FILE NAME: Sprayed Asbestos (SPRA)

DATE: 1971

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SPRAYON RESEARCH CORPORATION

SprayDon
Since 1929

October 11, 1971

5701 BAYVIEW DRIVE
FT. LAUDERDALE, FLORIDA 33308
(305) 943-0119

Mr. Barry J. Castleman
305 West Biddle Street
Baltimore, Maryland 21201

Dear Mr. Castleman:

Your letter of September 30, 1971 addressed to Mr. Joseph Mammano in Brooklyn, N. Y. has been referred to us since we are the owners of the product SprayDon.

We are enclosing a brochure which has just come out on our asbestos free materials. As you see we have been able to remove the asbestos from all of our products while adding to them dust inhibitors. The formulations now contain mineral wool and a proprietary binder system which consists mainly of white Portland cement. The products are now not only asbestos free but are completely dustless during spraying. We have also carefully checked each of the ingredients and have found nothing that would be injurious to the health.

We have received from Underwriters Laboratories complete interchangeability between these new asbestos free materials and our old asbestos containing materials. A copy of this interchangeability letter is enclosed for your information. The cost of the new Asbestos Free material is competitive with the older materials. The methods of application are conventional requiring no special equipment.

Yours very truly,

SPRAYON RESEARCH CORPORATION

Richard L. Kempthorne
Vice President

RLK/dc
Enc.



SINCE 1929

SprayDon®

with 43 years experience in sprayed fiber

- FIREPROOFING
- THERMAL INSULATION
- CONDENSATION CONTROL
- ACOUSTICAL ABSORPTION
- HIGH TEMPERATURE INSULATION
- SOUND ATTENUATION

All SprayDon products are asbestos free
(Underwriters Laboratories tested)

Atlantic Richfield Building, Richfield Square
Architect: A. C. Martin
General Contractor: McKee-Turner
Sprayon Contractor: Filosa Fireproofing Co., Los Angeles

SprayDon

PRODUCTS

SPRAYDON products are designed to fill modern needs for . . . economical . . . light weight . . . efficient . . . fireproofing, acoustical treatments and thermal insulation requirements.

SPRAYDON products are scientifically formulated blends of mineral wool and proprietary binders. Research advances in material formulation, coupled with advances in design of application equipment, have created the new SPRAYDON finishes which produce . . . harder . . . firmer . . . more abrasion resistant surfaces.

CHARACTERISTICS

HIGH FIRE RESISTANCE

Tests by Underwriters Laboratories prove SPRAYDON firetest fiber as a fireproofing material of the highest efficiency.

HIGH PERCENTAGE OF BINDERS

SPRAYDON STANDARD fiber has been formulated with a high content of binders which produce a harder, firmer surface with a superior resistance to abrasion and damage.

DUST FREE APPLICATION

Improved SPRAYDON formulations eliminate application dustiness generally associated with conventional sprayed fiber products.

LIGHT WEIGHT

SPRAYDON STANDARD fiber weighs an average of one pound per board foot and result in substantial savings in dead load.

RAPID APPLICATION

SPRAYDON is quickly applied by machine to many surfaces in one scaffold pass using one trade . . . no delays for multiple coats . . . speeds job schedules . . . reduces costs.

CORROSION PREVENTION

SPRAYDON STANDARD has been tested in accordance with ASTM B117 and Military Specification E-5272C for 240 hours. Results show that the application of SPRAYDON fiber to shop coated steel, galvanized steel or plain steel prevents corrosion and thereby the need for field painting of steel is eliminated.

COMPLIES WITH G.S.A. STANDARDS

SPRAYDON STANDARD has been tested in accordance with standards set up by the General Services Administration and has equalled or surpassed all requirements. Withstands high air erosion — SPRAYDON STANDARD has been tested and proved to withstand high air erosion — details on request.

PRODUCT GUIDE

SPRAYDON STANDARD "J"
- specify for fireproofing of structural steel beams, decks and columns.
- specify for acoustical installations.

