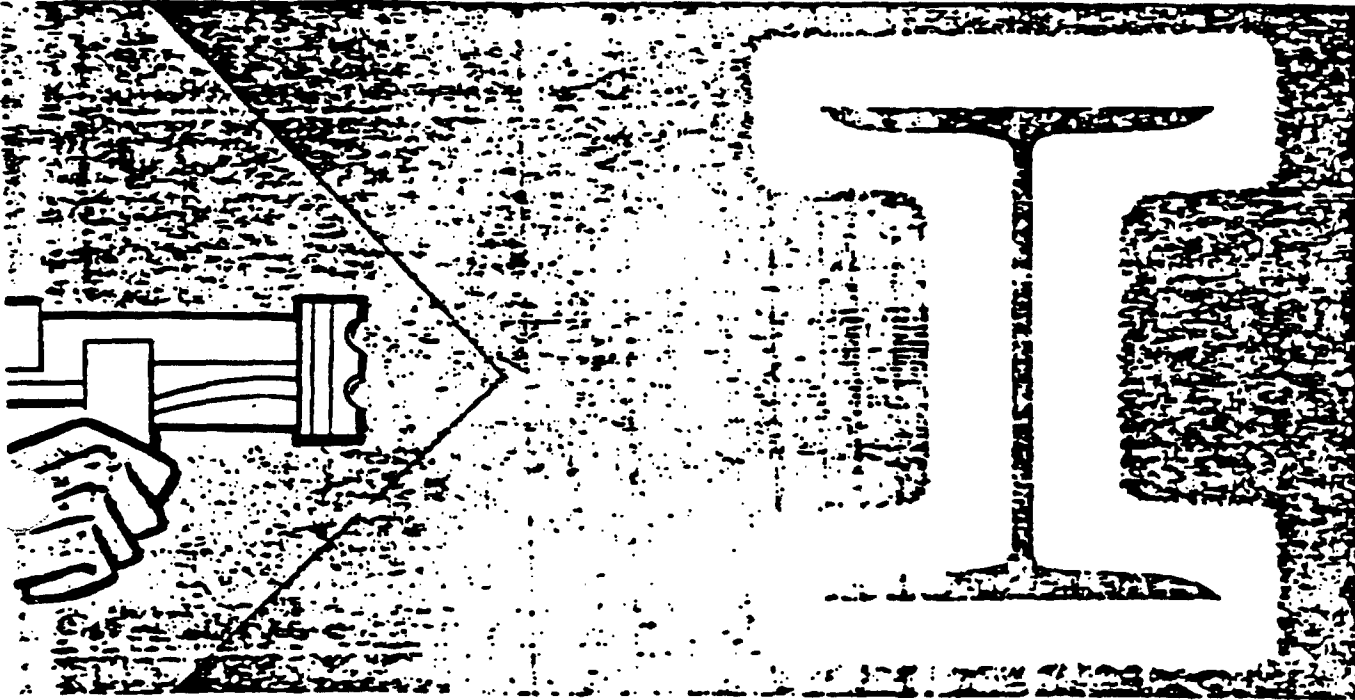


SPRAYED
"Limpet."
ASBESTOS

- FIREPROOFING ■
- ACOUSTICAL TREATMENT ■
- THERMAL INSULATION ■
- CONDENSATION CONTROL ■
- CORROSION PREVENTION ■



ⓐ **Armstrong CONTRACTING AND SUPPLY CORPORATION**

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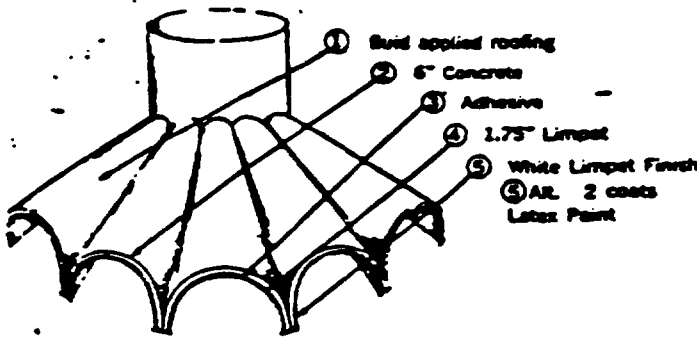
SPRAYED *Limpet* ASBESTOS

INTRODUCTION

Sprayed "Limpet" Asbestos describes both a material and a process. The material is the original and only 100% asbestos mixture sold in the United States. No substitute fibers are used for any reason. Specifiers should be aware that the physical characteristics of Limpet are not necessarily duplicated by other fibrous materials. The information on this and the back page is designed to supply background information which should be read in conjunction with the detailed specifications on the opposite page.

