PLAINTIFF'S EXHIBIT
Blumberg No. 5113
WRG-86

7.14/Gra

GRACE

Zonolite® MONOKOTE® FIREPROOFING



Zonolite®

MR — MANUFACTURER

The Construction Products Division of W. R. Grace & Co. is a leading supplier of building materials to the construction market. MONOKOTE® Fireproofing is only one of the many quality products Grace has developed and supplied to the construction industry during the past twenty years. Concrete admixtures, waterproofing membranes, roof deck systems and a wide range of insulating materials are a few of the product areas through which Grace has developed its widely respected reputation in the construction industry. Grace remains committed to supplying innovative quality products to meet today's and tomorrow's construction industry needs.

OP — DOCUMENT

This catalog contains both general and technical data to help you, the professional, meet and specify your fire protection needs with MONOKOTE Fireproofing.

Please note: All data has been organized following the Sweets "Standard Guidelines For Preparation of Construction Product Literature", making product selection, comparison and specification easier and quicker.

CONTENTS	GL Heading	Page
W. R. Grace & Co.	MR — Manufacturer	2
Description	OP — Overall Product, In Place	3
Advantages	PP — Product Presentation	4
Fire Protection Ratings & Classification	CC — Codes, Certification	4-5
Specifications	TS — Technical Support Data	6-7
MONOKOTE Worldwide	UA — Uses, Applications	2-7
Sales Offices	AC — Availability, Costs	8

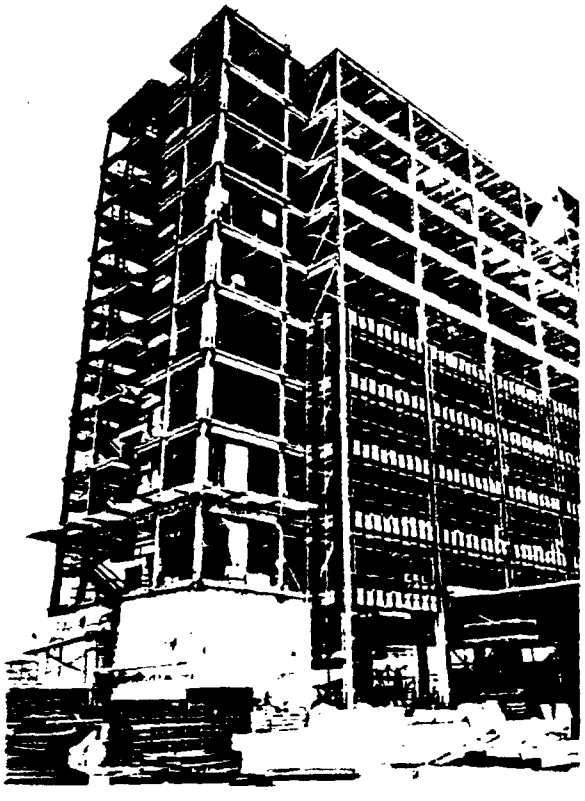
UA — USES, APPLICATIONS

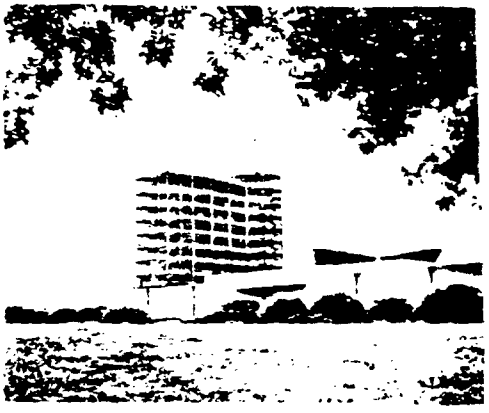
MONOKOTE Fireproofing

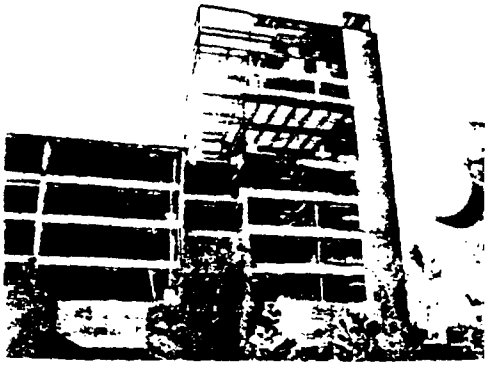
During the past twenty years, MONOKOTE Fireproofing has become the industry standard, representing quality spray-applied fire protection. MONOKOTE has been widely used in commercial, industrial, institutional and governmental construction projects. MONOKOTE has a tested and proven history of fire protection on beams, girders, columns, and a wide variety of the most modern steel and concrete floor and roof deck systems.

A partial listing of construction protected by MONOKOTE indicates how widely MONOKOTE is accepted in the industry today. There are significant numbers of MONOKOTE jobs in every major city in North America. There's one near you!

Continued on page 4







MONOKOTE CEMENTITIOUS FIREPROOFING

W. R. Grace & Co. Construction Products Division 1980

Zonolite SALES OFFICES

ARIZONA
Phoenix 85031 4220 West Glenrosa
P.O. Box 14279 (602) 272-6663

ARKANSAS
North Little Rock 72115 P.O. Box 294
(501) 945-1678

CALIFORNIA
LOS ANGELES
South Gate 90280 9430 Rayo Avenue.
(213) 567-7764
Santa Ana 92707 2500 South Garnsey Street
P.O. Box 2503, (714) 979-4682
SAN FRANCISCO/OAKLAND
Newark 94560 6851 Smith Avenue
P.O. Box 217, (415) 793-9111

COLORADO
Denver 80223 111 S. Navajo Street
(303) 722-5707

FLORIDA
Altamonte Springs 32701, 919 W. Highway 436
Suite 320 (305) 869-5161
Boca Raton 33432, 1555 N.W. First Avenue
(305) 395-2424
Jacksonville 32202, 1530 E. Adams Street.
(904) 355-8431
Pompano Beach 33060, 1200 N.W. Fifteenth
Avenue (305) 974-5200
Tampa 33605, P.O. Box 5047 Ybor Station
(813) 248-1554