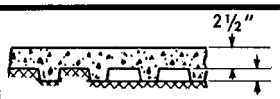
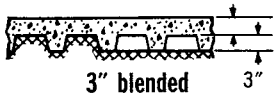
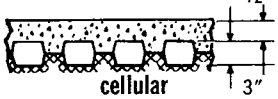
SPRAYDON TYPE II
- specify for insulation requirements . . . special ingredients make Type II a superior incombustible, insulation material.

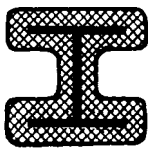
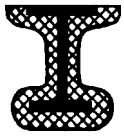
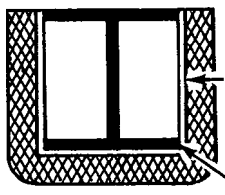
SPRAYDON SPRAY-TEMP
- specify for high temperature insulation or thermal insulation of high temperature processing equipment in the fields of power generating, refineries, steel processing, paper, textiles and chemicals.

SPRAYDON TYPE III
- specify for acoustical ceilings where only the hardness of a wet mix material will suffice . . . NRC ranging as high as .85.

SPRAYDON "S A-48"
- specify to reduce the transmission of sound through walls . . . highly efficient and low in cost.

FIRE RETARDANT RATINGS (Asbestos Free–Standard "J")

	CONSTRUCTION	SPRAYDON THICKNESS	RATING	AUTHORITY UNDERWRITERS DESIGN NUMBERS
FLOORS AND ROOFS	 1½" blended	½" / ⅞" in Flute	3 hr.	229–3 hr. C153–3 hr.
		½" contour	2 hr.	C154–2 hr.
	 3" blended	½" / ⅞" in Flute	3 hr.	88–3 hr.
		½" / ⅞" in Flute	3 hr.	229–3 hr. C153–3 hr.
		⅜" / ⅝" in Flute	2 hr.	277–2 hr.
	 cellular	½" / ⅞" in Flute	3 hr.	C153–3 hr.
		½" contour	2 hr.	C154–2 hr.

		1+ Small	2+ Med	3+ Large	RATING	AUTHORITY
COLUMNS	 columns	2⅝"	1½"	1⅜"	4 hr.	Coll. Design 28–4 hr. 47–4 hr. 22–3 hr. 38–3 hr. 11–2 hr. 26–2 hr.
		1⅞"	1"	1"	3 hr.	
		1⁷⁄₁₆"	¾"	¾"	2 hr.	
BEAMS	 beams & girders	⅜**			4 hr.	277–2 hr.
		⅜			3 hr.	277–2 hr.
		⅜			2 hr.	277–2 hr.
	 wrapped beam (¼" pencil rod; 3.4 ⅜" rib lath)	1¼" sides 1⅜" bottom			4 hr.	C125–3 hr. Beam 4 hr.

Trench headers require ¾" additional for 3 hr. rating, ½" for 2 hr. rating. Both composite and non-composite construction.

**Beam thicknesses are based on normal load method. Information on time-temperature method at 1,000, 1,100, and 1,200 degrees F. avg. available on request. Spraydon Standard Fiber may be Tamped or left Untamped at the thickness shown. Surfaces do not require either Adhesive or Sealer to meet U.L. requirements.

+ Column Notes on Sizes
1. Smaller than 14WF228 2. From 14WF228 to 14WF237 3. 14WF237 or larger

SprayDon architectural specifications guide

FIREPROOFING...ACOUSTICAL TREATMENT...INSULATION

It is suggested that these specifications be made a separate section to eliminate a double mark-up.

SPRAYED MINERAL FIBER

GENERAL CONDITIONS:

The General Conditions of the Specifications form a part of this section and the conditions contained therein shall apply to work performed under this section.

SCOPE OF WORK:

A. Work Included The work to be performed under this section shall include all materials, equipment, labor and services required to install the sprayed mineral fiber in accordance with this specification and as indicated on the drawings.
B. Work Not Included: Surfaces to which the sprayed fiber is to be applied, as well as all clips, hangers, clamps, supports, sleeves, stops and other attachments to the base surface, shall be installed by others prior to start of work covered by this section.

