585

PLAINTIFF'S EXHIBIT USG-222

R-4142-BA TYPE V

Underwriters' Laboratories, Inc.

LISTED

CEMENTITIOUS MIXTURE

ISSUE NO. AJ-340

FIRE HAZARD CLASSIFICATION

(Based on 100 for untreated red oak)

Applied to Asbestos-Cement Board in a maximum thickness of 1/2 in

Flame Spread	15
Fuel Contributed	10
Smoke Developed	0

FIRE RESISTANCE CLASSIFICATION

FLOOR OR ROOF AND CEILING CONSTRUCTION: Design Nos. 22-3HR., 23-3HR., 24-3HR., 32-3HR., 70-3HR., 206-3HR., 207-3HR., 10-2HR., 14-2HR., 15-2HR., 68-2HR. AND 229-2HR.

ROOF AND CEILING CONSTRUCTION: Design No. RC2-2HR.

BEAM PROTECTION: Design Nos. 37-5HR AND 67-3HR.

COLUMN PROTECTION: Design Nos. 25-4HR., 27-4HR., 30-4HR., 42-4HR., 43-4HR., 44-4HR., 13-3HR., [illegible]-3HR., 25-3HR., 12-2HR., AND [illegible]-2HR.

CS011 0963

CLASSIFICATION MARKING:

Each package of cementitious material which conforms to the description and specifications given in this section of the Procedure shall be eligible to bear a Classification Marking containing the following information:

1. "United States Gypsum Co." or "R4142."
2. Type V.
3. Follow-Up Service Symbol reading as follows:

UNDERWRITERS' LABORATORIES, INC.

(R)

CLASSIFIED
CEMENTITIOUS MIXTURE
ISSUE NO. _____

Fire Resistance Classification

Design Nos. A701, P675, P676, P677, P702, N701, N702, U701, X505, Y706, and Y707

See U.L. Fire Resistance Index.

GP/RLP:cp

C5011 0004

Ope: Mfg. Division PRODUCT- IDENTIFICATION Approved: JP	RED TOP FIRECODE V PLASTER 50 LB. BAG	No. 7-6-25-1 Date 7-13-64 Page 2 of 2 Cancels Page 2 Dated 5-2-63

DIRECTIONS

USE

RED TOP FIRECODE V Plaster is especially formulated for direct application by machine to steel floor units, steel beams and columns, and metal lath to provide fire retardant qualities.

MIXING

Machine mixing is required. Place 40 to 50 quarts of water in the mixer for each 50# bag of plaster. (The amount of water required will be governed by the length of hose, type of machine, and varying job conditions. The greater the length of hose being used, the greater the amount of water required. Proper consistency for spraying, at the nozzle, will determine if required amount of water is being used.) Add the FIRECODE Plaster to the water while the machine is running. Mix for 4 to 7 minutes, depending upon the speed of the mixer.

APPLICATION

For application direct to corrugated, ribbed or cellular steel units, steel beams or metal lath, use low to medium output on the machine with medium to high air pressure and a small enough nozzle orifice to obtain a narrow uniform spray pattern.

For steel floor units FIRECODE V Plaster should be applied in such a manner that the required thickness is applied as uniformly as possible to the underside contour of the floor. For steel beams, columns, and metal lath apply 1/2" to 3/4" coat, allow to set and partially dry, then build out to required thickness.

FIRECODE V Plaster should be left with spray-applied finish. It should not be necessary to work the material with hand tools.

CAUTION

All surfaces must be clean, dry and free from oil and grease. Do not mix more material than can be applied within one hour. Store bagged material in a dry place. Temperature and ventilating requirements are the same as those in standard specifications for Gypsum Plaster.

Since methods and conditions of application and use are beyond our control, The United States Gypsum Company will not be responsible for failure of its product when not used according to our directions and specifications.

