KEENE
CORPORATION

SOUND CONTROL DIVISION

U.S. NO. 1, PRINCETON, NEW JERSEY 08540 • TELEPH

BULLETIN

H 001948

PLAINTIFF'S EXHIBIT
KN-331

March 30, 1970

Bulletin B-577

To: Pyrospray Manual Holders

Re: 1970 Pyrospray Brochure

Attached you will find a copy of the 1970 Pyrospray Brochure which has been inserted in the 1970 Sweets Catalog.

At the time this brochure was sent to press, the binder problem which developed with Bonded "K-dB" had not been encountered. At this time we believe we are well on the way to solving the problem that developed and expect to be in a position within the next 90 days to inform you accordingly.

Lee C. Jenne
Manager
Spray Products

LCJ:jca

Enc.

I 0349702

PYROSP

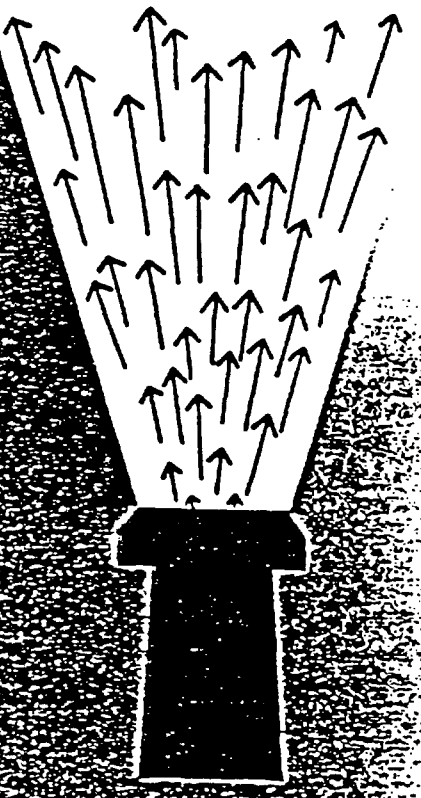
001949

fireproofing

condensation control

acoustical treatment

thermal insulation



KEENE
CORPORATION

SOUND CONTROL DIVISION

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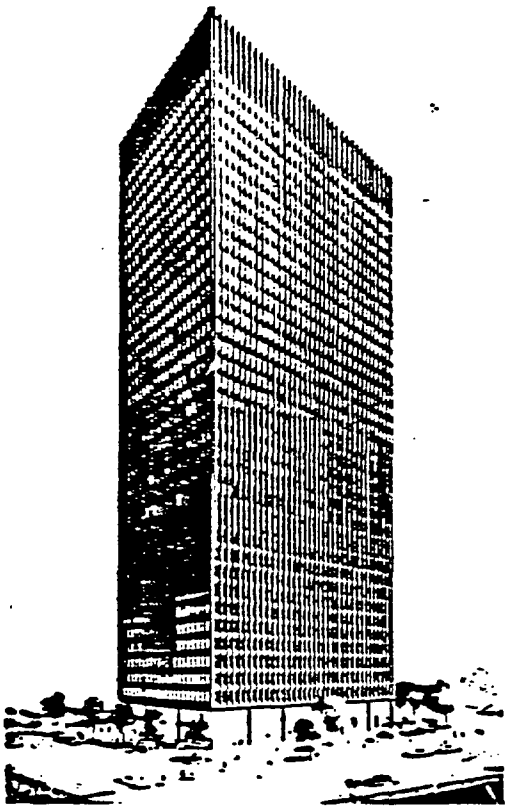
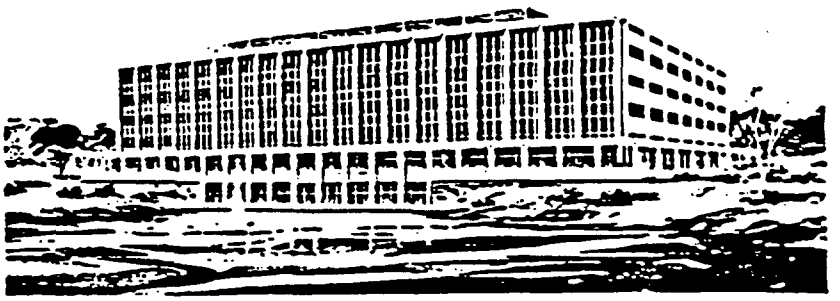
KEENE CORPORATION SOUND CONTROL DIVISION 70 FIFTH AVE. N.Y. 89 SPECIAL COATINGS

