PLAINTIFF'S EXHIBIT JM-2415

Merrero FACTORY

Asbestos Shingle DEPT.

PRODUCT: Master Sheet - Dry Veneer Mixes for Asbestos Roofing and Siding Shingles

SECTION NO.

PAGE NO. 1

I. VENEER MIXES FOR NORMAL CORE UNIFORM THICKNESS SHINGLES (SMOOTH & TEXTURE)

	MATERIAL CODE NO.		COLORS: GREEN %	GREEN BATCH	BLUE BLACK %	BLUE BLACK BATCH	RED %	RED BATCH
X	61064	Portland Cement - Dark	80	240 lbs.	80	240 lbs.	80	240 lbs.
	63123	Chrome Green - X1134W	20	60	-	-	-	-
	63175	Red Oxide - #1232	-	-	-	-	16.5	49.5
	63190	Yellow Oxide - #11499	-	-	-	-	3.5	10.5
	63160	Manganese Dioxide	-	-	20	60	-	-

NOTE: Weight all materials, ball mill for 30 minutes.

II. VENEER MIXES FOR #35 BALEN SHINGLES

Materials	DARK COLOR PORT. CEMENT	MANGANESE DIOXIDE	BURNT UMBER	X-1134-W CHROME GREEN	1149-D YELLOW OXIDE	#1232 RED OXIDE	ULTRA BLUE
X Material Code No.	61064	63160	63115	63123	63190	63175	63106
NO. 1 WEATH. GRAY							
BATCH, LBS.	240	45	15	-	-	-	-
PERCENT	80	15	5	-	-	-	-
NO. 2 WEATH. BLACK							
BATCH, LBS.	240	54	6	-	-	-	-
PERCENT	80	18	2	-	-	-	-
NO. 3 OLIVE GREEN							
BATCH, LBS.	231	-	15	39	15	-	-
PERCENT	77	-	5	13	5	-	-
NO. 4 SEA GREEN							
BATCH, LBS.	243	21	9	27	-	-	-
PERCENT	81	7	3	9	-	-	-
NO. 5 APPLE GREEN							
BATCH, LBS.	267	-	-	30	-	-	3
PERCENT	89	-	-	10	-	-	1
NO. 6 FORREST BROWN							
BATCH, LBS.	243	-	42	15	-	-	-
PERCENT	81	-	14	5	-	-	-
NO. 7 GRANADA RED							
BATCH, LBS.	225	10.5	3	-	9	52.5	-
PERCENT	75	3.5	1	-	3	17.5	-
NO. 8 TOURAINE RED							
BATCH, LBS.	240	24	-	3	-	24	9
PERCENT	80	8	-	1	-	8	3

CANCELLED BY Letter from Mr. Hargman dated 9/28/43

NOTE: WEIGH ALL MATERIALS; BALL MILL FOR 30 MINUTES

X— INDICATES CHANGE — To correct the purchasing specif. number for Dark Colored Portland Cement

AUTHORITY FOR CHANGE

FILE-HOLDERS | BLDG. SUPT. | LOCAL COST DEPT. | RESEARCH DEPT. | GEN. I. & C. DEPT. | GEN. COST DEPT. | LOCAL I. & C. DEPT.

SUPERSEDES: SAME SPECIFICATION PAGE 1, ISSUED 7-9-40

DATE ISSUED 1-27-42

MT-000154

FORM X-602D 10-40 PRINTED IN U. S. A.

MANUFACTURING SPECIFICATIONS

ASBESTOS SHINGLE DEPT.