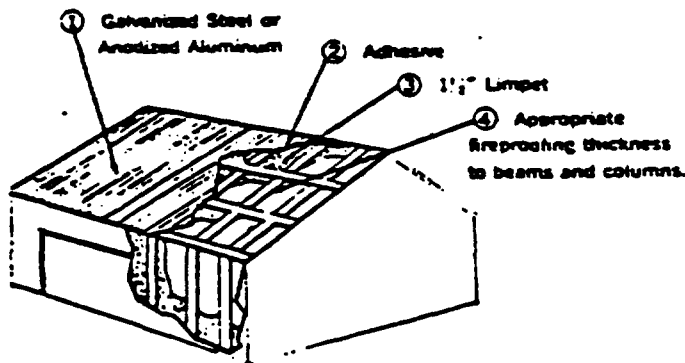
characteristics of Limpet are not necessarily duplicated by other fibrous materials. The information on this and the back page is designed to supply background information which should be read in conjunction with the detailed specifications on the opposite page.

CONCRETE STRUCTURES



Gives U = .17 } As well as condensation control
Gives NRC = .90 } & fireproofing

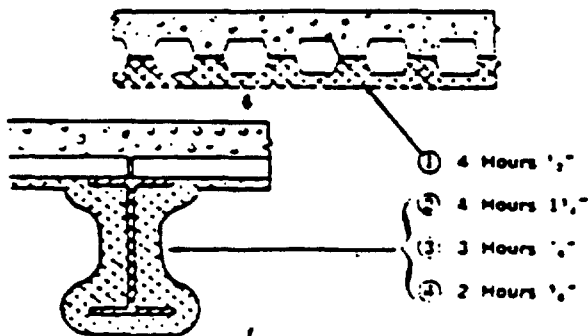
METAL BUILDINGS



Gives U = .14 } as well as condensation
Gives NRC = .90 } control & fireproofing

NOTE: Depending on building, controls fireproofing of beams and columns may drastically reduce fire insurance premiums.

FIREPROOFING DETAILS



FINISHES

Surface finishes can vary from coarse heavy textured, for concealed fireproofing applications to a fine textured or stippled finish where esthetics require a pleasing appearance.

CUSTOMER SERVICE

The sale of Limpet is confined to an installed basis due to the need for special patented equipment and highly skilled carefully trained personnel.

Specifications, Technical Service, backed by extensive practical experience, and quotations are available through factory trained franchised applicators in all major cities. Also Licensed Limpet applicators are located in all principal countries—for assistance on foreign projects contact Lancaster.

TEST REPORTS

All of the physical characteristics of Limpet quoted are from laboratory reports which are available on request.

PRODUCT DATA

LW.25: 100% Amosite Asbestos—the basic fiber used for all applications.

WS.1: A blend of special white asbestos used only over the base coat of LW.25 on exposed applications where consistency of color is required, such as acoustical applications. The light reflectivity is approximately 72% and is dependent upon texture.

BD.2: A mixture of asbestos and portland cement which is troweled over the Limpet where a touch plaster type finish is required—it may be used indoors or outdoors.

TS.2: A white resin emulsion which can be added to the spray water in various concentrations. The Limpet can be over-sprayed for surface toughening only or throughout the coating to make the Limpet as hard as a rock.

BF.10-16: An asphalt emulsion used on metal buildings as an adhesive and to prevent rusting in the event of leaks.

PHYSICAL CHARACTERISTICS

Density (after spraying and drying)—8 to 12 lbs./cu. ft., average for all applications except fireproofing where densities are in accordance with actual fire tests.

Thermal Conductivity—The "k" value of Limpet varies and is dependent upon whether the cold face is above or below the freezing point—See table on back page.

Sound Control—See table on back page.

Shot Content—Shot content less than 1.5% when tested at 10.5 lbs./cu. ft.—Test data on request.

Drying—24 hours at 70° F., 60% R.H. and 2' of air per minute.

Curing—Reaches 90% of ultimate strength in seven days.

Setting Time—2 to 3 hours, depending on temperature, humidity, and air movement.

Expansion and Contraction—The expansion and contraction of any metal surface is absorbed and nullified by the fibrous nature of the coating.

Combustibility—Completely incombustible.

Corrosion—Inhibits corrosion of steel.

General—Will not bulge, crack or rot and will not sustain rodents or vermin.

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For Fireproofing • Acoustics • Insulation
Condensation Control

BRIEF SPECIFICATION

Furnish and install Sprayed Limpet Asbestos for (a) Fireproofing, (b) Acoustical Correction (c) Insulation and/or Condensation Control in the areas listed below or where shown on the drawings.