GEORGIA
Atlanta 30362 6300 Button Gwinnett Drive
(404) 448-5880

[illegible]
CHICAGO
Park Ridge 60068, 1580 Northwest Highway
(312) 694-3144
WEST CHICAGO
West Chicago 60185, Fenton Industrial Park
603 Fenton Lane, (312) 231-8660

KENTUCKY
Wilder Newport 41071 112 North Street
(606) 291-3500

LOUISIANA
NEW ORLEANS
Jefferson 70181, P.O. Box 10245
(504) 733-2934

MARYLAND
BALTIMORE WASHINGTON, D.C.
Beltsville 20705, P.O. Box 347 (301) 953-2863

MASSACHUSETTS
BOSTON
Cambridge 02140 62 Whittemore Avenue
(617) 876-1400 Ext. 171
BOSTON SPRINGFIELD/WORCESTER
Easthampton 01027, P.O. Box 112,
(413) 527-1890

*Styrene Foam Insulation only

DETROIT
Dearborn 48121 14300 Henn Avenue
(313) 846-1010

[illegible]
Minneapolis 55413 1720 Madison St. N.E.
(612) 789-8845

KANSAS CITY ST. LOUIS
St. Louis 63110 1705 Sulphur Avenue
(314) 645-8786

[illegible]
Omaha 68107 3520 I Street (402) 731-0662

NEW JERSEY
NEWARK/TRENTON
North Brunswick 08902, 1215 Livingston Avenue.
(201) 828-5100

NEW YORK
ROCHESTER SYRACUSE ALBANY BUFFALO
Weedsport 13166 P.O. Box 312 (315) 834-6671
NEW YORK CITY
North Brunswick N.J. 08902, 1215 Livingston Ave
(212) 349-0964

NORTH CAROLINA
High Point 29260 P.O. Box 1308
(919) 886-4807

OHIO
CINCINNATI/COLUMBUS
Wilder Newport Kentucky 41071
112 North Street, (606) 291-3500

[illegible]
Oklahoma City 73111 P.O. Box 11402
(405) 232-2133

OREGON
Portland 97227 2303 N. Harding Street
(503) 288-5195

PENNSYLVANIA
PITTSBURGH
New Castle 16102, 202 E. Cherry Street
P.O. Box 1207 (412) 654-7721 (412) 654-7724
PHILADELPHIA
North Brunswick, New Jersey 08902,
1215 Livingston Avenue (201) 828-5100

TENNESSEE
Nashville 37204 4061 Powell Avenue
(615) 242-5496

TEXAS
Dallas 75222 P.O. Box 6306 (214) 637-0900
Houston 77008 P.O. Box 7253 Heights
Station (713) 864-2657
San Antonio 78204 P.O. Box [illegible]
(514) 223-[illegible]

WASHINGTON
SEATTLE TACOMA
Auburn 98002 102 C Street S.W. P.O. Box A
(206) 852-5725

[illegible]
Milwaukee 53208 900 North 43rd Street
(414) 344-6667

CANADA

Construction Products Division
W.R. Grace & Co. of Canada Ltd

ONTARIO
Alax L1S 3C6 294 Clements Road
(416) 683-8561

ALBERTA
Calgary T2H 1Z3 5830 Burbank Road S.E.
(403) 253-1013
Edmonton T5L 2Y5 14810-123rd Avenue
(403) 454-4511

BRITISH COLUMBIA
Vancouver V6A 2P3 476 Industrial Ave
(604) 669-4642

MANITOBA
Winnipeg R3E 1G6 1140 Pacific Avenue
(204) 786-5681

ZONOLITE PROCESSING

[illegible]
140 Deslauriers
[illegible]
[illegible]

P.O. Box 1419
12th St. North & River Dr.
Great Falls Montana 59403
(406) 453-1291

[illegible]
Albuquerque New Mexico
(505) 345-1633

P.O. Box 2396
333 W. First South Street
Salt Lake City, Utah [illegible]
[illegible]

P.O. Box 7327
3025 Maxroy Street
Houston Texas 77008
(713) 869-[illegible]

Copyright 1979 Zonolite and Monokote are registered [illegible] Construction Products Division W. R. Grace & Co. 62 Whittemore Ave. [illegible] 02140. We hope the information given here will be helpful [illegible] our best knowledge and we believe it to be true and accurate. Please [illegible] recommendations or suggestions herein [illegible] which apply to all goods supplied by us. We assume no [illegible] use of these statements, recommendations or suggestions [illegible] and there is a recommendation for any use which would infringe any [illegible]

[illegible] nearest sales [illegible]

MK 148E

Printed [illegible]

GRACE [illegible] DIVISION

test criteria. Approved performance criteria shall be:

3.3.1 [illegible] of the fireproofing shall be a minimum of 15 pcf with average minimum density of 17 pcf when tested in accordance with ASTM E605-77.

3.3.2 Material shall not crack or delaminate when the backing to which it is applied is subjected to a downward [illegible] of 1/120th of the span.

3.3.3 The fireproofing subject to impact tests on a sample of the completed floor assembly shall not crack or delaminate from the surface to which it was applied. The test shall consist of a 60lb. sand bag dropped from a height of 4'-0" onto the test specimen.

3.3.4 The sprayed on fireproofing applied over uncoated and galvanized steel shall have a minimum bond strength of 300 pounds per square foot when set and dry.

3.3.5 The fireproofing material shall not be subject to losses from the finished application by [illegible]. Performance shall be measured on samples representative of material which can be expected on the project and subjected to air velocities not less than 1250 feet per minute for a period of 24 hours.

3.3.6 As a measure of the fireproofing material's ability to resist [illegible], a sample of the material applied to a 6 inch by 24 inch galvanized steel sheet shall be subjected to a compressive load of 1000 lbs. The deformation of the material under these conditions shall be less than 10%.

3.3.7 Bare, shop-coated and galvanized steel sheets with the fireproofing applied shall be kept at 90 ± 3°F and 70 ± 3% RH for a duration of 240 hours without evidence of [illegible] of the steel.

3.3.8 The fireproofing material shall have been subjected to abrading forces in accordance with ASTM Proposed Test Methods For Fire Resistive Materials. The [illegible] when tested in accordance with this method shall be no more than 1.22 in.³ (20 cm³).