MARRERO PLANT

X

PRODUCT: MASTER SHEET
ASBESTOS SHINGLE VENEER
FORMULAE AND MIXING DIRECTIONS

DIVISION DF

440-VF

PAGE NO. 3

CANCELLED 9/19/54

PIPE AND BOARD DEPARTMENT
MAY 26 1953
G. B. BROWN

RAW MATERIAL	PURCH. SPEC.	VENDOR
Titanium Dioxide	———	Titanium Pigment Corp. (Titanox RA)
" "	———	E.I. Dupont (Rayox R-110 & R-510)
C-4099 Chromium Oxide	———	C. K. Williams & Co.
YC-2835 Ceramic Yellow	———	C. K. Williams & Co.
R-1599 Pure Red Oxide	———	C. K. Williams & Co.
BS-4070 Burnt Sienna	———	C. K. Williams & Co.
Dark Portland Cement	61061	Lone Star Cement Co.
" " "	"	Ideal Cement Co.
BK-250 Black Iron Oxide	———	C. K. Williams & Co.
BK-247 " " "	———	C. K. Williams & Co.

MT-000153

RETURN TO J-M RESEARCH FILE ROOM

X—INDICATES CHANGE — REASON: To cover all Veneers by a single Specification.

AUTHORITY FOR CHANGE: Rearrangement of all Asbestos Shingle Mfg. Specs.

FILE-HOLDERS		H. OHS	PLANT PER.	IND. ENG.	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	REGR. QUAL. CONTROL	DIR. QUAL. CONTRO

SUPERSEDES: [illegible]

DATE ISSUED 5-5-53

Form 80132-10

CANCELLED 2/11/65

BLACK VENEER SLURRY - FORMULA AND MIXING

FORMULA NO.	1		2 (ALTERNATE)	
	%	LBS.	%	LBS.
Dark Portland Cement	94.8	82.2	92.5	80.2
BK-250 Black Iron Oxide	5.2	4.5	—	—
BK-247 Black Iron Oxide	—	—	7.5	6.5
Total Dry Materials	100.0	86.7	100.0	86.7

Note: Use alternate formula No. 2 when BK-250 Black Iron Oxide is not available.

The above materials are mixed with 35 gals. of warm water (temp. 110-140°F) in the top mixer of the Black Veneer mixing equipment to produce Black Veneer Slurry of proper consistency.

APPROVED VENEER MATERIALS

	RAW MATERIALS	PURCH. SPEC.	VENDOR
	7F04 Asbestos Fibre	—	J-M (Asbestos Fibre Division)
	White Cement	61001	Medusa Cement Co.
	" "	"	Trinity White Cement
	" "	"	Atlas White Cement
	Light Color Cement	61061	Lone Star Cement Co.
	Dry Ground Whiting	63386	Thompson-Weinman Co.
	" " "	"	Georgia Marble Co.
	White Silex	61231	Wedron Silica
	" "	"	Western Materials
	" "	"	Pioneer Silica
	80-Mesh Sand	61272	Western Materials
1X	Titanium Dioxide	—	Titanium Pigment Corp. (Titanox A-HO)
1X	" "	—	E.I. Dupont (Ti-Pure FF)
1X	" "	—	Calco Chemical Co. (Unitane O-220)
1X	" "	—	Glidden Co. (Zopaque SD)
	C-4099 Chromium Oxide	—	C. K. Williams Co.
	YC-2835 Ceramic Yellow	—	C. K. Williams Co.
	R-1599 Pure Red Oxide	—	C. K. Williams Co.
	BS-4070 Burnt Sienna	—	C. K. Williams Co.
2X	R-5098 Red Oxide	—	C. K. Williams Co.
	Dark Portland Cement	61061	Lone Star Cement Co.
	" " "	"	Ideal Cement Co.
	BK-250 Black Iron Oxide	—	C. K. Williams Co.
	BK-247 " " "	—	C. K. Williams Co.
2X	Ideal Cement	61061	Ideal Cement Co.-Baton Rouge, La.

PIPE AND BOARD DEPARTMENT APR 5 1954 G. B. BROWN

RETURN TO

MT-000152

X—INDICATES CHANGE — REASON: 1X - Change to new grades of Titanium Dioxide.
2X - Add new Red Oxide and Ideal Cement.

AUTHORITY FOR CHANGE — 1X - Product Proposal 423-PP-24 and Congdon's letter 2-8-54.
2X - Product Proposal 423-PP-28 and Congdon's letter 12-2-53.

