

EAGLE PITCHER

THE EAGLE-PICHER FIREPROOFING CEMENT TREATMENT CUTS FIRE LOSS

EAGLE-PICHER FIREPROOFING CEMENT

Plant safety directors and engineers have long realized the importance of protecting structural steel columns, supporting members, girders, equipment bases, tower and tank supports and similar equipment against the ravages of industrial fires. Plans erected with only limited structural fire protection can now be economically fireproofed with effective, easy-to-apply Eagle-Paper Fireproofing Compound.

Eagle-Pickel Waterproof Cement is a dry mixture of fibers, aggregates and binding agents. When mixed with clean, fresh water at the recommended ratio, it is economically applied to surfaces which require protection.

HAS HIGH COVERAGE

Eagle-Fiber Fireproofing Cement has the high dry coverage of approximately 30 sq. ft. 1 inch thick per 100 lb. Its extreme lightweight mix makes installation easy and signifies more surface coverage per pound.

SETS QUICKLY

The quick setting properties of Preproceed Cement permit the application of subsequent finishing materials after only a 24-hour period. This represents a savings in both time and money.

APPLY TO US

Eagle-Ether Fireproofing Cement is easily applied by trowel, like most insulating or finishing cements; and it is applied to the desired thickness in only one operation. When the fireproofing treatment is exposed to weathering, bumping, abrasion, flaking, vibration, or other abnormal conditions, a protective finish is recommended.

When a pressure-water fire control system is used, the fireproofing element should be covered with either metal jackets or a fielding cement jacket for such a use. When a semi-rigid applied base material such as Eagle-Fiber Insulation is used on a fireproofing treatment, it is advisable to finish the waterproofing with the finishing cement conductive material. Eagle-Fiber Synthetic is an ideal finishing material for such a construction.

RESISTS CORROSION

Patented and Inventions are incorporated in English-Paper Pressing Company, then offering vehicle PLUS presentation aged and contained where the needed contacts structural members.

EASY TO PAINT

Eagle-Picher Fireproofing Cement, covered with a black homogeneous waterproofing compound like Eagle-Picher Insulcoat, may be patented with an asphalt base aluminum paint such as Eagle-Picher Paint number 330.

Standard Width Planks (Ex- posed)	Weight Per Linear Foot (Lb./Ft.)		Linear Feet Covered Per Cubic Yard	
	S.P. Pre- stressing Treatments	Percent Methods	S.P. Pre- stressing Treatments	Percent Methods
10 x 11 1/4	34.3	3.05	33.5	11.4
10 x 11 1/2	33	3.05	36	14.1
12 x 12	38.5	3.19	31.6	14.9
14 x 12	55.2	3.14	41.5	18.9
16 x 12	64.4	3.20	47.3	23
18 x 12	71	3.21	51.3	24

*Weight figures are based on 14% "Empire State Prestressing Concrete" brand concrete (14.4% in 100/101 samples) using standard method of application for deck.

*Welds herein are based on 14" Triple-Action Floorstanding Cement and 2" formed concrete (1.24 mils @ 150/psi density), using standard method of application for both.

**EASILY INSTALLED
AT MINIMUM COST**

Comparing estimated costs of the Kapt-Plicher Fireproofing Cement treatment with other acceptable fireproofing methods, 1½" Kapt-Plicher Fireproofing Cement, covered with ½" protective finish, results in an average savings of 30% for comparable protection... a welcome economy. Effects a real savings in weight, too. While affording positive fire protection, it adds only a minimum of weight.

SPECIFIC DATA

Water Ratio—11 gal. china, fresh water to 100 lbs. dry cement
Dry Covering—390 g. & 1" thick per 100 lbs. Wet Weight (Applied and Dried)—Approximate to 35% (lbs./sq. ft.) 1" thick
Thermal Conductivity—1.18 Btu. @ 600 F Mean Temperatures
Compressive Strength—175 to 400 lbs./sq. in.
Adhesive Strength—3.0 lbs./sq. in.
Setting Time—24 hours

NOTE: Preplaced Cement must be applied within 4 hours after mixing with water.

?PACKAGING: Eagle-Picher Fireproofing Cement is packed in multi-wall, paper bags having a net weight of 100 lbs.