3.3.9 The fireproofing material shall have been subjected to [illegible] tests in accordance with test procedures per ASTM Proposed Test Methods for Sprayed Fire Resistive Material. Samples of the material when subjected to impact forces shall not show an impact loss greater than .31 in.³ (5 cm³).

4.0 [illegible]

4.1 All material to be used for fireproofing shall be delivered in original unopened packages bearing the name of the manufacturer, the brand and proper Underwriters Laboratories, Inc. labels for fire hazard and fire resistance classifications.

4.2 The material shall be kept dry until ready for use. The packages of material shall be kept off the ground under cover and away from sweating walls and other damp surfaces. All bags that have been exposed to water before use shall be discarded. Stock of material is to be rotated and used before its expiration date.

4.3 Prior to application of fireproofing material, an inspection shall be made to see that all steel is acceptable to receive fireproofing. Steel shall be free of oil, grease, loose mill scale, or any other substance that may impair proper adhesion. Where necessary, cleaning of surfaces to receive fireproofing shall be the responsibility of structural steel erector, or general contractor, as outlined in structural steel section.

4.4 All clips, hangers supports, sleeves and other attachments to the fireproofing bases, as covered under other sections of the specifications, are to be placed by others, prior to the application of the fireproofing material, where these attachments can be anticipated in advance.

4.5 Ducts, piping, conduit or other suspended equipment that interfere with the uniform application of the fireproofing material shall be positioned after the application of the sprayed fireproofing.

5.0 [illegible]

5.1 Application of sprayed fireproofing shall be in accordance with the printed instructions of the material manufacturer and shall be installed by experienced craftsmen.

5.2 Fireproofing shall be to the underside of roof deck assemblies only after roofing application is complete and roof traffic has ceased.

5.3 No fireproofing shall be applied prior to completion of concrete work on steel decking.

5.4 Temperature and enclosure conditions shall be as required by the fireproofing manufacturer.

5.4.1 An air and substrate temperature of 40°F (4.5°C) shall be maintained for 24 hours before and after application of the fireproofing.

5.4.2 Provisions shall be made for ventilation to properly dry the fireproofing after application. In enclosed areas lacking natural ventilation air circulation and ventilation is to be provided

5.5 Patching and repairing of sprayed fireproofing damaged by other trades, shall be performed under this section and paid for by the trade(s) causing the damage.

6.0 [illegible]

6.1 After completion of the fireproofing work, equipment shall be removed and all exposed wall and floor areas shall be cleaned of deposits of sprayed fireproofing materials.

7.0 [illegible]

7.1 The architect may select, and the owner will pay, an independent testing laboratory to sample and verify the thickness and density of the fireproofing in accordance with provisions of ASTM E605-77 "Standard Test Method for Thickness and Density of Sprayed Fire Resistive Material Applied to Structural Members" or Uniform Building Code Standard No. 43-6 "Thickness and Density Determination for Sprayed Fireproofing"

W. R. Grace & Co.
Construction Products Division
1980
7 | MONOKOTE CEMENTITIOUS FIREPROOFING

Zonolite SALES OFFICES

[illegible]

ARIZONA
Phoenix 85031 4220 West Glenrosa
P O Box 14279, (602) 272-6663

ARKANSAS
North Little Rock 72115 P O Box 294
(501) 945-1678

CALIFORNIA
LOS ANGELES
South Gate 90280, 9430 Rayo Avenue,
(213) 567-7764
Santa Ana 92707 2500 South Garnsey Street,
P O Box 2503, (714) 979-4682
SAN FRANCISCO/OAKLAND
Newark 94560, 6851 Smith Avenue,
P O. Box 217, (415) 793-9111

COLORADO
Denver 80223, 111 S. Navajo Street
(303) 722-5707

FLORIDA
Altamonte Springs 32701 919 W Highway 436
Suite 320 (305) 869-5161
Boca Raton 33432, 1555 N W First Avenue
(305) 395-2424
Jacksonville 32202, 1530 E Adams Street,
(904) 355-8431
Pompano Beach 33060, 1200 N W Fifteenth
Avenue, (305) 974-5200
Tampa 33605, P O. Box 5047, Ybor Station
(813) 248-1554

GEORGIA
Atlanta 30362, 6300 Button Gwinnett Drive
(404) 448-5880

ILLINOIS
CHICAGO
Park Ridge 60068 1580 Northwest Highway
(312) 694-3144
WEST CHICAGO
West Chicago 60185, Fenton Industrial Park,
603 Fenton Lane, (312) 231-8660

KENTUCKY
Wilder Newport 41071, 112 North Street
(606) 291-3500

LOUISIANA
NEW ORLEANS
Jefferson 70181, P O Box 10245
(504) 733-2934

MARYLAND
BALTIMORE WASHINGTON, D C
Beltsville 20705, P O Box 347 (301) 953-2863

MASSACHUSETTS
BOSTON
Cambridge 02140, 62 Whittemore Avenue
(617) 876-1400 Ext 171
BOSTON SPRINGFIELD/WORCESTER
Easthampton 01027 P O. Box 112,
(413) 527-1890

*Styrene Foam Insulation only

[illegible]
DETROIT
Dearborn 48121 14300 Henn Avenue
(313) 846-1010

[illegible]
Minneapolis 55413 1720 Madison St N E
(612) 789-8845

[illegible]
KANSAS CITY/ST LOUIS
St Louis 63110 1705 Sulphur Avenue
(314) 645-8786

[illegible]
Omaha 68107 3520 "I" Street (402) 731-3662

NEW JERSEY
NEWARK/TRENTON
North Brunswick 08902, 1215 Livingston Avenue
(201) 828-5100

NEW YORK
ROCHESTER SYRACUSE/ALBANY BUFFALO
Weedsport 13166, P O Box 310 (315) 834-6671
NEW YORK CITY
North Brunswick, N.J 08902, 1215 Livingston Ave
(212) 349-0964

NORTH CAROLINA
High Point 29260, P O Box 1308
(919) 886-4807

OHIO
CINCINNATI/COLUMBUS
Wilder, Newport, Kentucky 41071,
112 North Street, (606) 291-3500

[illegible]
Oklahoma City 73111, P O Box 11402
(405) 232-2133

OREGON
Portland 97227 2303 N Harding Street
(503) 288-5195

PENNSYLVANIA
PITTSBURGH
New Castle 16102, 202 E Cherry Street
P O Box 1207, (412) 654-7721 (412) 654-7724
PHILADELPHIA
North Brunswick, New Jersey 08902,
1215 Livingston Avenue, (201) 828-5100