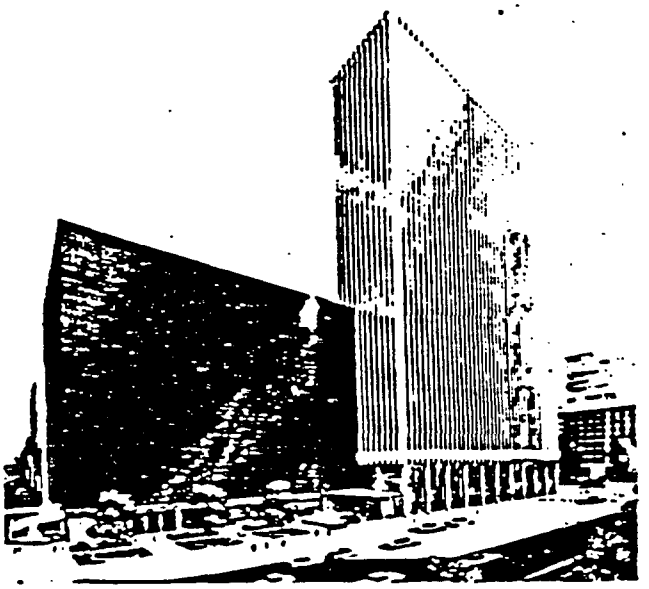
PYROSPRAY



ONE OLIVER PLAZA
Pittsburgh, Pennsylvania
Architect: William Lescaze and Associates, New York, New York
General Contractor: Diesel Construction Co., Pittsburgh, Pennsylvania
Applicator: Carley-Siciliano, Inc., Pittsburgh, Pennsylvania

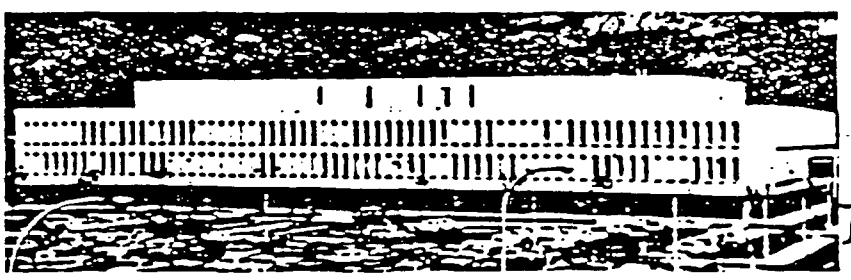


NATIONAL GEOGRAPHIC SOCIETY
MEMBERSHIP OPERATIONS BUILDING
Gaithersburg, Md.
Architect: Mills, Petticord & Mills, Washington, D.C.
General Contractor: Charles H. Tompkins Co., Washington, D.C.
Applicator: Bilton Insulation and Supply, Inc., Arlington, Va.



MIDWEST FEDERAL BUILDING
Minneapolis, Minnesota
Architect: Wilburn McCormick, St. Louis, Missouri
General Contractor: Knudson Construction Co., Minneapolis, Minnesota
Applicator: Insulation Sales Company, Minneapolis, Minnesota

PRATT AND WHITNEY
East Hartford, Connecticut
Architect: DuBose Associates, Hartford, Connecticut
General Contractor: George A. Fuller Co., Inc., East Hartford, Connecticut
Applicator: H. Carr and Sons, Inc., Providence, Rhode Island



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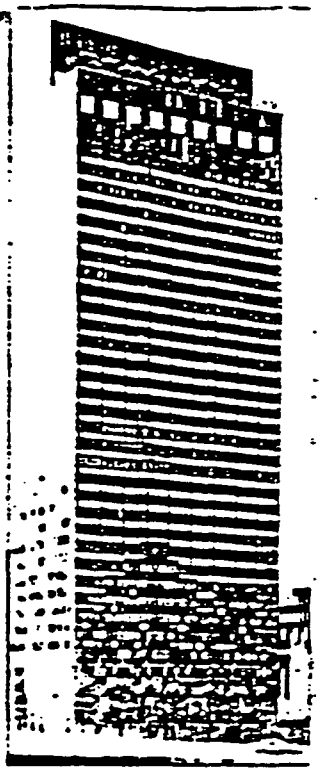


NEW ENGLAND MERCHANTS NATIONAL BANK
Boston, Massachusetts
Architect: Edward Larrabee Barnes and Emery Roth & Sons, New York, New York
General Contractor: Aberthaw and Turner, Boston, Massachusetts
Applicator: DiGregorio and Cassia, Inc., Boston, Massachusetts

PYROSPRAY products are blends of virgin asbestos fibers, refined white mineral fibers, and inorganic binders.

