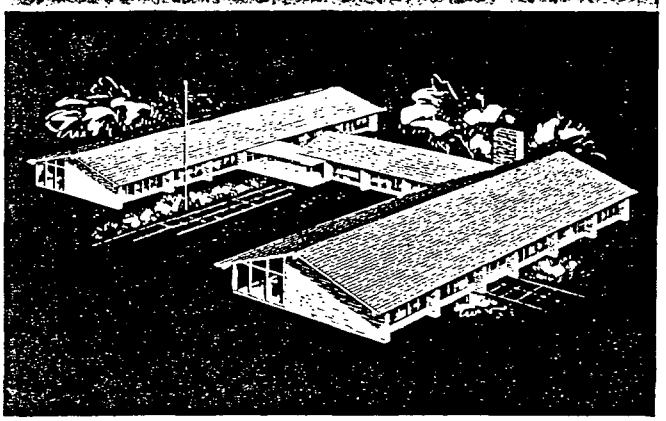
PLAINTIFF'S EXHIBIT

USG-1724

USG® Asphalt Roofing Products

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1937



A.I.A. File No. 12-B/12-B-2

description and utility

Exterior protection of buildings has been a United States Gypsum specialty ever since the company began manufacturing roofing products, in 1933. USG asphalt roofing offers the protection of rated fire resistance plus the two other characteristics most important to architects—beauty, expressed in harmonious, lasting colors, and durability, promising minimum maintenance for years to come.

Value and dependability are built into these products through the unique USG quality control standards. Asphalt shingles, for example, are made from top-grade felt that is asphalt-saturated to resist aging and coated with a special stabilized asphalt. Color-fast granules are embedded in the heavy-bodied coating to form a weather-protective shield. A second coating covers the back of the shingle—all carefully controlled to conform to rigid specifications. These manufacturing safeguards are backed by regular testing and constant product improvement at the USG Research Center, largest and best equipped in the industry.

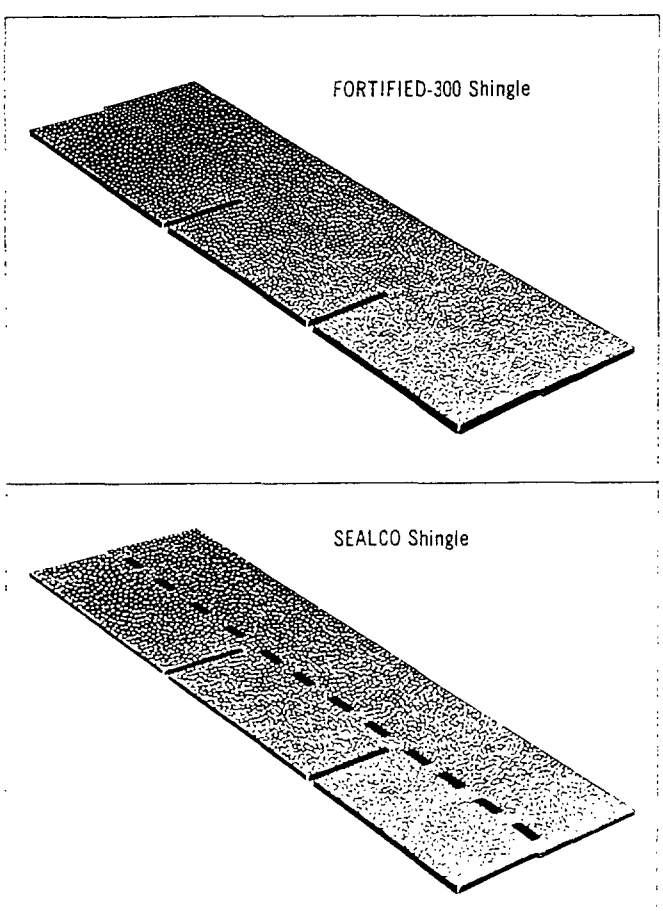
The wide diversity of types, styles and colors makes it possible to satisfy almost every asphalt roofing requirement. U.S.G. offers differing product lines, tailored to market preferences, in three large geographic areas:

Northeast (states north and east of North Carolina, West Virginia and Ohio)—3-tab asphalt shingles, both conventional and self-sealing, in 300-lb., 265-lb. and 235-240-lb. weights; also 2-tab, 300-lb. triple coverage asphalt shingles.

Upper Midwest (Iowa, Minnesota, North Dakota, South Dakota, Nebraska, Wisconsin, northern Illinois, northern Michigan, eastern Montana)—3-tab asphalt shingles in 300-lb., 265-lb. and 235-lb. weights and self-sealing type; also double coverage interlocking shingles.