All products covered in this specification are to be installed in accordance with procedures described and approved by Armstrong Contracting and Supply Corporation and by factory trained franchised applicators.

COMPLETE SPECIFICATION

FIREPROOFING

SCOPE

- General** The general conditions of the contract are a part of this specification. This specification covers the furnishing, delivering, unloading, hauling, storing, protection, and application of Limpet to complete all sprayed surfaces as shown on the drawings or herein specified.
- Work Included** The contractor shall furnish all supervision, labor, materials, tools, and equipment to perform the work specified herein, and shall cooperate with other trades to meet the requirements of the general progress of the work as directed by the architect and general contractor.
- Work Not Included** All clips, hangers, brackets, rods or other attachments to areas receiving spray shall be installed before spray work commences. Heat, light, water and suitable electric power shall be provided by others. Surfaces to be sprayed shall be free from loose rust, scale, grease, dirt or any other foreign matter likely to create a false bond. Painting where required by others.
- Materials** Materials shall be Limpet Grade LW.25 or 100% asbestos fibers free from adulterants in the form of glass or mineral wool. Each bag shall carry an Underwriters' Laboratory label indicating factory inspection and acceptance. The thickness of Limpet shall be in accordance with Underwriters' tests for decks, beams and columns or other thicknesses approved by the authority having jurisdiction.
- Samples (Optional)** Samples demonstrating the surface finish shall be prepared by the contractor and submitted to the architect where required.
- Clean Up** All adjoining walls and floors where fiber has been deposited shall be swept clean by the contractor.
- Warranty** The contractor applying material and the manufacturer supplying material shall be required to warrant the satisfactory performance of the Sprayed "Limpet" Asbestos

warranty shall be valid for a period not exceeding twelve months following the date on which the application is completed.

NOTE: Items 1 through 7 of the above specification are applicable to all of the following specifications except for the thicknesses in number 4. Substitute:

ACOUSTICAL CORRECTION

MATERIALS

(See note under item 7)

(a) Exposed acoustical work shall be composed of Limpet LW.25 plus $\frac{1}{4}$ " final pressed coat of WS.1 to a complete final thickness of ____" to achieve a noise reduction coefficient of ____ (See table on back page.)

(b) Exposed acoustical work shall be composed of LW.25 to a final pressed thickness of ____" to achieve a noise reduction coefficient of ____ (See table on back page.)

The exposed Limpet shall then be painted with two spray coats of water base latex type paint in accordance with the color schedule in the painting section of these specifications, not by the contractor.

THERMAL INSULATION

(See note under item 7)

1 POROUS SURFACES

MATERIALS

(a) For applications to porous surfaces such as brick, plaster, asbestos cement board, concrete and other indoor surfaces, the surface to be treated shall be sprayed with a solution of TS.2 before the application of Limpet LW.25 ____" thick to achieve a "U" or "k" value of ____ (See table back page.)

(b) For application to the underside of concrete slabs open to the elements.

The surface shall be sprayed with LW.25 and a solution of TS.2 throughout, to a thickness of ____" to achieve a "U" or "k" value of ____ (See table back page.)

2 METAL SURFACES

MATERIALS

For applications to the roofs and walls of galvanized metal or anodized aluminum buildings, the Limpet shall be applied to a brush or sprayed coat of BF.10-16 asphalt emulsion while still tacky.

The Limpet LW.25 shall have a final pressed thickness of ____" to achieve a "U" or "k" of ____ (See table back page.)

CONDENSATION CONTROL

The thickness of Limpet for condensation control varies according to the "U" or "k" value of other elements of the structure. Other conditions which effect the thickness are outside and inside temperatures, degree of relative humidity, ventilation and air movement. It is not possible to write a standard specification for all conditions. Specifiers should contact Armstrong Contracting and Supply at Lancaster for guidance.

FIREPROOFING TEST DATA

Assemblies	Applied by Ref. #	Description	Rating (min.)	Thick. (min.)	Authority
	1	Plaster Concrete Ceiling Steel Joist	1 1/2	1/2	U.L.C. 998 U.L.C. 1795.1
	2	Plaster Concrete Ceiling Steel Joist	2 1/2	1/2	U.L.C. 1795.1 U.L.C. 1795.2
	3	Plaster Concrete Ceiling Steel Joist	3 1/2	1/2	U.L.C. 1795.1 U.L.C. 1795.2
	4	Plaster Concrete Ceiling Steel Joist	4 1/2	1/2	U.L.C. 1795.1 U.L.C. 1795.2
	5	Plaster Concrete Ceiling Steel Joist	5 1/2	1/2	U.L.C. 1795.1 U.L.C. 1795.2