Developed for the many economical spray applications required in today's construction market, the machine applied products are incombustible, chemically stable, light-weight, rot-proof, vermin-proof, unaffected by water and possess excellent fireproofing, thermal and acoustical values.

The light weight monolithic blanket of fiber, is unaffected by expansion and contraction of base material.

Decorative colors and textures can be made to its surface by various tamping or spray painting procedures.

KEENE manufactures three blends of **PYROSPRAY.** A brief discussion of each follows in order to assist in the evaluation and proper selection of the material best suited for various types of field applications.

types available:

type I — Fireproofing

This premium blend of combustible fibers has been formulated and tested by Underwriter's Laboratories, Inc. primarily for use in fireproofing applications of steel beams and columns, structural deck systems and ventilating ducts. Sprayed with modern application equipment, PYROSPRAY type I does not require the use of an adhesive bonding agent and in most fireproofing applications does not require tamping.

PYROSPRAY I can also be used for insulation applications, acoustical treatment and condensation control. These applications, which require the use of a Pyrospray adhesive bonding agent, can be finished in fine, medium or coarse travertine textured surfaces.

PYROSPRAY I is available in 50 lb. paper bags.

See charts and additional data on pages 4 & 5 of this catalog.

Note: PYROSPRAY I may also be used as a base coat for a Type S/I acoustical application.

PYROSPRAY type S — Acoustical (Hard Finish)

This blend of incombustible fibers has been formulated primarily for acoustical treatment where a hard surface or finish is required to offer greater resistance to abrasion. PYROSPRAY type S is of a heavy density weighing 1.5 lbs per board foot. Sprayed wtih modern application equipment, this blend requires the use of an adhesive as a bonding agent and can be finished in fine, medium or coarse travertine textured surfaces.

Additional finishing can be made with a spray of transparent sealer for a natural off-white finish, or Latex paint.

PYROSPRAY S is available in 50 lb. paper bags.

See charts and additional data on page 6.

BONDED "K-dB" PYROSPRAY® — Thermal Insulation and Acoustical Treatment

This advanced, factory-formulated product is composed of asbestos-free, inorganic white mineral fibers, blended with chemically stable binders and corrosion inhibitors. When machine sprayed, application is dustless and void of offensive odors; forms a light weight, incombustible, monolithic blanket with an 0.26 K value.

This product was designed to meet the modern thermal insulation and acoustical treatments required by the metal building industry.

Bonded "K-dB" Hardcote also is available and is recommended for wall treatment where a hard surface or finish is required to offer a greater resistance to abrasion.

For additional information, please refer to the Bonded "K-dB" PYROSPRAY catalog.

I 0349705

PYROSPRAY

Pyrospray Characteristics

Fire Hazard Classification — Pyrospray rated incombustible by Underwriters' Laboratories, Incorporated.

Fire Retardancy — Tests by Underwriters' Laboratories, Inc. prove Pyrospray Fireproofing Fiber to be of superior efficiency.

Resistance to Corrosion — Pyrospray Mineral Fiber contains additive corrosion inhibitors which afford protection to steel against rusting.

Resistance to Air Erosion — Laboratory tests prove Pyrospray Fireproofing effectively resists erosion, dusting or flaking due to high velocity air movement. Exceeds GSA requirements.

Pyrospray Adhesion — When tested in accordance with MIL-C-2861 Specification the adhesion exceeds
- To Steel — 191 lbs. per square foot
- To Painted Steel — 90 lbs. per square foot
- To Galvanized Steel — 137 lbs. per square foot

Pyrospray meets all requirements
- Bonded Impact Test — G.S.A. Specification 224-3A Section 05 (3)
- Deflection Test — G.S.A. Specification 224-3A Section 05 (2)

Efficient Thermal Insulation — Pyrospray with a K value of 0.26 BTU/hr./sq.ft./ degree F/inch thickness, provides highly effective thermal insulation (see page 6).

High Acoustical Absorption — Pyrospray Fiber coatings, provide excellent acoustical correction due to high sound absorption (see page 6).

Condensation Control — The natural physical characteristics of Pyrospray permits the application to critical surfaces for control of condensation.