C5011 0965

FIG. 1
SEC. 1
VOL. 1
R 4142

Sieve Analysis - Shall conform to the following:

USS Sieve Size	Cumulative Per Cent Retained by Volume	
	Maximum	Minimum
8	5	0
16	45	10
30	85	45
50	95	75
100	100	88

PURITY OF UNFIBERED GYPSUM STUCCO:

The unfibered gypsum stucco shall have a sulphur trioxide content of not less than 36.4 per cent by weight.

* CLASSIFICATION MARKING:

Bags of "Type S" material complying with this specification may bear a classification marking containing the following:

1. Manufacturer's name and "Type S Structo-Lite."

* 2. Follow-Up Service Symbol reading as follows:

UNDERWRITERS' LABORATORIES, INC.

Ⓡ

* CLASSIFIED
CEMENTITIOUS MIXTURE
ISSUE NO. _____

*3. Fire Retardant Classification
Design Nos. A701, D401, X402
and U402
See UL Fire Resistance Index

RDB:RMB:cl

CS011 0776

TO: [illegible] DEPT. [illegible] NO. 147-3 [illegible]

FROM: [illegible] SYSTEMS TESTING

CC: 147-3 R.P. FAUST
151 D.L. CRALL

SUBJECT: RECENT UL PROCEDURE REVISION WHICH MAY AFFECT THE MARKETING OF A UCC PRODUCT

UL PROCEDURE NO. 4142 & 4256 VOL. I SEC. 1

PRODUCT COVERED FIRECODE Plaster - TYPE D and V

DATE OF REVISION 7-28-66

TYPE OF REVISION: CHANGE - ADDITION - DELETION

EXPLANATION OF REVISION: TYPE D deleted from fire hazard and retardant Procedures. Product can no longer be labeled without reinstatement in the Procedures.

C3011 0967

SPONSORED BY
American Insurance Association

IN REPLYING
PLEASE REFER TO R-4142

ISSUED FROM

Chicago, Ill. 60611
August 4, 1966

United States Gypsum Co.
1000 E. Northwest Hwy.
Des Plaines, Ill. 60016

Attention: F. F. Kastner

SUBJECT: CEMENTITIOUS MIXTURE

Gentlemen:

We enclose the pages listed below, for the description of your subject product.

Please examine the pages carefully, and notify us promptly regarding any inaccuracies or omissions. If you find the pages satisfactory in all respects, kindly file them in your copy of our Label Service Procedure, observing that revised pages replace the pages of like identity, while new pages should be filed in their numerical sequence. Your prompt acknowledgment of receipt will be appreciated.

Revised pages 1, 2, 3, 4, repl. page for Fig. 1 Section 1, dated July 27, 1966 for the Label Service Procedure R-4142 Vol. I.

If you have any comments concerning inaccuracies or omissions on the attached pages, please direct your letter to Mr. K. H. Kastman at our Northbrook Office.

Very truly yours,

Helen S. Pawl
Asst. to Supt.
Label Service

HP:NW
enc. (2)
cc East Chicago, Ind., New Brighton, S. I., N. Y., Empire, Nev., Gypsum, Ohio, Midland, Calif., Sweetwater, Tex., Baltimore, Md.-enc.

G E N E R A L

PRODUCT COVERED:

A mixture of dry granular, fibrous, and powdered materials which, when mixed with water, form spray plaster.

Trade Name - Red Top Firecode Plaster.

Type Designations - Type D or V.

FACTORY LOCATION AND IDENTIFICATION:

Location	Identification
East Chicago	EC
New Brighton	N
Empire	E
Gypsum	G
Midland †	M
Sweetwater †	S
*Baltimore †	BA

† - These plants eligible to label only when vermiculite is used.

LABEL SERVICE SYMBOL:

Each package of cementitious material complying with all the details of this description shall be eligible to bear the combination label containing the following:

1. Manufacturer's name or file designation.

2. Label Service Symbol reading:

UNDERWRITERS' LABORATORIES, INC.