SCHEDULING WORK WITH OTHER TRADES:

A. It shall be the responsibility of the General Contractor to coordinate all Sub-Contractors so that:
1. all items mentioned under "Scope of Work" paragraph "B," are installed prior to the installation of the sprayed fiber.
2. the installation of all ductwork, piping, fixtures, suspended ceilings, partitions, etc., shall follow the work covered by this section.
B. It shall be the responsibility of this Sub-Contractor to provide the General Contractor with accurate production schedules, so that the General Contractor may coordinate the work covered under this section with the work of other trades, in order to speed up the progress of the job.

MATERIAL QUALIFICATIONS:

A. All sprayed mineral fiber shall conform to the applicable requirements of the local building code and have the approval of the pertinent municipal building authorities, for the required fire rating.
B. The fiber shall have a thermal conductivity (k) of not greater than 0.26 BTU/hr./sq. ft./inch of thickness.

CONTRACTOR QUALIFICATIONS:

The Sub-Contractor shall be franchised by the manufacturer of the materials approved for use and shall use materials and application equipment approved by this manufacturer. All work shall be performed in strict accordance with the manufacturer's printed specifications and instructions, under the supervision of a manufacturer trained and approved foreman.

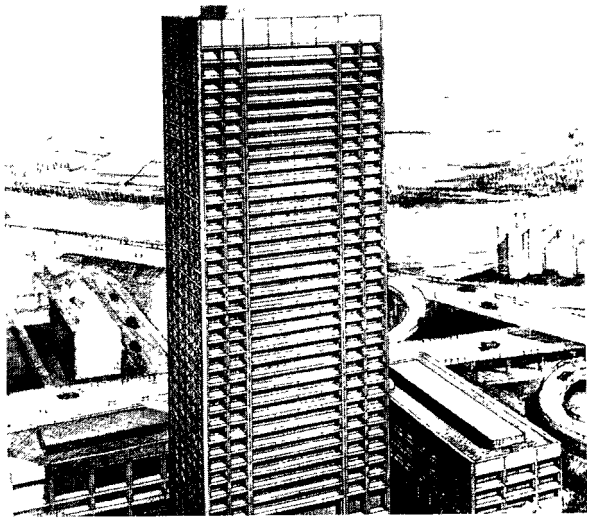
MATERIALS:

A. The sprayed mineral fiber shall be asbestos free SPRAYDON as manufactured for Sprayon Research Corporation by United States Gypsum Co. or approved equal, and consisting primarily of inorganic virgin mineral wool fibers blended with proprietary binders. The Sprayed Mineral Fiber shall be delivered to the job site in sealed paper bags, properly identified, and labeled to show the approval of Underwriters' Laboratories. (The last sentence for fireproofing only.)
B. Adhesive, where required, shall be SPRAYDON ADHESIVE or approved equal, consisting of a latex type emulsion which, after setting, is unaffected by moisture, freezing, or aging, (optional — Not required for fireproofing).
C. The sealer, where required, shall be SPRAYDON SEALER, or an approved equal. (optional)

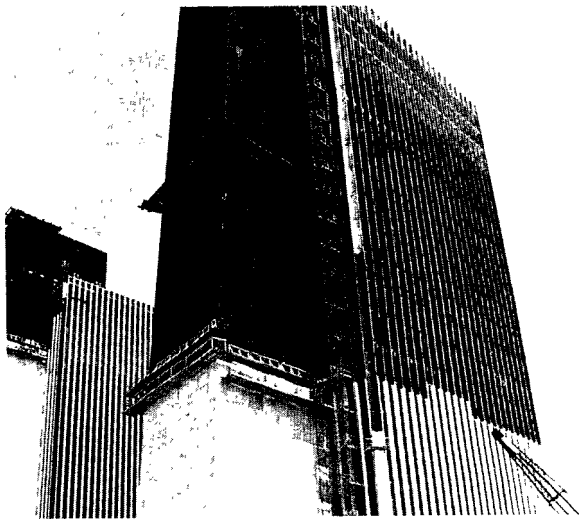
APPLICATION:

