

WRG 001358

AUG 29 1968

ZON DIVISION.
August 28, 1968
FBI DEPT.



Memorandum to Mr. P. R. Strand

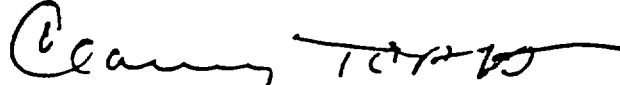
Enclosed for your comments and approval is a proposed release about the spray-on fireproofing on the Bank of America World Headquarters in San Francisco.

In giving this copy a final reading before sending it to you, it does not seem that we have really defined Mono-Kote. Doesn't it contain vermiculite?

We took this point up with Fred Bona, who prepared this copy, and he said that Mono-Kote, in technical bulletins, is defined only as a "cementitious, mill-mixed material."

We were of the impression that Mono-Kote was fire retardant because of its content of vermiculite. It seems like it is an interesting note.

We are enclosing an extra copy because we think you may wish to send it to your San Francisco representative to get the approval of the Bank of America, which seems to be required.


Clancy Topp

cc: Mr. D. J. Boone

12/69

NONOLITE

Fireproofing

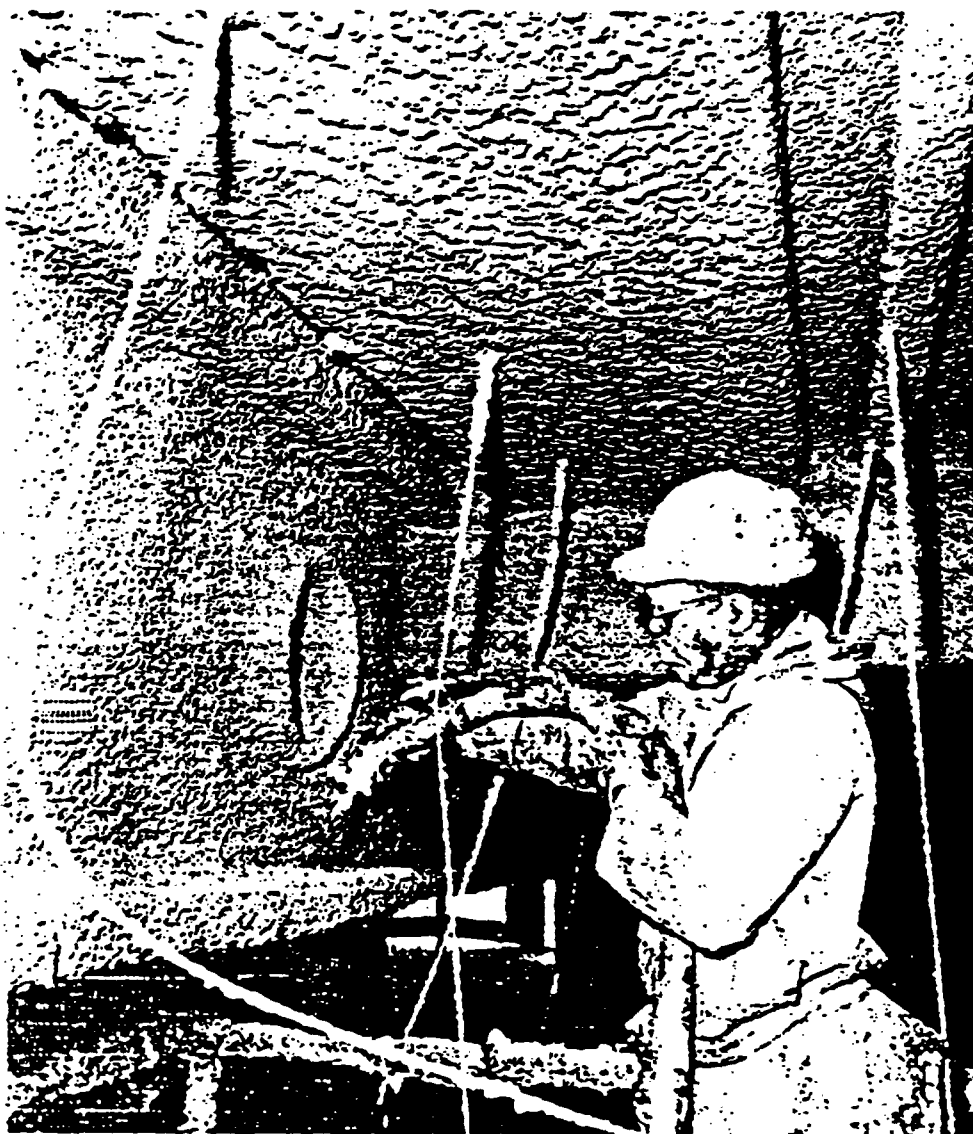
Nonolite Mono-Kote is a cementitious fireproofing compound that is spray applied to concrete or steel. It has been accorded fire ratings on many systems involving floors, ceiling beams, and columns.

Nonolite Vermiculite and Perlite Plaster Aggregates are used in lightweight plaster membrane fireproofing applications.