®

LISTED
CEMENTITIOUS MIXTURE
ISSUE NO. _____

3. Statement pertaining to classification:

KWH:JA

CG011 0769

The statement pertaining to classification will vary depending on whether the bag is marked with the designation Type D or V. The bags shall be marked with either the Type D or V designation; the bag is marked Type D when the finished product contains perlite and Type V when it contains vermiculite. The required statements are as follows:

LABEL NO. 1 (TYPE D OR V):

FIRE-RESISTANCE CLASSIFICATION

Floor or Roof and Ceiling Construction
Design Nos. 22 - 3 Hr, 23 - 3 Hr, 24 - 3 Hr, 32 - 3 Hr, 70 - 3 Hr, 10 - 2 Hr, 14 - 2 Hr, 15 - 2 Hr, 68 - 2 Hr, and 229 - 2 Hr.
Roof and Ceiling Construction
Design No. RC2 - 2 Hr.
Beam Protection
Design Nos. 37 - 5 Hr and 67 - 3 Hr.
Column Protection
Design Nos. 25 - 4 Hr and 13 - 3 Hr.

LABEL NO. 2 (TYPE V ONLY):

FIRE-RESISTANCE CLASSIFICATION

Floor or Roof and Ceiling Construction
Design Nos. 22 - 3 Hr, 23 - 3 Hr, 24 - 3 Hr, 32 - 3 Hr, 70 - 3 Hr, 10 - 2 Hr, 14 - 2 Hr, 15 - 2 Hr, 68 - 2 Hr, and 229 - 2 Hr.
Roof and Ceiling Construction
Design No. RC2 - 2 Hr.
Beam Protection
Design Nos. 37 - 5 Hr and 67 - 3 Hr.
Column Protection
Design Nos. 25 - 4 Hr, 27 - 4 Hr, 30 - 4 Hr, 13 - 3 Hr, 23 - 3 Hr, 25 - 3 Hr, 12 - 2 Hr, and 13 - 2 Hr.

In addition, each package shall contain the directions for application and mixing as shown on Figs. 1 and 2 for material containing perlite and vermiculite, respectively. Also, each package shall contain factory identification noted above.

JAF:JD

D E S C R I P T I O N

PRODUCT COVERED:

A mixture of dry granular, fibrous, and powdered materials which forms a cementitious mixture when mixed with water.

MANUFACTURING PROCESS:

The ingredients as hereinafter described are weighed individually and all (with the exception of the perlite or vermiculite) the ingredients are mixed approximately 3 min. The perlite or vermiculite is then added and mixing is continued for an additional 2 min. (See note below.)

The mixed product is packed into bags of approximately 50 lb each.

Note - For the Empire, Nevada plant, the manufacturing process is as follows: The stabilizers are individually weighed and blended for 15 min before use. The stucco is drawn into a weigh hopper and the asbestos and stabilizers are added. The perlite or vermiculite and the materials in the weigh hopper are then simultaneously released into the mixer and mixed for 2-1/2 min before being passed through the packer and sacked.

CS011 0771

FORMULATION:

Name of Ingredient	Proportion	Tolerance
Tube Mill Stucco	515 lb	± 25 lb
Asbestos - Grade 7H	138 lb	± 7 lb
Duponal	3 lb	± 1/2 lb
Retarder	16-1/2 lb	Maximum
Corn Flour	11.0 lb maximum	-

Note - Corn flour plus retarder shall not exceed 16-1/2 lb.

Dowicide G (Sodium Pentachlorophenate)	1/2 lb	± 1/4 lb
Lime	3-1/2 lb	± 1/2 lb
Perlite or	45 cu ft	± 2-1/4 cu ft
Vermiculite †	46 cu ft	± 2-1/4 cu ft

† - Either perlite or vermiculite may be used but not both.

The size of the batch may vary but the proportions shall remain the same.

FINISHED PRODUCT:

Ash Contact - 87.0 per cent minimum.

Unit Weight - 19.0 ± 3.0 lb per cu ft.

Sieve Analysis -

Mesh Size	- 16	50
With Perlite - 0/0 Passing	- 94.0 ± 5	40.0 + 8.0 -12.0
With Vermiculite	- 83.0 ± 7.0	35.0 ± 8.0

Per Cent Sulphur Trioxide - 22.9 minimum.

RFB:mb

C5011 0077