TENNESSEE
Nashville 37204, 4061 Powell Avenue
(615) 242-5496

TEXAS
Dallas 75222, P O Box 6306, (214) 637-0900
Houston 77008 P O Box 7253, Heights
Station (713) 864-2657
San Antonio 78204 P O Box 9114
(514) 223-5761

WASHINGTON
SEATTLE-TACOMA
Auburn 98002, 102 C Street, S W. P O Box A
(206) 852-5725

[illegible]
Milwaukee 53208, 900 North 43rd Street
(414) 344-6667

CANADA

Construction Products Division
W R Grace & Co of Canada Ltd

ONTARIO
Ajax L1S 3C6, 294 Clements Road
(416) 683-8561

ALBERTA
Calgary T2H 1Z3, 5830 Burbank Road S E
(403) 253-1013
Edmonton T5L 2Y5 14810-123rd Avenue
(403) 454-4511

BRITISH COLUMBIA
Vancouver V6A 2P3 475 Industrial Ave
(604) 669-4642

MANITOBA
Winnipeg R3E 1G6, 1140 Pacific Avenue
(204) 786-5681

ZONOLITE PROCESSING

[illegible]
140 Deslauriers
[illegible]
[illegible]

[illegible]
P O Box 1419
12th St, North & River Dr
Great Falls Montana 59403
(406) 453-1291

[illegible]
[illegible]
Albuquerque New Mexico [illegible]
(505) 345-1633

P O Box 2398
333 W First South Street
Salt Lake City Utah [illegible]
[illegible]

P O Box 7327
3025 Maxroy Street
Houston Texas 77008
(713) 869-6663

Copyright 1979 Zonolite and Monokote are registered trademarks of Construction Products Division W R Grace & Co 62 Whittemore Ave, Cambridge 02140. We hope the information given here will be helpful. It is based on our best knowledge and we believe it to be true and accurate. Please read all recommendations or suggestions herein in conjunction with our conditions of sale which apply to all goods supplied by us. We assume no responsibility for use of these statements, recommendations or suggestions. Nor do we intend them as a recommendation for any use which would infringe any patent.

[illegible]
nearest sales [illegible] Fourth [illegible]

MK 148E

Printed in U.S.A.

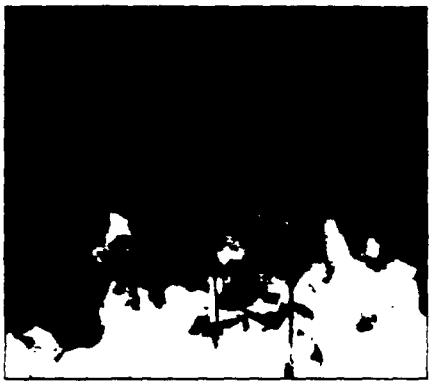
GRACE [illegible] STRUCTURAL PRODUCTS DIVISION

TS — TECHNICAL SUPPORT DATA

Specifications

Specification (Short Form):

Sprayed fireproofing material shall be MONOKOTE Fireproofing as manufactured by the Construction Products Division, W. R. Grace & Co., or its processing distributor. It shall be applied by machine to the thickness required by local code specifications, and as indicated on all applicable drawings. The method of mixing and application shall comply with the manufacturer's recommendations as set forth in current literature.



Specification (Standard Form):

1.0

1.1 Work Included
Provide materials, labor, equipment and services necessary; furnish, deliver and install all work as shown on the drawings, as specified herein, and/or as required by job conditions

1.2 Work Not Included

1.2.1 Concrete encasement of structural steel

1.2.2 Troweled plaster

1.2.3 Cleaning of surfaces to be fireproofed

1.2.4 Fireproofing applied to lath.

2.0

2.1 Materials

2.1.1 The sprayed fireproofing material shall be MONOKOTE cementitious type as manufactured by the Construction Products Division, W. R. Grace & Co., or its processing distributors and shall be formulated without asbestos.

2.1.2 Mixing water shall be clean, fresh and suitable for domestic consumption and free from such amounts of mineral or organic substances as would affect the set of the fireproofing material.

3.0

3.1 The sprayed fireproofing shall have been tested by Underwriters Laboratories, Inc. or other certified testing agency in accordance with the procedures of ASTM E119.

3.2 The sprayed fireproofing material shall have been sprayed onto structural members, the underside of decks after concrete topping and/or roofing applications have been completed and to other members indicated on the drawings with proper thickness and densities to provide the following fire resistive ratings

3.2.1 Columns: _____hr.
Primary Members: _____hr
Secondary Members. _____hr

3.2.2 The sprayed fireproofing beneath the floor assembly together with the assembly above: _____ hr

3.2.3 The sprayed fireproofing beneath the roof assembly together with the assembly above: _____ hr

3.3 The sprayed-on fireproofing shall be a factory mixed cementitious material. The material shall be applied to provide compliance with specified performance specifications and

USA USES, APPLICATIONS continued

Tulsa — Bank of Oklahoma — Williams Center, American Airlines Data Center, Performing Arts Center

San Francisco — Regency Hyatt House, Transamerica Building, Bank of America

San Diego — Federal Courts & Office Building, Central Office Tow[illegible] VA Hospital

Chicago — Standard Oil Bu[illegible]; Harris Trust, Northern Trust

Reno — MGM Grand Hotel, Security National Bank, St. Mary's Hospital

Houston — Pennzoil Building, Houston Center, Allen Center

A group of qualified professionals — the architect, engineer, and general contractor — in each of these cities — has chosen MONOKOTE to fulfill their need for reliable quality fire protection.



Resistance Ratings refers to two ratings — one based on time-temperature performance (unrestrained) and the other based on a combination of structural and lesser time-temperature performance criteria (restrained).

Fire Protection Performance: MONOKOTE Fireproofing has been tested and classified by Underwriters Laboratories, Inc. in accordance with ASTM E119 for fire resistance ratings from 1 to 4 hours in over 50 individual UL classifications (see fire rating table, this page). MONOKOTE field performance in actual building fires has also been extensively documented.