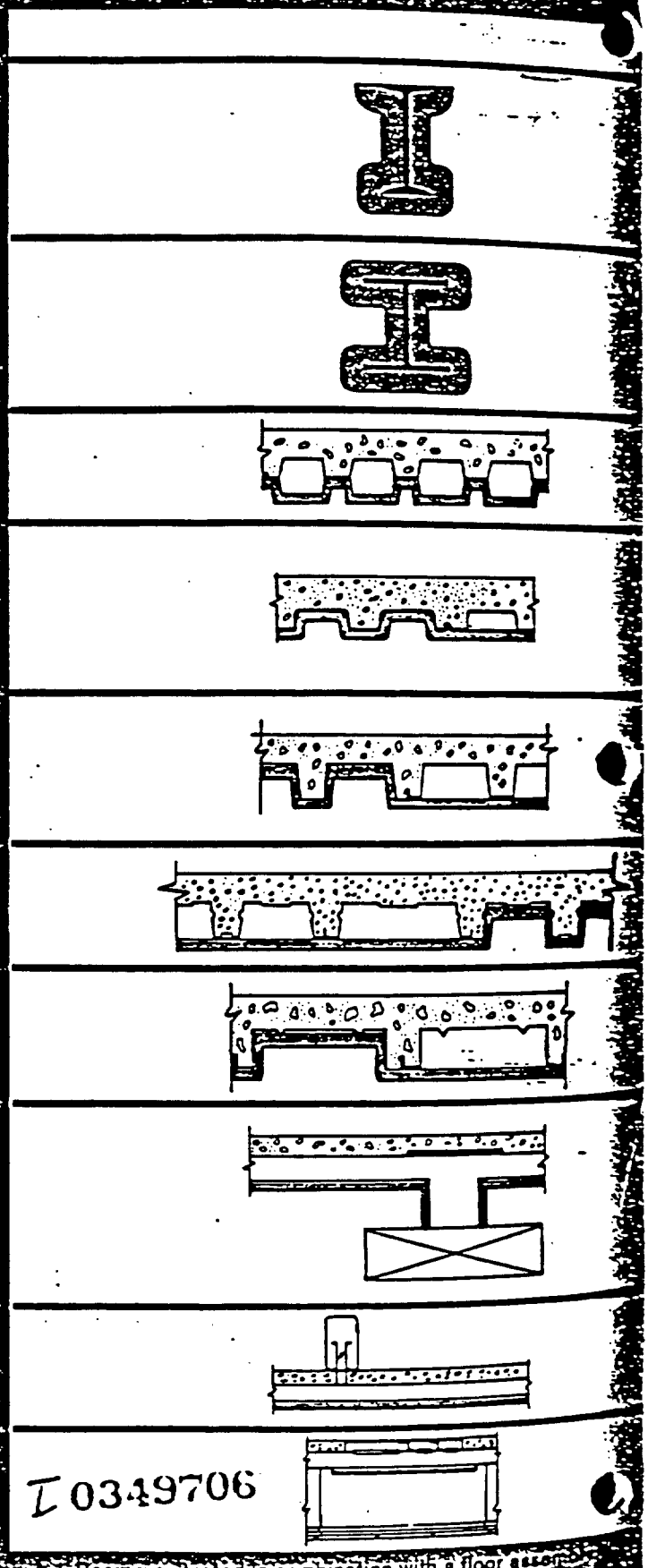
Light Weight — Pyrospray Mineral Fiber Fireproofing installed adds less weight to the structure than any other type of fireproofing. Pyrospray 1" thick, weighs 1 lb. per board foot.

East of Application — Pyrospray Fireproofing is machine applied directly to steel surfaces in one application. Speed of application and ease of clean-up permit a substantial reduction to normal construction schedules.

Economical — Pyrospray Fire Resistance applications require less materials and with fast machine application methods, the fireproofing installation is accomplished at less cost.

Safety and Versatility — Contact Pyrospray Fireproofing permits unrestricted ceiling design and location of partitions. Remodeling of area can be accomplished without damage or removal of the fireproofing, and safety of the structure is always assured.

Pyrospray Sealer — Pyrospray Transparent Sealer as applied to Pyrospray fiber coatings is rated incombustible by Underwriters' Laboratories, Incorporated.