RESULTS OF FIRE TESTS ON UNPROTECTED COLUMNS
Time-to-failure of Unprotected Steel Columns ranges
(from 15 to 30 minutes)

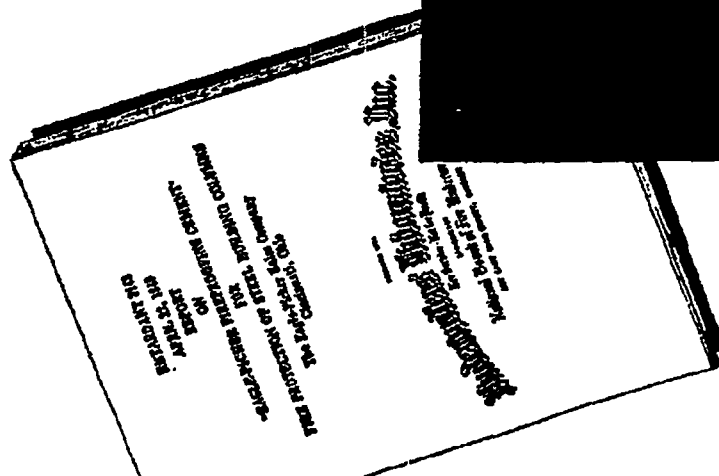
Reference Free Tens of Building Columns*				
Type	Standard Area Sq. In.	Modulus Ratio (1/0)	Unit Load Lb./Sq. Inch	Tensile to Failure Htz. - Min.
Flat and Angle	13.46	111.3	9900	9-10½
Star and Plate	9.32	84.7	17718	9-10½
I-beam and Channel	19.12	72.1	12650	9-11
Round Cast Iron	14.12	64.3	6900	9-10½
Steel Pipe (Concrete Filled)	Concrete 36.74 Steel 6.85	61.9	3500	9-10

**By The National Board of Fire Underwriters
Associated Factory Mutual Fire Insurance Companies
Bureau of Standards, Department of Commerce.**

RECOMMENDED THICKNESSES

Thickness of Fireproofing Cement	Approximate Fire Resistance Rating
1"	2 hours
1 1/2"	3 "
2 1/4"	4 "

Eagle-Picher Fireproofing Cement, 1 1/2" thick, provides 3 hour protection, as revealed in Underwriters' Laboratories report R 3143, covering a full scale column test made according to ASTM Standard E-119. Subscribers to Underwriters' Laboratories may refer to Guide No. 540 20, April 22, 1949, File R-3143.



A copy of the Underwriters' Laboratories, Inc., report can be secured by writing to the Industrial Insurance Division, The Eagle-Picher Company, American Building, Cincinnati 1, Ohio.

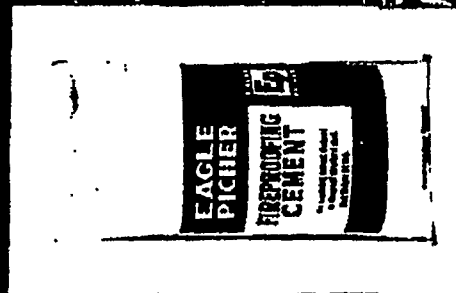
For positive fireproofing economy, investigate the Eagle-Picher Cement treatment. Each job is individually engineered by the Eagle-Picher Industrial Insurance Department. Don't take chances! An industrial fire can happen at any time. Savings in your insurance premiums soon amortize the investment.

An experienced Eagle-Picher Sales Engineer will gladly make a free survey of your plant's fireproofing needs. Simply contact your Eagle-Picher Jobber, Distributor, or Contractor . . . or write direct to any of the various Eagle-Picher Industrial Insurance offices listed at the bottom of this page.

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THE EAGLE-PICHER SALES COMPANY

American Building . . . Cincinnati 1, Ohio





THE EAGLE-PICHER FIREPROOFING CEMENT TREATMENT CUTS FIRE LOSS

NEW AND IMPROVED FIREPROOFING CEMENT

Plant safety directors and engineers have long realized the importance of protecting structural steel columns, supporting members, skids, equipment bases, tower and tank supports, and similar equipment against the ravages of industrial fires. Plants erected with only limited structural fire protection can now be economically fireproofed with effective, easy-to-apply Eagle-Picher Fireproofing Cement. On average jobs, there is no need for heavy reinforcing. In the case of tall structures, this weight saving may even permit the use of smaller steel columns.

HAS HIGH COVERAGE

Eagle-Picher Fireproofing Cement has the high wet coverage of approximately 25 to 27 bd ft per 100 lb. Its extreme lightness-in-weight means installation economy to you and signifies more surface coverage per pound.

SETS QUICKLY

The quick setting properties of Fireproofing Cement permits the application of subsequent finishing materials within 8 hours. Only 24-hours are required for it to set hard. This represents a savings in both time and money.



RESISTS CORROSION

Painted steel surfaces are incorporated in Eagle-Picher Fireproofing Cement, thus affording valuable PLUS protection against rust and corrosion where the material contacts moisture.

SIMPLE TO APPLY

Eagle-Picher Fireproofing Cement is easy to apply. You simply trowel it on to the desired thickness in only one operation after surfaces have been prepared by removal of rust, scale, and dirt. Moreover, it can be applied on to equipment if so desired. When exposed to weathering, bending, abrasion, fumes, and vibration, a protective finish is recommended.

Where a pressure-water fire control system is used, the Fireproofing Cement should be covered with either metal jackets or a finishing material designed for such a use. When a semi-solvent resistant base material such as Rock-Picher Insulation is used as a finishing treatment, it is advisable to finish the weatherproofing with the finish material recommended by Eagle-Picher. Rock-Picher is an ideal finishing material for such an application.