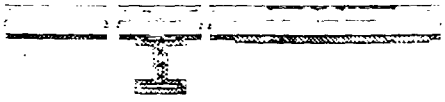
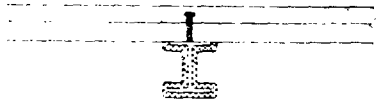
Fire Test Method (ASTM E84): As listed and classified by Underwriters Laboratories, Inc., ASTM E-84 Tunnel Test, MONOKOTE Fireproofing has a low flame spread, negligible fuel contributed, and zero smoke developed. Underwriters Laboratories lists:

Flame Spread	10
Fuel Contributed	5
Smoke Developed	0

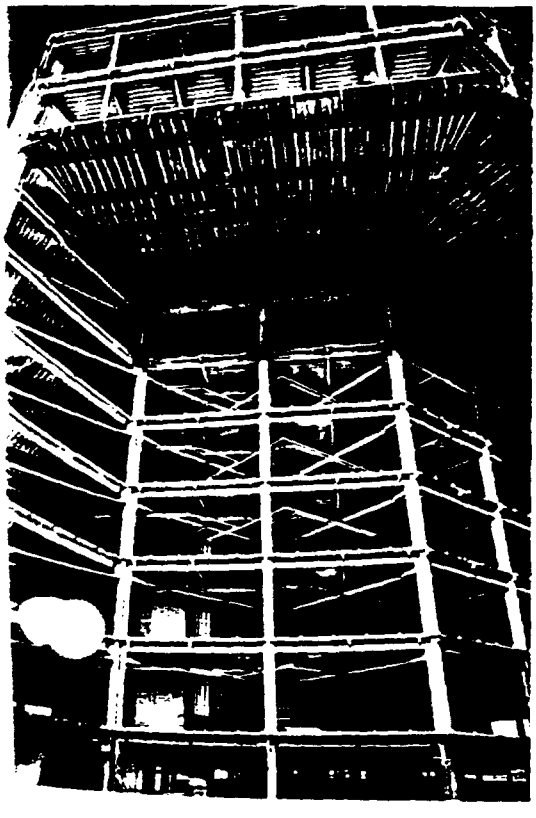
Fireproofing Requirements: The MONOKOTE Fireproofing thickness, required to achieve a particular fire resistance classification (rating), depends upon local requirements.

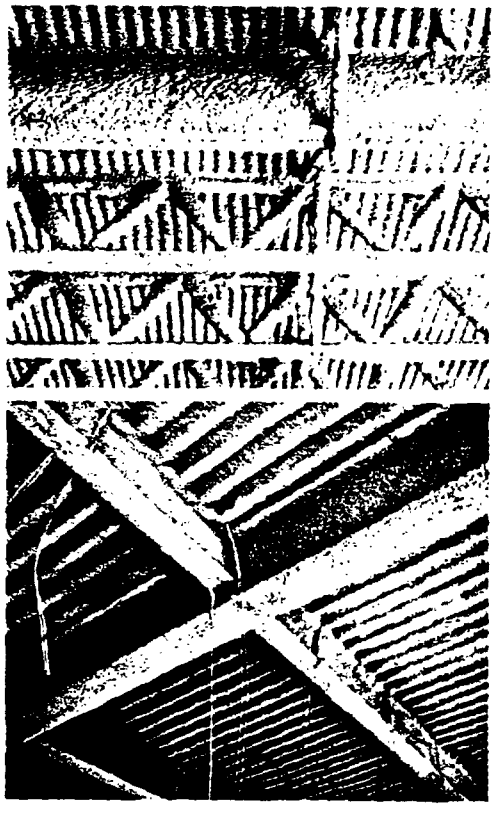
NOTE. In many instances, local building codes have not yet adopted the most recent revisions to the E119 criteria. Contact your nearest Zonolite office for the latest criteria in your area.

Fire Ratings For Typical Constructions

Construction	Hourly Ratings	U.L. Design Numbers
FLOOR/CEILING SYSTEMS Protected Floors		
	2.3 Hr 3 Hr 2 Hr 1.2 Hr 2 Hr	D703 D708 D712 D722 D739
UNPROTECTED FLOORS		
	1½ Hr 2 Hr 1 Hr 1 1/2, 2.3 Hr 1½ 2.3 Hr	D905 D907 D909 D915 D917
CONCRETE SYSTEMS		
Pan-Joist/Poured in Place	2 Hr	J701
Pre Cast Concrete	2.3.4 Hr 2.3.4 Hr.	J704 J705
ROOF SYSTEMS		
Mineral Fiber Board/Deck	1 Hr 1½.2 Hr	P701 P703
Vermiculite Concrete	1½ Hr. 2 Hr	P919 P908
BEAMS ONLY		
Restrained Unrestrained	1.2.3.4 Hr 1.2.3.4 Hr.	N706 N708
COLUMNS — DIRECT SPRAY		
W 6 x 16 or Larger	1.2.3 Hr	X722
W 8 x 28 or Larger	1.2.3.4 Hr	X723
W 8 x 28 or Larger*	2.3.4 Hr	X527
W10 x 49 or Larger	1.1½.2.3.4 Hr	X721
W14 x 228 or Larger	2.3.4 Hr	X704
*Direct Spray and Wall Board		

Check UL Design Listings for Concrete, Deck Type, Trench Headers, etc





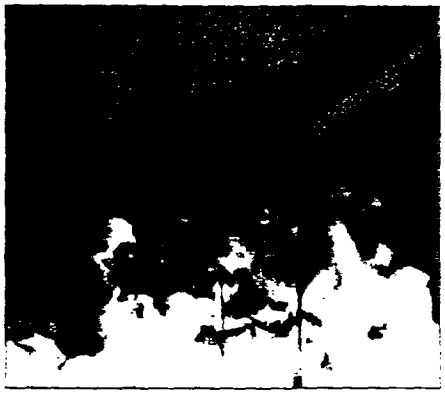


TS — TECHNICAL SUPPORT DATA

Specification

Specification (Short Form):

Sprayed fireproofing material shall be MONOKOTE Fireproofing as manufactured by the Construction Products Division, W. R. Grace & Co., or its processing distributor. It shall be applied by machine to the thickness required by local code specifications, and as indicated on all applicable drawings. The method of mixing and application shall comply with the manufacturer's recommendations as set forth in current literature.