I 0349706

1. Beam was tested in combination with a floor assem
2. Columns — 14 WF 228 or larger
3. 2 hr. Deck with
   rench header duct use ¾" additional

spray insulation

fire retardant ratings

description	rating	thickness	authority
Beams (1) Girders or Spandrels	4 hr	3/8"	UL #R4609-13
Columns	2 hr 3 hr 4 hr 3 hr 4 hr	3/4" 1" 1 7/16" (2) 2 3/8" 2 1/2"	UL #R4609-11 & UL #R4609-12 UL #R4609-9 UL #R4609-9
Cellular Steel Floor or Roof	3 hr	1/2"	UL #R4609-5
Composite Design (3) Blended Fluted Cellular Floor or Roof Units	2 hr 3 hr	3/8" (1/2" in flutes) 1/2"	UL #R4609-13 UL #R4609-5
Blended (4) Fluted-Cellular Floor or Roof Units	3 hr	1/2" (1" in flutes)	UL #R4609-6 UL #R4609-10
Composite Design (5) Blended Fluted-Cellular Floor or Roof Units	3 hr	1/2" (1" in flutes)	UL #R4609-15
Blended (6) Fluted-Cellular Floor or Roof Units	3 hr	9/16" (1" in flutes)	UL #R5257-1
Air Inlet Cover	3 hr	1" Board	UL #R4609-10 UL #R5079
Air Inlets	3 hr	1"	UL #R4609-10
Air Cells	3 hr	1/2"	UL #R4609-10
Air Outlets	3 hr	1/2"	UL #R4609-10
Air Cells	3 hr	1/2"	UL #R4609-10
Structural Header above Fire Resistant Ceiling	2 hr	I 0349707	UL #R4647-13

4. With trench header duct use 1" additional PYROSPRAY below duct.
5. With standard header duct use additional PYROSPRAY below duct (plus 6" on tube and 4" in other areas) trench header duct use additional PYROSPRAY

KEENE CORPORATION

PYROSPRAY

coefficient of heat transmission

(u value) for various type constructions

CONSTRUCTION	UNINSULATED	PYROSPRAY TYPE I OR BONDED "K-dB" ½"	1"	1½"	2"
Metal roof deck or siding (corrugated)	1.28	0.37	0.22	0.15	0.12
Concrete roof slab 2" thick	0.79	0.31	0.20	0.14	0.11
4" thick	0.70	0.30	0.19	0.14	0.11
6" thick	0.63	0.28	0.18	0.14	0.11
8" thick	0.57	0.27	0.18	0.13	0.11
Poured gypsum roof deck — 2½" thick	0.38	0.22	0.15	0.12	0.10
Wood frame construction, 1" wood roofer, air space, ⅜" gypsum bd.	0.31	0.19	0.14	0.11	0.09
8" common brick wall	0.41	0.23	0.16	0.12	0.10
8" cinder block wall	0.39	0.22	0.16	0.12	0.10

sound absorption

THICKNESS	BASE	COEFFICIENTS 125	250	500	1000	2000	4000	NRC
¾"	Metal Lath	.71	.66	.76	.95	.91	.85	.80
⅜"	Solid (painted)	.03	.23	.34	.57	.74	.85	.45
¾"	Solid	.07	.38	.70	.94	.90	.80	.75

Authority—Riverbank Acoustical Laboratories, Geneva, Illinois

fire hazard classifications

	PYROSPRAY FIBER	PYROSPRAY SEALER	BONDED "K-dB" PYROSPRAY
FLAME SPREAD	15	15	10
FUEL CONTRIBUTED	15	15	20
SMOKE DEVELOPED	0	0	0

I0349708

Listed by Underwriters' Laboratories, Inc. Guide #40-U8-6

ARCHITECTURAL SPECIFICATIONS

PYROSPRAY type I. — fireproofing
BONDED "K-dB" PYROSPRAY
PYROSPRAY type S. — acoustical treatment
(select relevant paragraph)

Scope: The work required under this section shall include furnishing all materials, labor and equipment necessary for the application of sprayed-on mineral fireproofing — thermal insulation — acoustical treatment — in accordance with the specifications, drawings, and terms and conditions of the contract documents.

Work of other sections: The installation of all bases and surfaces to which sprayed-on mineral fiber is to be applied, as well as hangers, clips and other mechanical supports required for suspended ceilings, piping, ducts, electrical work, or other mechanical devices shall be completed by others prior to the installation of sprayed fiber.

Utilities, including heat, light, electric power, and water shall be furnished by others.

Contractor's Qualifications and Responsibility: The contractor shall be a licensed applicator of the manufacturer and use materials and equipment approved by the manufacturer. The work performed shall be in strict accordance with the manufacturer's instructions and approved specifications.

The contractor shall examine all surfaces of areas to be sprayed and notify the General Contractor of the existance of any conditions which would prove unsatisfactory for proper application of sprayed-on mineral fiber. All unsatisfactory conditions must be corrected before proceeding with the installation of sprayed fiber.