West (California, Oregon, Washington, Idaho, Utah, Nevada, Arizona, western Montana, Hawaii)—20, 15 and 10-year bonded built-up roof assemblies: 3-tab asphalt shingles in 300-lb. and 235-lb. weights and self-sealing type.

USG asphalt roofing is *made to work together*, economically and compatibly, with other USG exterior materials—poured gypsum concrete roof decks, precast gypsum roof plank, wood fiberboard roof insulation, and wood fiberboard insulating roof deck (West only). The benefit of dealing with a single manufacturer is extended further by incorporating into the job such additional USG exterior products as gypsum or insulating sheathing, exterior stucco, mineral siding, mason's lime, aluminum louvers, and paint products.



types and functions

FORTIFIED-300 Strip Shingles—one of the finest custom shingles ever made—ideal for churches, institutions, public buildings as well as custom-built homes. Almost 30% heavier than standard strip shingles, designed to give maximum rugged wear wherever supreme roof quality is desired.

This fire-resistant 300-lb. shingle is built from extra-heavy felt, given a super-thick asphalt coating and a deep layer of selected granules. The result is a rich, massive appearance with deep shadow lines created by the shingle's extra thickness. FORTIFIED-300 offers long-run economy because of its built-in durability to resist high winds, sun, rain and snow. Available in popular blended colors, textures and standard surfaces; also with the SEALCO self-sealing feature (below) in some areas.

SEALCO Self-Sealing Strip Shingles—wherever the requirement is for maximum wind protection or for application to low-pitched roofs, SEALCO self-sealing shingles offer many advantages over ordinary shingles. SEALCO comes with 12 spots of high-strength adhesive placed across each shingle, automatically bonding the tabs to the nailed-down portion of the previous course. This self-sealing action takes place at normal roof temperatures, not limited to extremes of summer heat. SEALCO carries the U.L. Wind-Resistant label.

The placement of SEALCO sealant spots at intervals across the shingle helps the roof to breathe, and prevents trapping of condensation beneath the tabs. Unlike ordinary shingles, no hand sealing is needed on the lower pitches down to 2/12

Rugged, fire-resistant SEALCO shingles are available in a wid range of beautiful solid and blended colors.

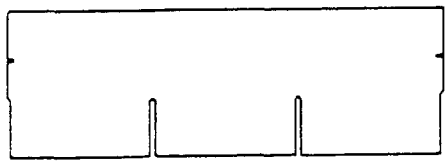
USG 235-lb. Square Butt Strip Shingles—the all-time favorite in roofing shingles of standard weight and design, offering superior

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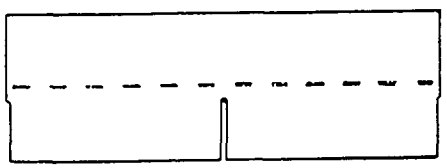
quality at economical cost. These classic 12" three-tab shingles blend well with both traditional and contemporary styles of architecture, harmonizing with the texture and tone of exterior walls.

Square Butts (identified as CASCADE Shingles in West) are available in the widest range of rich-toned colors of any USG shingle—in solid, blended and pastel shades. Rock-hard mineral granules give them a lasting full-color brilliance.

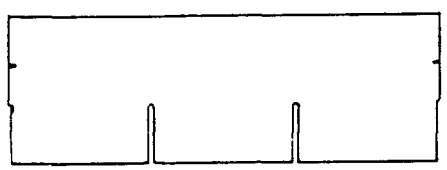
For the extra protection and longer life of a triple-coverage roof, USG Square Butts may be applied with a 4-in. exposure in place of the standard 5-in. exposure—done by using built-in alignment guides and increasing quantity by 25%.



2-Tab SEALCO Strip Shingles (available in Northeast only)—huge 18" tabs. 50% wider than in 3-tab roofing, accentuate horizontal roof lines desired in contemporary design. SEALCO self-sealing features provide maximum wind protection, permit use on low-pitched roofs. Carries U.L. Wind-Resistant label.



USG Giant Strip Shingles (available in Northeast and Upper Midwest)—265-lb. super-thick shingles for custom appearance and long service. Conventional three-tab design, in range of solid, blended and pastel colors; also available with the SEALCO self-sealing feature in some areas.



Specialty Shingles, available in areas of market demand, include lock shingles for high-wind areas—double coverage and standard GRIP-LOCK, standard-weight IMPERIAL-LOCK, and lighter weight ARRO-LOCK shingles. Others are 10" THATCH and STARCRAFT shingles for distinctive appearance, individual DUTCH LAP and ANGLE LAP shingles, and Hexagon shingles for re-roofing and utility needs.