Specification (Standard Form):

1.0

1.1 **Work Included**
Provide materials, labor, equipment and services necessary to furnish, deliver and install all work as shown on the drawings, as specified herein, and/or as required by job conditions.

1.2 **Work Not Included**

1.2.1 Concrete encasement of structural steel.

1.2.2 Troweled plaster.

1.2.3 Cleaning of surfaces to be fireproofed.

1.2.4 Fireproofing applied to lath.

2.0

2.1 **Materials**

2.1.1 The sprayed fireproofing material shall be MONOKOTE cementitious type as manufactured by the Construction Products Division, W. R. Grace & Co., or its processing distributors and shall be formulated without asbestos.

2.1.2 Mixing water shall be clean, fresh and suitable for domestic consumption and free from such amounts of mineral or organic substances as would affect the set of the fireproofing material.

3.0

3.1 The sprayed fireproofing shall have been tested by Underwriters Laboratories, Inc. or other certified testing agency in accordance with the procedures of ASTM E119.

3.2 The sprayed fireproofing material shall have been sprayed onto structural members, the underside of decks after concrete topping and/or roofing applications have been completed and to other members indicated on the drawings with proper thickness and densities to provide the following fire resistive ratings:

3.2.1 Columns _____ hr.
Primary Members _____ hr.
Secondary Members _____ hr.

3.2.2 The sprayed fireproofing beneath the floor assembly, together with the assembly above _____ hr.

3.2.3 The sprayed fireproofing beneath the roof assembly, together with the assembly above _____ hr.

3.3 The sprayed-on fireproofing shall be a factory mixed cementitious material. The material shall be applied to provide compliance with specified performance specifications and

UA-USES, APPLICATIONS-continued

Tulsa — Bank of Oklahoma — Williams Center, American Airlines Data Center, Performing Arts Center

San Francisco — Regency Hyatt House, Transamerica Building, Bank of America

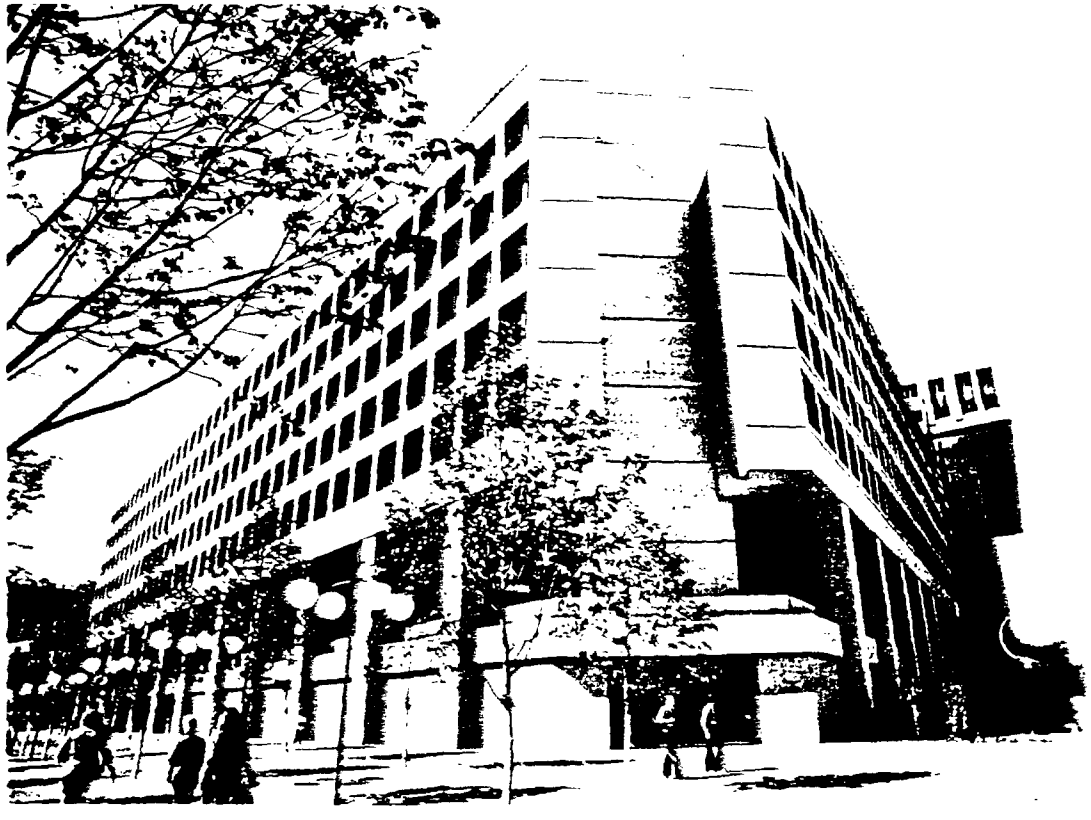
San Diego — Federal Courts & Office Building, Central Office Towers, VA Hospital

Chicago — Standard Oil Building, Harris Trust, Northern Trust

Reno — MGM Grand Hotel, Security National Bank, St. Mary's Hospital

Houston — Pennzoil Building, Houston Center, Allen Center

A group of qualified professionals — the architect, engineer, and general contractor — in each of these cities — has chosen MONOKOTE to fulfill their need for reliable quality fire protection.



PP — PRODUCT PRESENTATION

What do MONOKOTE's most important characteristic advantages mean in actual field use?

Factory-Mixed Single Component: Rigid UL factory inspection assures the proper ratio of raw materials necessary to obtain the UL tested fire endurance rating. There is no on-site juggling of ingredients. Just add water, mix, pump and spray.

Cementitious: The spray-applied MONOKOTE slurry sets to a continuous, monolithic, fire-protective envelope. Structural members are completely encapsulated with a continuous, uniform heat shield.

High Bond Strength: MONOKOTE's high plaster content provides a tenacious bond to concrete and steel substrates. High bond strength helps minimize accidental damage by others working on or in the structure after the fireproofing is in place. Any necessary patching is easily accomplished by troweling a small amount of the slurry into any damaged areas.

Permanent, Continuous Protection: Under normal end-use conditions, MONOKOTE can be expected to remain in place and provide continuous fire protection throughout the life of the building.

Once in place, MONOKOTE requires no maintenance — there are no pipes to be drained or valves that can be accidentally left shut.

