed roof insulation on steel deck. Fireproofing —1⅜" vermiculite Type-MK following contour.	1 hr.	RC10-1	3996-5

Spread-10. Fuel Contributed-5. Smoke Developed-0.

POLLUTION AND HEALTH: Because of the constantly-changing conditions involving fireproofing and its relation to pollution and health, we recommend that you contact your Zonolite sales office for the latest data on these subjects. Recent tests at Underwriters' Laboratories, Inc. have provided some fire-ratings on an asbestos-free formula Mono-Kote. Other tests and ratings will follow.

Existing formulations of Mono-Kote contain minimal amounts of asbestos which are "locked in" during the mixing process. Mono-Kote is wet-mixed, pumped and sprayed, and hardens to a cementitious mass. Job-site tests show air fiber counts well below occupational threshold limit values proposed by governmental bodies.

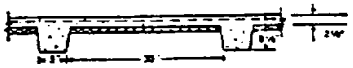
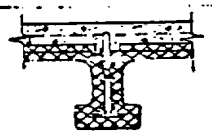
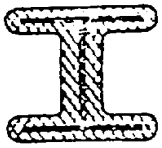
DRY DENSITY: Approximately 22 p.c.f. U. L. Inc. lists 18 p.c.f. minimum average density.

BOND STRENGTH TO STEEL OR CONCRETE: More than 500 lbs. per sq. ft. when set and dry.

RESISTANCE TO AIR EROSION: Independent laboratory test subjected standard, machine-applied Mono-Kote surface to winds exceeding hurricane velocity . . . over 100 M.P.H. for 87 hours . . . with no erosion. Copies of test description available.

SOUND ATTENUATION: The combination of beams and ceiling when fireproofed with Mono-Kote gives sound absorption of .50 to .85 depending upon the ratio of beam area to flat area. This is of value to the designer in accomplishing attenuation objectives, especially when the fireproofed area is part of a plenum above a finished ceiling.

SPECIFICATION (SHORT FORM): Sprayed fireproofing material shall be Mono-Kote as manufactured by Zonolite, Construction Products Division, W. R. Grace & Co. or its processing distributor. It shall be applied by machine to the thickness required by local codes and in the areas shown on the drawings. The method of mixing and application shall comply with the manufacturer's recommendations.

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 PAN JOIST	2½" Concrete Slab Mono-Kote ⅞" Thick under slab.	2 hrs.	99-2	4374-9
 JOIST	2¾" regular concrete fill. Fireproofing—½" vermiculite Type-MK following contour of floor and 1½" vermiculite Type-MK following contour of joists.	3 hrs.	227-3	4374-32
 BEAMS	½" Mono-Kote following contour of the member.	4 hrs.	40-4	4374-24
	Composite beam (shear strap on stud).			
	¾"	4 hrs.	257-2	4374-25
	½"	3 hrs.	216-3	4339
 COLUMNS	Mono-Kote following contour of the Column—Min 14WF228.			
	1¼"	4 hrs.	37-4	4374-21-23
	⅞"	3 hrs.	32-3	4374-21-23
	All Columns.			
	2½"	4 hrs.	15-4	4374-8
	1⅞"	3 hrs.	17-3	4374-13
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	Minimum Column 14WF228—Mono-Kote with ⅞" U.L. Inc. approved board on one flange.			
	1½"	4 hrs.	46-4	4374-30
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NOTE: Revision of thickness to comply with new criteria of ASTM E-119 and Underwriters' Laboratories, Inc. 263, effective January 1, 1971, has been completed but not approved in time for this publication. This will list restrained and unrestrained floor and beam assemblies under a 1100°-1300° limit.

Please contact any of the Zonolite, Construction Products Division offices for these new listings or any other data.

GRACE

09 0631

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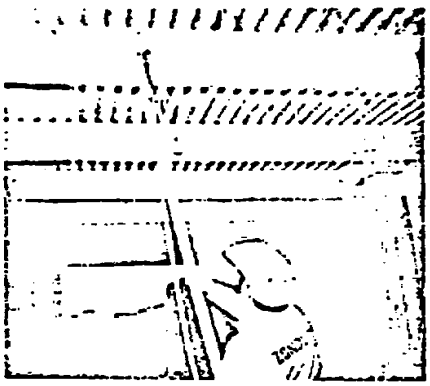
Vermiculite Perlite and Plaster Aggregate

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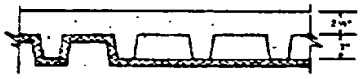
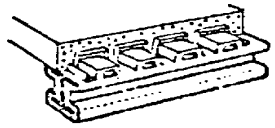
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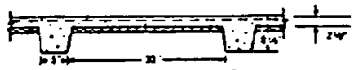
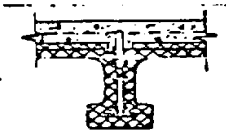
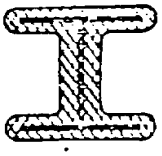
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