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TYPICAL PERFORMANCE

Thickness of Fireproofing Cement	Approximate Fire Resistance Rating
1 in.	2 hours
1 1/2 in.	3 hours
2 in.	4 hours

EASY TO PAINT

Eagle-Picher Fireproofing Cement, covered with a black homogeneous weatherproofing compound like Eagle-Picher Insulation, may be painted with an asphalt base aluminum paint.

EASILY INSTALLED AT MINIMUM COST

Comparing estimated costs of the Eagle-Picher Fireproofing Cement treatment with other acceptable fireproofing methods, 1 1/2" Eagle-Picher Fireproofing Cement, covered with 3/4" protective finish, results in an average savings of 30% for comparable protection... a welcome economy. Effects a real savings in weight, too. While affording positive fire protection, it adds only a minimum of weight.

SPECIFIC DATA

Water Ratio—approx 4 gal clean, fresh water to 50 lbs dry cement
Wet Coverage—approx 25 to 27 bd ft per 100 lbs dry cement
Weight (applied and dried)—54.5 lbs/cu ft
Thermal Conductivity—1.5 Btu (in 1000 P Mean Temperature
Compressive Strength—900 to 1000 lbs/sq in.
Setting Time—24 hours (protective weatherproofing compound such as Eagle-Picher Insulation may be applied within 24 hours after fireproofing cement has been applied.)

NOTE: Fireproofing Cement must be applied within 3 hours after mixing with water.

PACKAGING: Packed in multi-wall, paper bags having a net weight of 50 lbs containing approximately 1.5 cu ft.

RESULTS OF FIRE TESTS ON UNPROTECTED COLUMNS

Time-to-failure of unprotected steel columns ranges from 11 to 17 minutes.

Type	Notched Area (sq in.)	Modulus of Elasticity (psi)	Ultimate Load (lb)	Time to Failure (min)
Steel and Angle	13.96	111.8	2000	6-10
Steel and Plate	9.37	81.7	1310	6-10
10-in and Channel	18.13	111.1	2000	6-10
Steel and C-10	14.15	84.2	2100	6-10
Steel Pipe (Concrete M40)	Concrete 31.16 Steel 6.15	61.9	2100	6-10

By The National Board of Fire Underwriters American Society of Mechanical Engineers, Committee on Fire Protection, Department of Fire Protection.

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		Temperature Range
CEMENTS	SUPER "66" " Insulating Cement	to 1800 F
	ONE-COTE "a" Cement	to 1000 F
FLAT MATERIALS	"33" " Insulating Cement	to 1800 F
	Fireproofing Cement	to 2000 F
	"20" " Abrasion Cement	to 1000 F
	"43" Finishing Cement	to 1000 F
PIPE COVERINGS	PV SUPERTEMP "a" Block Insulation	to 1900 F
	HYLO "a" Block Insulation	to 1200 F and to 1800 F
	SUPERGLAS "a" Block Insulation*	to 400 F
	85" Magnesia Block Insulation	to 600 F
	Mineral Wool Blanket Insulation	to 1200 F
	Bonded Mineral Wool Blankets	to 800 F
	Spun Mineral Wool Felt	sub-zero to 450 F
	MT "a" Insulating Board	to 400 F
	SUPERGLAS "a" Duct Insulation*	to 250 F
	SUPERGLAS "a" Equipment Insulation*	to 400 F
FILL MATERIALS	TABLOK "a" Pipe Insulation	to 1200 F
	HYLO "a" Pipe Insulation	to 1200 F and to 1800 F
	85" Magnesia Pipe Insulation	from 120 F to 400 F
COATINGS & ADHESIVES	SUPERGLAS "a" Pipe Insulation*	to 600 F
	"H-2" Loose Wool Insulation	to 1200 F
	"H-1" SPECIAL Steam Blown Mineral Wool	to 300 F
INSULATION ACCESSORIES	CELATON (Diatomaceous Earth)	to 1200 F
	STATALIC "a" Plastic Coating	to 400 F and to 700 F
	SPRAY-MASTIC "a" Protective Coating	to 250 F
	INSULSEAL "a" Protective Coating	to 450 F
	Pipe and Water Relining Jacketing	60 F to 225 F
	Anti-Roof Type Low Pressure Covering	to 40-60 F
	Woodlet Type Low Pressure Covering	to 300 F
	Non Sinter Type Low Pressure Covering	
	Air CSE Type Low Pressure Covering	

*Manufactured by Owens-Corning Fiberglas Corporation

Manufactured by
THE EAGLE-PICHER COMPANY
 General Office, Insulation Division
 American Building—Cincinnati 1, Ohio
 NEW YORK
 PHILADELPHIA
 MANUFACTURERS ASSOCIATION

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