CONSTRUCTION PRODUCTS DIVISION
W. B. GRACE & CO.
1000 BROADWAY, NEW YORK, N.Y. 10018
MONROVIE, CALIF. 94555
TELEPHONE (415) 435-1111
CABLE ADDRESS: GRACE 1000

High Speed Fireproofing in Action



MODERN METHODS of fireproofing can supply up to 10,000 square feet of coverage in a day. High speed application allows trades that follow to get on job sooner. General as well as owner reaps benefits.

THE BANK of America building (right) involves one of the largest direct-to-steel fireproofing jobs in country.



"THE SPEED and method of applying fire protection has greatly improved over the last ten years. The San Francisco Bank of America job is an excellent example of this progress."

So says Gene Connell, president, Structural Fireproofing, Inc., the fireproofing contractor for the Bank of America.

"Methods traditionally relied on for protection of the steel frame," Connell says, "often are prohibitive in cost, time and weight. They also can delay other trades getting on the job."

"Modern methods, which pump materials long distances, can supply up to 10,000 square feet of coverage in a day. These high speed application rates allow the trades that follow to get on the job sooner, proceed at a quicker pace and leave the job quicker. Quicker occupancy benefits the owner as well as the general."

Bank is 'largest job'

Connell says he thinks the Bank of America work involves the largest direct-to-steel fireproofing job in the United States. His firm is applying about five million board feet of sprayed fireproofing to the bank.

"We are pumping the fireproofing material, Zonolite's 'MonoKote', long distances," Connell states. "We ultimately will pump the material 900 feet from one mixing station in the basement area. This gives us substantial freedom of movement—since we don't have to stock materials on the 40 individual floors or constantly move equipment. It is also saving us money on material handling costs."

Estimates a \$40,000 savings

Zonolite's Bob Chaney, who is involved with Connell on the Bank of America work, claims that pumping long distances saved Connell \$40,000 in material handling cost alone.

"We figure," Chaney says, "that the handling of material from one

general contractor as well as owner benefit from high speed fireproofing on Bank of America

point to another amounts to about 5¢ per bag. Where pumps are not used, it is necessary to transport individual packages from the van to the elevator and from the elevator to the floor where the mixing is done.

"There are additional costs for hoist rental, disposition of empty bags—when mixing must be done on individual upper floors. These extra material handling costs may run as much as 25¢ per bag.

"On the Bank of America 160,000 bags are being handled. It means potential savings of \$40,000."

Time saved in equipment set up

Connell says he also saved money in another area. "Proper set up of the mixer and plaster pump can save many hours of valuable time. A weather-protected site, preferably near the perimeter of the building and on the ground floor, usually offers the most economical position. Being near the perimeter of the project provides the proper shelter, the ease of stocking material and close proximity to any vertical runs of pipe for pumping."

'Can make or break a job'

Coordination between the fireproofing applicator and general contractor is of prime importance on any job, Connell adds. This is another critical area on the Bank of America job.

"Timing of the entry of the fireproofing applicator," Connell says, "can make or break a job for either the applicator or the general. The cost of fireproofing may double if the fireproofing contractor is not called in before the air distribution ducts and piping have been installed. Getting around these installed obstacles causes delay due to slow methods of application necessary to work around them.

"Stock piling by other trades also causes undue delays. Freedom to move and maneuver expedites the application for all parties."

Other aspects of fireproofing

Connell, a fourth generation owner of an old-line plastering firm, formed Structural in 1965 "to serve the specialized need for fireproofing structural steel frames." He talks about other aspects of fireproofing that make his job easier.

Simplicity of application

"Simplicity of application is of prime concern in developing a spray-on fireproofing material," he says. "Most fireproofing contractors are plasterers. They can use their plastering pumps for the job—thus avoiding buying special units.

"Optional equipment such as the so-called 'Mudslinger' and the Var-E-Speed controls are available if needed. But the 'Mudslinger' must operate on an extremely clear floor to take advantage of maneuverability."

The equipment used on the bank job is Essick Manufacturing Company's TM-30 gasoline powered plaster pump. Essick's standard 12 cubic capacity electric plaster mixer is also used.

One-time set up

"We have fireproofed many structures ranging from 10 to 32 stories moving the mixer or pump from its original set up position," Connell says. "Fluid material like 'Mono-Kote' can easily be pumped up vertically. Vertical runs of 2", 2½" or 3" diameter pipe provide an excellent conveyance for the vertical runs. Laborers who normally move equipment and material from floor-to-floor can either be eliminated from the work crew or can be used to assist the nozzle men in moving scaffolds or preparing areas for spraying. There is no down time for moving the units.

"Costly nozzle men are not kept sitting around waiting for equipment to be moved. Since material is stored on the ground and not on the upper floors, the spraying operation is not hampered."

Hardness a benefit

Hardness and integrity of the fireproofing material are important, Connell adds. Soft materials can easily be damaged by trades which follow the fireproofing applicator.

"Not only is the patching and repair costly and time-consuming, but it delays the time schedule of the project," Connell states. "The use of cementitious fireproofing materials reduces the probability of damage to the fireproofing—and may greatly reduce the overall cost of construction."