A. Inspection: This Sub-Contratcor shall carefully examine all surfaces which will receive sprayed fireproofing and report in writing to the General Contractor, listing all unsatisfactory conditions. Sprayed fireproofing work shall not proceed until unsatisfactory conditions are corrected.
B. Surface Preparation Surfaces which are to receive sprayed fireproofing shall be reasonably free of dirt, grease, oil, loose paint, excessive rust scale or other foreign material which would prevent adequate adhesion.
C. Procedure: The application of sprayed mineral fiber shall be in accordance with the manufacturer's printed specifications and instructions. Thickness shall be sufficient to achieve the following ratings. *(Architect indicate surfaces and hourly ratings).* Where required, all surfaces to be treated shall be primed with SPRAYDON ADHESIVE. Sprayed fiber shall be applied while the adhesive remains tacky, tamped or left untamped to the required thickness and, where required, oversprayed with SPRAYDON SEALER, or water. (Tamping, adhesive and sealer NOT required for U.L. approval when fireproofing.)

NOTE: The above specification is intended for sprayed fireproofing work. Where acoustical or thermal insulation specifications are to be written, select appropriate paragraphs.
Thermal Insulation or Acoustical Treatment: Add following paragraphs.
Under Materials: A.
(1) Specify type SPRAYDON desired, STANDARD "J", TYPE No. II, SPRAY — TEMP, TYPE No. III, SA — 48 or any combination.
(2) Specify thickness.
(3) Insulation Treatment: Specify thickness required or insulation value desired.



Marine Midland Building
Architect: Skidmore, Owings and Merrill
General Contractor: Aberthaw-Cowper
Sprayon Contractor: The Mader Corp., Buffalo



Agency Building, South Mall, Albany, N.Y.
Architect: Harrison and Abramowitz
General Contractor: P. J. Carlin
Sprayon Contractor: Metropolitan Spray, Inc.
Div. of Giamboi Bros., Inc., Brooklyn

A product of:
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SPRAYDON INSULATION AND CONDENSATION CONTROL

SPRAYDON TYPE II fiber, with a k factor of 0.26 BTU/hr/sq. ft/ inch of thickness, provides highly efficient insulation . . . in any area where extreme temperature variations occur on the opposite sides of the same material. This material is asbestos free.

EXAMPLES: metal buildings, boiler rooms, direct-to-concrete applications, underside of exposed floors, etc.

HEAT LOSS CHARACTERISTICS

expressed in "U" valves

construction	concrete slab, in.	not insulated	SprayDon thickness, in. ½	1	1½	2
built-up roofing on concrete roof slab 	4	.72	.30	.19	.14	.11
	6	.64	.28	.17	.13	.10
metal deck with ½ inch roof insulation and built-up roofing 	None	.40	.23	.16	.12	.10
corrugated metal or transite wall 	None	1.18	.36	.21	.15	.12

SPRAYDON ACOUSTICAL TREATMENT

SPRAYDON offers the architect complete design flexibility . . . its ability to follow the contours of poured concrete, metal lath, or gypsum boards with excellent acoustical qualities, lends itself to modern building.

SPRAYDON STANDARD J is the sprayed fiber material with the high NRC and is asbestos free.

SPRAYDON TYPE III is the wet mix sprayed fiber which dries to a fine white granular finish with an NRC range as high as .85 when applied to a type 7 mounting.

SOUND ABSORPTION CHARACTERISTICS (Standard "J")

	thickness inches	mounting	coefficient of sound absorption at cps 125	250	500	1000	2000	4000	noise reduction coefficient
SPRAYDON	⅜	solid	.08	.19	.37	.61	.79	.78	.50
	½	solid	.38	.20	.57	.73	.75	.74	.60
	¾	metal lath	.49	.65	.88	.93	.90	.87	.85
	1"	solid	.59	.50	.71	.91	.91	.88	.75

tests, by: Riverbank Laboratories, Armour Research Institute, U.S. Testing Co.