Asphalt shingle application

USG Asphalt Shingle Roofing—Specifications

product	availability: North-east	Upper Mid-west	West	approx. weight per sq.	dimension (in.)	shingles sq.	exposure (in.)	headlap (in.)	Underwriters' label
FORTIFIED-300	X	X	X	300 lbs.	12 x 36	80	5	2	C
2-Tab SEALCO	X			235-240 lbs.	12 x 36	80	5	2	wind-resistant
Giant Strip	X	X		265 lbs.	12 x 36	80	5	2	C
SEALCO	X	X	X	235-240 lbs.	12 x 36	80	5	2	wind-resistant
235-lb. Square Butt (CASCADE in West)	X	X	X	235 lbs.	12 x 36	80	5	2	C

Underwriters' Label Service—the Underwriters' Class C label on asphalt roofing products identifies them as being "effective against light fire exposure"; that is, they are "not readily flammable and do not readily carry or communicate fire; afford a measurable degree of fire protection to the roof deck; do not slip from position; and possess no flying brand hazard."

Asphalt shingles bearing the Class C label have been manufactured to conform to Underwriters' Laboratories, Inc., Standard UL 55B Class "C" Asphalt Organic-Felt Sheet Roofing and Shingles, dated April 1962. Shingles bearing the UL Wind-Resistant label have been manufactured with factory-applied adhesive or integral locking tabs to meet a similar UL 1962 standard.

In addition to testing materials for fire resistance, Underwriters' Laboratories maintains a check on labeled products by factory inspections at varying intervals.

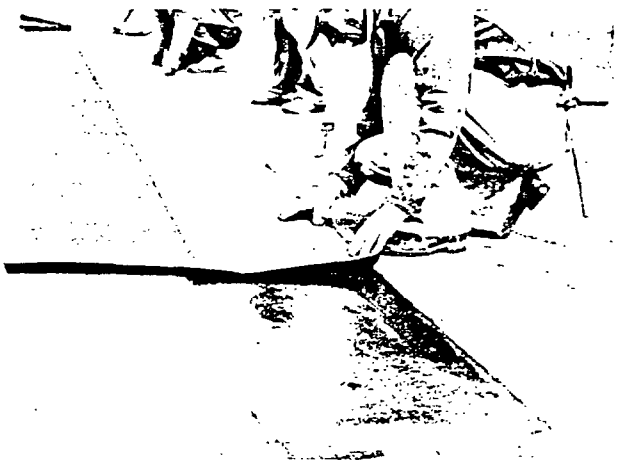
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USG Built-Up Roofing (available in West only) comprises a full line of products for use on pitched, curved or level inclines over all common roof decks. U.S.G. also provides specifications and application standards for two classes of roof assemblies incorporating these products:

—**Certified Roofs,** for which U.S.G. furnishes inspection service and issues a Certificate of Compliance.

—**Bonded Roofs,** for which U.S.G. provides inspection service and issues a 10, 15 or 20-year surety bond paid for by the owner.

The table following lists the recommended USG built-up roof assemblies available in the Western region—a wide choice of gravel surfaced, mineral surfaced and asphalt-coated asbestos roof coverings. USG products used include various grades and types of asphalt felt, asbestos felt, mineral-surface and smooth-surface roll roofing, roofing asphalt, roof coatings and cements, and wood fiberboard USG Roof Insulation. For complete data and specifications, see the USG Built-Up Roofing Manual, form no. RF-34.