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTTS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR QUAL CONTI

SUPERSEDES: Same Specification, Page 3, issued 5-5-53. DATE ISSUED 3-18-

CANCELLED 3/11/65

BLACK VENEER SLURRY - FORMULA AND MIXING

FORMULA NO.	1		2 (ALTERNATE)	
	%	LBS.	%	LBS.
Dark Portland Cement	94.8	82.2	92.5	80.2
BK-250 Black Iron Oxide	5.2	4.5	—	—
BK-247 Black Iron Oxide	—	—	7.5	6.5
Total Dry Materials	100.0	86.7	100.0	86.7

Note: Use alternate formula No. 2 when BK-250 Black Iron Oxide is not available.

PIPE AND BOARD DEPARTMENT MAR 7 1955 G. B. BROWN

The above materials are mixed with 35 gals. of warm water (temp. 110-140°F) in the top mixer of the Black Veneer mixing equipment to produce Black Veneer Slurry of proper consistency.

APPROVED VENEER MATERIALS

RAW MATERIALS	PURCH. SPEC.	VENDOR
7F04 Asbestos Fibre	-	J-M (Asbestos Fibre Division)
White Cement	61001	Medusa Cement Co.
" "	"	Trinity White Cement
" "	"	Atlas White Cement
Light Color Cement	61061	Lone Star Cement Co.
Dry Ground Whiting	63386	Thompson-Weinman Co.
" " "	"	Georgia Marble Co.
White Silex	61281	Wedron Silica
" "	"	Western Materials
" "	"	Pioneer Silica
" "	"	Pennsylvania Glass Sand Corp.
80-Mesh Sand	61272	Western Materials
Titanium Dioxide	-	Titanium Pigment Corp.(Titanox A-40)
" "	-	E.I. Dupont (Ti-Pure FF)
" "	-	Calco Chemical Co.(Unitane O-220)
" "	-	Glidden Co. (Zopaque SD)
G-4099 Chromium Oxide	-	C. K. Williams Co.
YC-2835 Ceramic Yellow	-	C. K. Williams Co.
R-1599 Pure Red Oxide	-	C. K. Williams Co.
BS-4070 Burnt Sienna	-	C. K. Williams Co.
R-5098 Red Oxide	-	C. K. Williams Co.
Dark Portland Cement	61061	Lone Star Cement Co.
" " "	"	Ideal Cement Co.
BK-250 Black Iron Oxide	-	C. K. Williams Co.
BK-247 " " "	-	C. K. Williams Co.
Ideal Cement	61061	Ideal Cement Co.-Baton Rouge, La.

RETURN TO J-M RESEARCH FILE ROOM

MT-000151

X — INDICATES CHANGE — REASON: Add White Silex from Pennsylvania Glass Sand Corp.

AUTHORITY FOR CHANGE — Product Proposal Marrero 926-4, H. R. Congdon's Letter 1-25-55.

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONTRC

SUPERSEDES: Same Specification, Page 3, issued 3-18-54.

DATE ISSUED

CANCELLED 6/16/55 K-3

PIPE AND BOARD DEPARTMENT
MAR 23 1955
C. C. BROWN

BLACK VENEER SLURRY - FORMULA AND MIXING

FORMULA NO.	1		2 (ALTERNATE)	
	%	LBS.	%	LBS.
Dark Portland Cement	94.8	94.0	92.5	94.0
BK-250 Black Iron Oxide	5.2	5.2	—	—
BK-247 Black Iron Oxide	—	—	7.5	7.6
Total Dry Materials	100.0	99.2	100.0	101.6

Note: Use alternate formula No. 2 when BK-250 Black Iron Oxide is not available.

The above materials are mixed with 35 gals. of warm water (temp. 110-140°F) in the top mixer of the Black Veneer mixing equipment to produce Black Veneer Slurry of proper consistency.