SPRAYDON "S A 48" (Asbestos free)

SPRAYDON "SA 48" fiber has been specially designed and formulated to be a highly efficient and low cost sound barrier to the transmission of sound through walls. Tests conducted in accordance with ASTM E90-66T show that when applied to the inside face of a gypsumboard wall erected on 2½" metal studs (24" o.c.) the resulting STC value is:

½" gypsumboard - ½" SPRAYDON — 45
⅝" gypsumboard - ¾" SPRAYDON — 48

SPRAYDON	HZ	125	160	200	250	315	400	500	630
	Transmission Loss, DB ½"	22	26	33	37	37	41	44	44
	¾"	26	31	35	29	38	40	43	46
	HZ	800	1000	1250	1600	2000	2500	3150	4000
	Transmission Loss, DB ½"	45	46	48	49	50	48	48	49
	¾"	49	51	51	52	53	53	54	55

SPRAYDON SPRAY-TEMP

HIGH TEMPERATURE THERMAL INSULATION

SPRAYDON SPRAY-TEMP is a spray applied formulation of mineral fiber combined with special binders for high temperature processing equipment. Spray-Temp may be applied directly to irregular sections and contours in a joint free blanket Some typical uses are — Boilers, ovens, steam pipes, turbines, precipitators, heaters, flues, spray booths, heat exchangers, tanks, breechings, dryers, ducts, kilns, condensers, digesters, furnaces, pipes, and enclosures. Available in Asbestos or Asbestos free formulation.

ADVANTAGES

ECONOMICAL APPLICATION
Applied by SprayDon-trained, licensed contractors employing special equipment, Spray-Temp may be installed to "on line" equipment, eliminating expensive down time.

JOINT-FREE APPLICATION
Spray-Temp's monolithic coating eliminates critical heat loss at the seams and between layers of laminated insulations. Cutting and fitting are eliminated, scrap costs are eliminated and what is left is a one-piece contour fitting blanket.

PERMANENCE
Spray-Temp will not putrefy and is mildew and rotproof. The monolithic application moves with normal expansion and contraction of processing equipment without cracking, spalling or separating.

PHYSICAL PROPERTIES*

General

Resistance:
To Corrosion — Good
To Solvents — Excellent
To Alkalies — Good
To Acids — Poor
To Fungus — Excellent

Specific Heat — .20
Heat Capacity — .28 TU/bd.ft/°F
Loss on Ignition — 5.6%
Volume Shrinkage — 3.6%
Linear Shrinkage — 0.37%

*Average values from accepted test methods

COMPRESSIVE STRENGTH

% deformation	11 lbs density	15 lbs.density
5	196 psf	625 psf
10	300 psf	942 psf
25	920 psf	1910 psf

TEMPERATURE LIMITATIONS

Maximum Service Temperature	1600°F
Maximum Application Temperature	600°F
Sintering Point	1700-1900°F
Melting Point	2200-2600°F
Flash-Flame	None

COVERAGE

80-120 board feet per CWT (avg. 100)
9-1.25#/board foot (avg. 1.00)
Density—11-15 pcf (avg. 12 pcf)
Specific Gravity—2.28

STRENGTH

Bond—100-300 psf (avg 150 psf)
Shear—150-275 psf (avg. 200 psf)

THERMAL CONDUCTIVITY
(k factor) BTU/inch/hr./sq. ft./F°

Mean Temperature °F	k Factor	Mean Temperature °F	k Factor
50	.240	500	.520
75	.260	600	.585
100	.275	700	645
200	.345	800	700
300	405	900	.760
400	460	1000	835

TYPICAL APPLICATION THICKNESSES STEAM TURBINES

Steam Temp °F	Max. Surface Temp. (80° ambient)	Insul. Cement	Thickness Calcium Silicate	Spray Don Spray-Temp
below 250	100	2	1½	1½
250-349	110	2½	2	2
350-449	115	3½	2½	2
450-549	120	4	3	2½
550-649	125	5	3½	3
650-749	125	6	3½	3½
750-849	130	6	4	4
850-949	135	6½	4½	4
950-1049	135	7	4½	4½
1050-1149	140	8	5	5
1150-1250	145	9	5½	5½

On outdoor installations an additional ½" thickness is often used on areas which are exposed to weather