Hard, Dust-Free: MONOKOTE sets and dries forming a hard and dust-free surface. No overspraying, sealing, or tamping is required.

Low In-Place Cost, Rapid Application: W. R. Grace & Co. has available high-production literature and provides on-site technical guidance to plasterers throughout the country to ensure efficient high production MONOKOTE application techniques. These techniques minimize labor costs and help adhere to tight construction schedules. Special fireproofing kits are available for high production pumping to further increase overall application efficiency.

Dry Density: Dry density can be directly related to damagability: a consistent, uniform density throughout the material adds greatly to its ability to resist accidental penetration and removal. The density of MONOKOTE is uniform throughout; there is no thin crust to break, flake or peel away. MONOKOTE density is approximately 17 pcf. Underwriters Laboratories, Inc. lists 15 pcf as the minimum density.

EPA Compliance: MONOKOTE Fireproofing is in compliance with United States Environmental Protection Agency (EPA) Regulation 40 C. F. R., Chapter 1, Subsection 61.22E, promulgated by EPA on April 6, 1973.

MONOKOTE Fireproofing has already met the proposed industry primary requisites for an ideal fireproofing material.

Adhesion/Cohesion	Pass
Corrosion	Pass
Deflection/Bond Impact	Pass
Compression	Pass
Air Erosion Resistance	Pass
Abrasion/Impact Resistance	Pass

Note: Above results comply with and in most instances exceed GSA Requirements

CC — MONOKOTE FIRE PROTECTION

Fire Test Method ASTM E119: Structural fire resistance is the predicted time period that a material or system can withstand a standard fire exposure, usually expressed in terms of hours. The fire resistance ratings are the results of standard fire test exposures in accordance with ASTM E119, "Standard Methods of Fire Tests of Building Construction and Materials".

E119 Criteria: Current revisions to E119 provide a system for rating the hourly performance of assemblies and individual structural members. The Underwriters Laboratories, Inc. Directory of Fire

UA-USES, APPLICATIONS continued

Canada — Lansdowne Shopping Center — BC, Edmonton Center — Alb, Markham Market Place — Ont.

New York — CitiBank, Iranian Bldg

Boston — Shawmut Bank, 60 State Street

Denver — Mountain Bell, Denver Square Project (Anaconda Bldg.) Blue Cross/Blue Shield Bldg.

Washington, DC — Department of Labor, FBI, Walter Reed Hospital

Los Angeles — Century Plaza Towers, United California Bank Building, Security Pacific Bank Building

Atlanta — Omni Center, Coca Cola Building, 101 Marietta Building

Anchorage — Captain Cook Hotel, ARCO Building, British Petroleum Building

Dallas — Hyatt Regency Hotel, Allstate Insurance Company, C&H Transportation

Seattle — Bank of California, Federal Office Building, Pacific Northwest Bell

continued on page 6



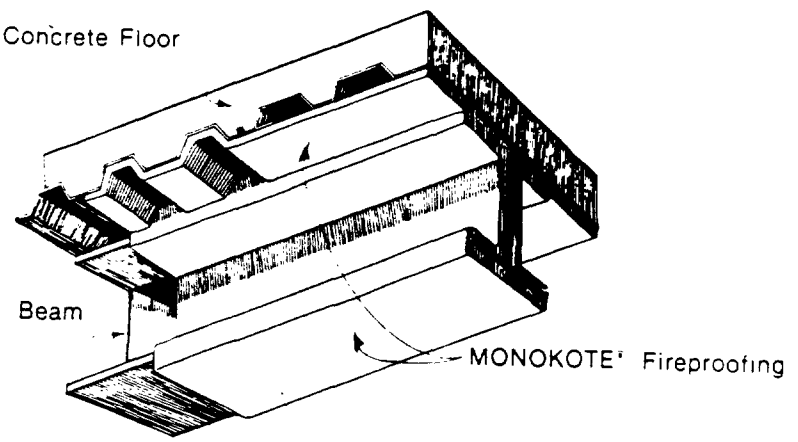


04502368

OP — OVERALL PRODUCT IN PLACE

Description

MONOKOTE Fireproofing has been developed by the Construction Products Division, W. R. Grace & Co., specifically for fast, reliable application, low in-place cost and high fire resistance. MONOKOTE is a single component, mill-mixed material, and requires only the addition of water at the job site to form a consistent, pumpable, slurry. MONOKOTE is formulated to be spray-applied directly to steel, concrete and other substrates requiring fire protection, using a wide variety of plaster pumps.

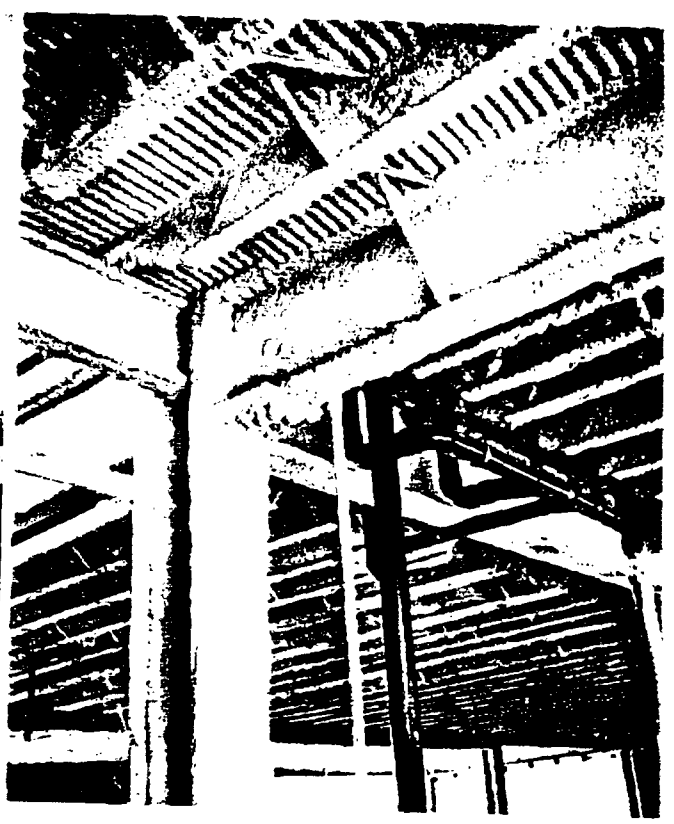


Advantages & Features

MONOKOTE, a cementitious plaster fireproofing, has several features which should be considered when specifying fireproofing products:

- Single Component
- High Bond Strength
- Monolithic
- UL, Inc. Tested and Factory Inspected
- Cementitious
- Rapid Spray Application
- Low In-Place Cost
- Hard, Dust-Free Surface
- Won't Crack, Spall, Deteriorate





PP — PRODUCT PRESENTATION

What do MONOKOTE's most important characteristic advantages mean in actual field use?