"Materials which are damaged quite readily also lead to closer scrutiny by building officials and fire insurance inspectors. In California, inspectors really enforce conformance to density, thickness and freedom from damage to the surface of the fireproofing. We are all aware of the slow-downs caused by extensive unnecessary inspections by inspection agencies."

Tenant changes are easier

Connell claims that direct application fireproofing offers many advantages.

"In an office building designed for varied occupancy and different ceiling heights," he says, "construction is not delayed until the ceiling pattern and a permanent partition plan are determined. Special protection is not needed for recessed lighting fixtures, air diffusers and return air grills. This is because the fireproofing is above the ceiling plane. Changes in office space can be accomplished at any future time without penetrating the fireproofing membrane."

Connell's fireproofing booms as he practices the ideas he preaches. Structural has 150 floors of fireproofing under contract; the firm expects 200 stories next year.

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For more information on Zonolite's "MonoKote", circle 380 on the reader service cards facing pages 18 and 45.

CONTACT: New York, 344-1200, Fred Bona, x330

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PHOTOS ATTACHED

SPRAY-ON FIREPROOFING WILL PROTECT STEEL IN
NEW BANK HEADQUARTERS UP TO FOUR HOURS

The largest direct-to-steel fireproofing job in the United States has approximately 5 million board feet of a four-hour rated spray-on fireproofing applied to the new Bank of America World Headquarters Building, the tallest in the West.

In the 52-floor San Francisco building, Zonolite Mono-Kote Fireproofing, developed and manufactured by the Zonolite Division, W. R. Grace & Co., was successfully pumped to a height of nearly 900 feet from one basement mixing station. One-time proper set-up of the mixer and plaster pump saves time and provides substantial freedom of movement during construction, since the equipment does not have to be constantly moved and materials do not have to be stocked on the 52 individual floors.

Mono-Kote, a cementitious, mill-mixed material requiring only the addition of water at the job, is designed specifically for fast application, high fire resistance, and low cost. Simplicity of application with a standard plastering pump and no obstructions are of prime concern for a spray-on fire resistant material and coordination between the fireproofing applicator and the general contractor is very important. The fireproofing application cost could double if applied after installation of air ducts and piping.

(more)

With the framing system consisting of a steel deck instead of concrete, the steel frames must be fireproofed. However, with the concrete, the building would have been twice as heavy. The contrasting densities are 150 pounds for normal concrete, as opposed to 20 pounds for Zonolite Mono-Kote, and once in place, the Mono-Kote holds the steel inside it below critical temperatures, should a fire break out, for up to four hours. The application of concrete encasement for fire protection of steel frame is often prohibitive in cost, time, weight, and delay of other trades.

Direct application fireproofing also offers many advantages. Special fireproofing protection is not required for recessed lighting fixtures, air diffusers, and return air grills because the fireproofing is above the ceiling plane. In an office building designed for varied occupancy and different ceiling heights, construction is not delayed until the ceiling pattern and a permanent partition plan are determined. Changes in office space can be accomplished at any future time without penetrating the fireproofing membrane.

Hardness and integrity of the fireproofing material are essential since soft materials can easily be damaged by trades following the fireproofing applicator. The use of cementitious fireproofing materials reduces the probability of damage to the fireproofing and may substantially reduce the overall cost of construction. Patching and repair are costly and time consuming. Fireproofing thicknesses vary throughout the building from 2 1/2 inches to 1 1/4 inches.

CONTACT: New York, 344-1200, Fred Bona, x330

The largest direct-to-steel fireproofing job in the United States has approximately 5 million board feet of spray-on fireproofing applied to the new Bank of America World Headquarters Building (top left photo), the tallest in the West. In the 52-floor San Francisco building, Zonolite Mono-Kote Fireproofing, developed and manufactured by Zonolite Division, W. R. Grace & Co., was successfully pumped to a height of nearly 900 feet from one basement mixing station (top right photo). One-time proper set-up of the mixer and plaster pump saves time and provides substantial freedom of movement during construction, since the equipment does not have to be constantly moved and materials do not have to be stocked on the 52 individual floors. Mono-Kote, a cementitious, mill-mixed material requiring only the addition of water at the job, is designed specifically for fast application, high fire resistance, and low cost. Simplicity of application with a standard plastering pump and no obstructions are of prime concern for a spray-on fireproofing material (bottom left photo). The fireproofing application cost could double if applied after installation of air ducts and piping. With the framing system consisting of a steel deck instead of concrete, the steel frames must be fireproofed. However, with the concrete, the building would have been twice as heavy. The contrasting densities are 150 pounds for normal concrete, as opposed to 20 pounds for Zonolite Mono-Kote, and once in place (bottom right photo), the Mono-Kote holds the steel inside it below critical temperatures, should a fire break out, for up to four hours.

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(Zonolite Mono-Kote Fireproofing is a product of the Zonolite Division of W. R. Grace & Co., Merchandise Mart Plaza, Chicago, Ill. 60654)

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