Built-up roofing application

USG Built-Up Roof Assemblies—Western Region Only

USG assembly number	years bondable	U.L. roof covering class	roof slope limits	description of assembly	weight (4) in lbs./sq. ft.	
					nailable decks	non-nailable decks
gravel surfaced roofs						
dl-a-1	20	A	0" to ½"	3 layers specification roofing; gravel surfacing	6.30	6.40
dl-b-1	20	A	0" to ½"	5 layers no. 15 asphalt felt (1); gravel surfacing	6.10	6.05
dg-a-1	20	A	0" to 1"	3 layers specification roofing; double gravel surfacing	7.90	8.00
dg-b-1	20	A	0" to 1"	5 layers no. 15 asphalt felt (1); double gravel surfacing	7.70	7.65
g-a-1	20	A	½" to 3"	3 layers specification roofing; gravel surfacing	6.30	6.40
g-a-2	20	A	½" to 3"	5 layers no. 15 asphalt felt (1); gravel surfacing	6.10	6.05
dl-c-1	15	A	0" to ½"	1 layer specification roofing; 2 layers no. 15 asphalt felt; gravel surfacing	5.80	5.90
dl-d-1	15	A (2)	0" to ½"	4 layers no. 15 asphalt felt (1); gravel surfacing	5.70	5.65
g-b-1	15	A	½" to 3"	1 layer specification roofing; 2 layers no. 15 asphalt felt; gravel surfacing	5.80	5.90
g-c-1	15	A (2)	½" to 3"	4 layers no. 15 asphalt felt (1); gravel surfacing	5.70	5.65
dg-d-1	10	A (2)	0" to 1"	3 layers no. 15 asphalt felt; double gravel surfacing	7.15	7.25
g-d-1	10	A (2)	½" to 3"	3 layers no. 15 asphalt felt; gravel surfacing	5.55	5.65
mineral surfaced roofs						
m-a-1	20	A (3)	½" to 6"	2 layers no. 15 asbestos felt; mineral surfaced asbestos felt FORTI-CAP sheet	1.60	1.70
m-a-2	15	—	½" to 6"	2 layers no. 15 asphalt felt; mineral surfaced asbestos felt FORTI-CAP sheet	1.60	1.70
m-c-1	10	C	1" to 6"	3 layers no. 15 asphalt felt; 1 layer no. 90 ADAMANT cap	2.10	2.20
m-b-1	10	C	1" to 6"	2 layers no. 15 asphalt felt; 1 layer no. 105 BARRIER cap	1.85	1.95
ss-b-1	10	C	1" to 6"	1 layer no. 30 asphalt felt; 2 layers SEL-VI-LAP roofing	1.96	2.06
m-c-2	10	C	2" to 6"	2 layers no. 15 asphalt felt; 1 layer no. 90 ADAMANT cap	1.70	1.80
smooth surfaced asbestos felt roofs						
a-a-1	20	B	½" to 6"	1 layer no. 45 asbestos base sheet; 3 layers no. 15 asbestos felt (1); protective coating	1.85	1.55
a-b-1	15	B	½" to 6"	1 layer no. 45 asbestos base sheet; 2 layers no. 15 asbestos felt; protective coating	1.45	1.55
membrane waterproofing (for concrete decks under concrete floors, asphalt concrete paving and promenade tile)						
mw-e-1	—	—	—	3 layers specification sheet; 1 layer reinforcing fabric; 1 layer ADAMANT cap sheet		3.23
tile underlayment						
tu-e-1	—	—	3" to 6"	2 layers specification roofing	1.05	1.15

(1) Omit one layer no. 15 felt over non-nailable decks. (2) Rating changes to Underwriters' Class B when applied to a wood deck. (3) Additional layer no. 45 asbestos base sheet required for this rating. (4) Weights shown are nominal.

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specifications

I. scope—The roofing contractor shall provide labor, materials and equipment necessary for proper installation of asphalt roofing as specified herein, in accordance with application directions furnished by the manufacturer.

II. roof deck inspection—Before starting work, the roofing contractor shall examine thoroughly all roof deck areas on which roofing materials are to be applied. The contractor shall report to the architect or owner's agent in writing any defects which he considers detrimental to the proper application of roofing materials so that defects can be remedied before the roofing materials are applied.

III. materials

a. Asphalt Shingle Roofing shall be: (weight) (FORTIFIED-300) (SEALCO) (other) asphalt shingles (color) as manufactured by United States Gypsum Company (specify from page 2).

b. Asphalt Built-Up Roofing shall be: (select appropriate specification from USG Built-Up Roofing Manual) as manufactured by United States Gypsum Company.

c. Nails shall be: galvanized roofing nails (10 to 12 ga.) with ⅜" diam. heads. (Specify length from table following.)

Recommended Nail Length—Wood Decks

purpose	nail length
Roll roofing on new deck	1"
Strip or individual shingles—new deck	1¼"
Reroofing over old asphalt roofing	1½"
Reroofing over old wood shingles	1¾"

IV. installation

a. Asphalt Shingles, underlayment, flashings and all other accessories shall be applied in accordance with United States Gypsum directions as printed on shingle wrappers.

Note to architect: Fasteners for non-wood deck materials—when gypsum products, concrete plank and tile, fiber board, or similar materials other than wood are used for the roof deck, special fasteners and/or details for fastening are required to provide adequate anchorage for the roofing. In such cases it is recommended that the specifications of the manufacturer of the deck materials be followed in order to insure his responsibility for its performance.

b. Asphalt Built-Up Roofing (select appropriate specifications from USG Built-Up Roofing Manual).

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NOTE: Since methods and conditions of application and use are beyond the control of the United States Gypsum Company, its warranties of FITNESS and MERCHANTABILITY as well as any other warranties, express or implied, made in connection with the sale of these products, SHALL NOT BE EFFECTIVE OR ACTIONABLE UNLESS the products are applied according to United States Gypsum Company's directions and specifications.

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