The Contractor shall coordinate the work of this section with the work of other trades, so as not to delay progress of the job.

Applicable Code & Specifications: All Pyrospray Type I Fireproofing installed shall conform to the applicable requirements of the Building Code and all authorities having jurisdiction. Should the requirements specified herein differ from the requirements of the Authorities having jurisdiction, the more stringent requirements shall apply.

(List Fire Resistance Ratings desired)

Prior to the application of Pyrospray Type I Fireproofing, the Contractor shall furnish the Architect with evidence that the proposed installation to the structural system as shown in the drawings has been approved by the Authorities having jurisdiction.

Test data indicating the resistance to air erosion and nondusting properties of the mineral fiber coating shall be furnished to the Architect assuring the safety of the application in air plenum areas.

All mineral fiber applied as thermal insulation or for acoustical correction shall be rated as incombustible by the Underwriters' Laboratories, Inc.

(For Acoustical and Thermal Insulation only) The fiber application shall be _____ inch thick and have a thermal conductivity (K) of not greater than 0.26 BTU/hr./sq. ft./inch thickness. The application shall have a minimum noise reduction coefficient of _____.

Materials: All Sprayed Mineral Fiber shall be Pyrospray as manufactured by Keene Corporation, Princeton, New Jersey or approved equal. The fiber(s) shall be quality controlled mixture(s) of virgin asbestos fibers and mineral wool fibers, blended with inorganic binders and rust inhibitors. The material(s) shall be supplied to the job site in sealed paper bags, properly displaying appropriate labels for the application specified.

Adhesive — for applications other than fireproofing, Bonded "K-dB" Pyrospray adhesive as supplied by Keene Corporation or an approved equal shall be used.

Transparent Sealer — Sealer when required shall be rated incombustible by Underwriters' Laboratories, Inc., such as Vinrez 3R-58 PYROSPRAY Sealer supplied by Keene Corporation or an approved equal.

Preparation of Surfaces — Pyrospray Mineral Fiber shall only be installed to reasonably clean surfaces, which are free of grease, dirt, oil, loose paint, or other material which may prevent good adhesion. For applications to gypsum board all joints should be taped or sealed. For direct application to metal lath, high rib lath should be used and securely fastened to channels set on 12 to 16 inches O.C. (for all exposed finish applications to lath, a scratch coat of sand and gypsum is preferred prior to fiber application.)

Application: The application of sprayed fiber shall be in accordance with the specifications and the instructions of the approved manufacturer and of the licensed or franchised contractor. The fiber shall be applied with manufacturer's approved equipment.

Pyrospray Type I Fireproofing fiber may be applied as fireproofing to steel surfaces without Pyrospray adhesive, providing the steel surface be wetted with water, and the fiber sprayed immediately onto the wetted steel surface. The total required thickness of the fiber shall be applied in one spraying operation and finished by mechanically tamping to the required thickness or water tamped by applying a light spray of water. (Dependent upon desired finish or ULI test procedure.)

Pyrospray products other than Bonded "K-dB" applied as thermal insulation or acoustical correction should be applied using Pyrospray adhesive as a bonding medium. Fiber shall be sprayed onto the wet adhesive film to a thickness to produce the specified thickness after tamping to a fine — medimum — coarse travertine finish.

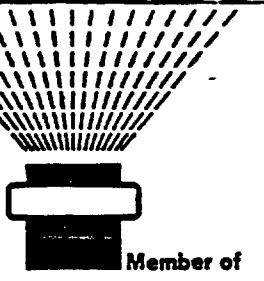
Incombustible transparent Pyrospray sealer shall be spray applied to produce a film of 3 mil thickness, or the installed fiber be spray painted with a pigmented latex-type paint to a desired color.

Pyrospray Type S/I Acoustical Finish

A base coat of Pyrospray Type I be applied as stated above including a leveling tamp. Pyrospray Type S Fiber would be sprayed onto the water wet surface of the base coat and tamped to produce a fine — medium — coarse travertine finish of ¼ inch thickness.

Finished surafce shall be sealed with latex-type paint or with Pyrospray transparent sealer.

SMFMA



Member of
SPRAYED MINERAL FIBER
MANUFACTURERS
ASSOCIATION,
INC.

In addition to the quality line of PYROSPRAY products, Keene Corporation, Sound Control Division provides a complete line of acoustical products. See catalogs in Architectural 14a/Ke and Plant Engineering 12a/Ke Files. For the name of the approved PYROSPRAY contractor in your area contact:

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