Factory-Mixed Single Component: Rigid UL factory inspection assures the proper ratio of raw materials necessary to obtain the UL tested fire endurance rating. There is no on-site juggling of ingredients. Just add water, mix, pump and spray.

Cementitious: The spray-applied MONOKOTE slurry sets to a continuous, monolithic, fire-protective envelope. Structural members are completely encapsulated with a continuous, uniform heat shield.

High Bond Strength: MONOKOTE's high plaster content provides a tenacious bond to concrete and steel substrates. High bond strength helps minimize accidental damage by others working on or in the structure after the fireproofing is in place. Any necessary patching is easily accomplished by troweling a small amount of the slurry into any damaged areas.

Permanent, Continuous Protection: Under normal end-use conditions, MONOKOTE can be expected to remain in place and provide continuous fire protection throughout the life of the building. Once in place, MONOKOTE requires no maintenance — there are no pipes to be drained or valves that can be accidentally left shut.

Hard, Dust-Free: MONOKOTE sets and dries forming a hard and dust-free surface. No overspraying, sealing, or tamping is required.

Low In-Place Cost, Rapid Application: W. R. Grace & Co. has available high-production literature and provides on-site technical guidance to plasterers throughout the country to ensure efficient high production MONOKOTE application techniques. These techniques minimize labor costs and help adhere to tight construction schedules. Special fireproofing kits are available for high production pumping to further increase overall application efficiency.

Dry Density: Dry density can be directly related to damagability: a consistent, uniform density throughout the material adds greatly to its ability to resist accidental penetration and removal. The density of MONOKOTE is uniform throughout; there is no thin crust to break, flake or peel away. MONOKOTE density is approximately 17 pcf. Underwriters Laboratories, Inc. lists 15 pcf as the minimum density.

EPA Compliance: MONOKOTE Fireproofing is in compliance with United States Environmental Protection Agency (EPA) Regulation 40 C. F. R., Chapter 1, Subsection 61:22E, promulgated by EPA on April 6, 1973.

MONOKOTE Fireproofing has already met the proposed industry primary requisites for an ideal fireproofing material.

Adhesion/Cohesion	Pass
Corrosion	Pass
Deflection/Bond Impact	Pass
Compression	Pass
Air Erosion Resistance	Pass
Abrasion/Impact Resistance	Pass

Note: Above results comply with and in most instances exceed GSA Requirements

CC — MONOKOTE FIRE PROTECTION

Fire Test Method (ASTM E119): Structural fire resistance is the predicted time period that a material or system can withstand a standard fire exposure, usually expressed in terms of hours. The fire resistance ratings are the results of standard fire test exposures in accordance with ASTM E119, "Standard Methods of Fire Tests of Building Construction and Materials".

E119 Criteria: Current revisions to E119 provide a system for rating the hourly performance of assemblies and individual structural members. The Underwriters Laboratories, Inc. Directory of Fire

UA-USES, APPLICATIONS-continued

Canada — Lansdowne Shopping Center — BC; Edmonton Center — Alb; Markham Market Place — Ont.

New York — CitiBank, Iranian Bldg.

Boston — Shawmut Bank, 60 State Street

Denver — Mountain Bell, Denver Square Project (Anaconda Bldg.) Blue Cross/Blue Shield Bldg.

Washington, DC — Department of Labor, FBI, Walter Reed Hospital

Los Angeles — Century Plaza Towers, United California Bank Building, Security Pacific Bank Building

Atlanta — Omni Center, Coca-Cola Building, 101 Marietta Building

Anchorage — Captain Cook Hotel, ARCO Building, British Petroleum Building

Dallas — Hyatt Regency Hotel, Allstate Insurance Company, C&H Transportation

Seattle — Bank of California, Federal Office Building, Pacific Northwest Bell

continued on page 6





Zonolite®

MONOKOTE FIREPROOFING

MR — MANUFACTURER

The Construction Products Division of W. R. Grace & Co. is a leading supplier of building materials to the construction market. MONOKOTE® Fireproofing is only one of the many quality products Grace has developed and supplied to the construction industry during the past twenty years. Concrete admixtures, waterproofing membranes, roof deck systems and a wide range of insulating materials are a few of the product areas through which Grace has developed its widely respected reputation in the construction industry. Grace remains committed to supplying innovative quality products to meet today's and tomorrow's construction industry needs.

OP — DOCUMENT

This catalog contains both general and technical data to help you, the professional, meet and specify your fire protection needs with MONOKOTE Fireproofing.

Please note: All data has been organized following the Sweets Standard Guidelines For Preparation of Construction Product Literature — making product selection, comparison and specification easier and quicker.

CONTENTS	GL Heading	Page
W. R. Grace & Co.	MR — Manufacturer	2
Description	OP — Overall Product, In Place	3
Advantages	PP — Product Presentation	4
Fire Protection Ratings & Classification	CC — Codes, Certification	4-5
Specifications	TS — Technical Support Data	6-7
MONOKOTE Worldwide	UA — Uses, Applications	2-7
Sales Offices	AC — Availability, Costs	8

UA — USES, APPLICATIONS

MONOKOTE Fireproofing

During the past twenty years, MONOKOTE Fireproofing has become the industry standard, representing quality spray-applied fire protection. MONOKOTE has been widely used in commercial, industrial, institutional and governmental construction projects. MONOKOTE has a tested and proven history of fire protection on beams, girders, columns, and a wide variety of the most modern steel and concrete floor and roof deck systems.

A partial listing of construction protected by MONOKOTE indicates how widely MONOKOTE is accepted in the industry today. There are significant numbers of MONOKOTE jobs in every major city in North America. There's one near you!

continued on page 4