Assemblies	Applied by Ref. #	Description	Rating (min.)	Thick. (min.)	Authority
	6	Plaster Concrete Ceiling Steel Joist	2 (11)	1/2	U.L.C. 6-111 U.L.C. 6-112
	7	Plaster Concrete Ceiling Steel Joist	3 (12)	1/2	U.L.C. 6-111 U.L.C. 6-112
	8	Plaster Concrete Ceiling Steel Joist	4 (13)	1/2	U.L.C. 6-111 U.L.C. 6-112
	9	Plaster Concrete Ceiling Steel Joist	5 (14)	1/2	U.L.C. 6-111 U.L.C. 6-112

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SPRAYED *Limpet* ASBESTOS

ACOUSTICAL TEST DATA

(TESTS ON SOLID BACKING)		COEFFICIENTS AT VARIOUS FREQUENCIES						SOUND REDUCTION COEFFICIENT
THICKNESS	SURFACE	128	256	512	1024	2048	4096	
1/2"	Unpainted	.08	.27	.53	.65	.71	.59	.55
3/4"	Unpainted	.08	.19	.70	.89	.95	.85	.70
3/4"	2 Coats	.09	.23	.67	.90	.93	.87	.70
1"	Unpainted	.30	.42	.74	.96	.95	.96	.75
1 1/4"	Unpainted	.16	.59	.98	.98	.97	.90	.90
1 1/4"	2 Coats	.16	.62	.94	.98	.94	.91	.85

(TESTS ON METAL LATH)

1/2"	Unpainted	.25	.78	.97	.81	.82	.85	.85
1/2"	2 Coats	.27	.75	.90	.75	.80	.88	.80
3/4"	Unpainted	.41	.88	.90	.88	.91	.81	.90
3/4"	2 Coats	.49	.90	.93	.86	.81	.82	.90

NOTE: All above figures are based on investigations conducted by recognized testing authorities in United States of America, Canada or Great Britain.

INSULATION TEST DATA

VALUES ADOPTED		COEFFICIENTS OF HEAT TRANSFER—BTU/HR. R/W/°F (R-VALUES)								
T	T	MATERIAL	As-Treated	1/2"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"
4.0		Asbestos Cement	.92	.39	.29	.24	.20	.17	.15	.13
	1.02	Wood Deck	.57	.29	.24	.20	.17	.15	.13	.12
0	0	Corrugated Metal	1.28	.41	.30	.24	.20	.17	.15	.14
	.90	8" Concrete Blocks	.53	.28	.23	.19	.17	.15	.13	.12
12.0		4" Concrete Deck	.65	.31	.25	.20	.18	.15	.14	.12
9.0		4" Face Brick	.49	.27	.22	.19	.16	.14	.13	.10
9.0		4" Common Brick								

NOTE: The "T" and "C" values for the materials above are from A.S.H.V.E. Guide. The "U" values with Limpet were calculated at "T" 0.10 to 1.0 f mean temp. 15 MPH wind and density of 10.5 lbs. ft.³. Variations in density and mean temperatures can result in a "U" value as low as 0.23.

Factory trained, franchised applicators in all principal cities

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120 North Lime Street
LANCASTER, PA.

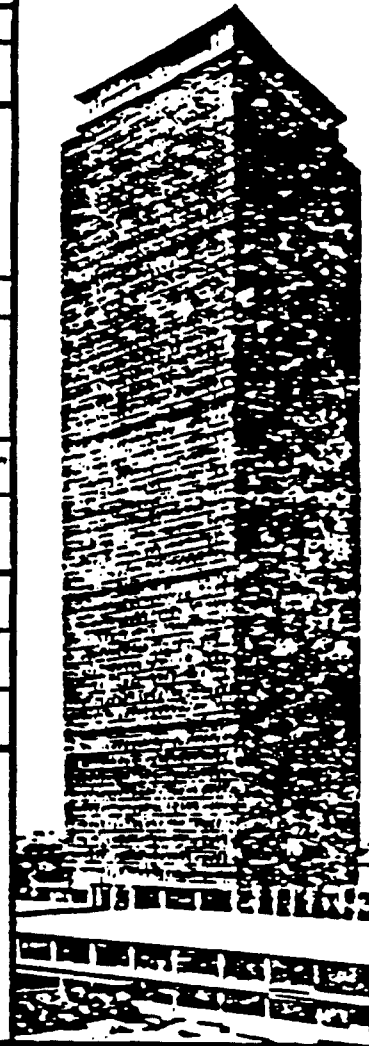
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PRUDENTIAL CENTER
Boston, Mass.

Architect: Charles L. Loomis, Assoc.
General Contractor: Park West
Joint Venture
Limpet Applicator: C. B. Carter &
Co., Inc.

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