APPROVED VENEER MATERIALS

RAW MATERIALS	PURCH. SPEC.	VENDOR
7F04 Asbestos Fibre	—	J-M (Asbestos Fibre Division)
White Cement	61001	Medusa Cement Co.
" "	"	Trinity White Cement
" "	"	Atlas White Cement
Light Color Cement	61061	Lone Star Cement Co.
Dry Ground Whiting	63386	Thompson-Weinman Co.
" " "	"	Georgia Marble Co.
White Silex	61281	Madron Silica
" "	"	Western Materials
" "	"	Pioneer Silica
" "	"	Pennsylvania Glass Sand Corp.
80-Mesh Sand	61272	Western Materials
Titanium Dioxide	—	Titanium Pigment Corp. (Titanox A-HO)
" "	—	E.I. Dupont (Ti-Pure FF)
" "	—	Calco Chemical Co. (Unitane O-220)
" "	—	Glidden Co. (Zopaque SD)
C-4099 Chromium Oxide	—	C. K. Williams Co.
YC-2835 Ceramic Yellow	—	C. K. Williams Co.
R-1599 Pure Red Oxide	—	C. K. Williams Co.
BS-4070 Burnt Sienna	—	C. K. Williams Co.
R-5098 Red Oxide	—	C. K. Williams Co.
Dark Portland Cement	61061	Lone Star Cement Co.
" " "	"	Ideal Cement Co.
BK-250 Black Iron Oxide	—	C. K. Williams Co.
BK-247 " " "	—	C. K. Williams Co.
Ideal Cement	61061	Ideal Cement Co. - Baton Rouge, La.

RETURN TO
J-M RESEARCH
FILE ROOM

MT-000150

X—INDICATES CHANGE — REASON: Change Black Veneer Formula to show increased dry materials in slurry.

AUTHORITY — FOR CHANGE: "Improved Plant Operation" - Letter L. L. Liggett (Schoenfeld) received at Marrero 3-10-55.

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL CONTR

SUPERSEDES: Same Specification, Page 3, issued 2-11-55 and

DATE ISSUED 3-11-55

MANUFACTURING SPECIFICATIONS

MARRERO PLANT

ASBESTOS SHINGLE DEPT.

PRODUCT: MASTER SHEET
ASBESTOS SHINGLE VENEER
FORMULAE AND MIXING INSTRUCTIONS

DIVISION BP

SPEC. NO. 440-VF

PAGE NO. 3

CANCELLED 1/10/56

BLACK VENEER SLURRY - FORMULA AND MIXING

Formula No.	1		2 (Alternate)	
	%	Lbs.	%	Lbs.
Dark Portland Cement	94.8	94.0	92.5	94.0
BK-250 Black Iron Oxide	5.2	5.2	—	—
BK-247 Black Iron Oxide	—	—	7.5	7.6
Total Dry Materials	100.0	99.2	100.0	101.6

Note: Use alternate formula No. 2 when BK-250 Black Iron Oxide is not available.

The above materials are mixed with 35 gals. of warm water (temp. 110-140°F) in the top mixer of the Black Veneer mixing equipment to produce Black Veneer Slurry of proper consistency.

RECEIVED MARRERO DEPARTMENT PIPE MILL JUN 21 1955 L. B. BROWN

APPROVED VENEER MATERIALS

RAW MATERIALS	PURCH. SPEC.	VENDOR
7F04 Asbestos Fibre	-	J-M (Asbestos Fibre Division)
White Cement	61001	Medusa Cement Co.
" "	"	Trinity White Cement
" "	"	Atlas White Cement
Light Color Cement	61061	Lone Star Cement Co.
No. 10 Whiting	63336	Thompson-Weinman Co.
X CW-3995 Whiting	-	Thompson-Weinman Co.
White Silex	61281	Wedron Silica
" "	"	Western Materials
" "	"	Pioneer Silica
" "	"	Pennsylvania Glass Sand Corp.
80-Mesh Sand	61272	Western Materials
Titanium Dioxide	-	Titanium Pigment Corp.(Titanox A-HO)
" "	-	E.I. Dupont (Ti-Pure FF)
" "	-	Celco Chemical Co. (Unitane O-220)
" "	-	Glidden Co. (Zopaque SD)
G-4099 Chromium Oxide	-	C. K. Williams Co.
YC-2835 Ceramic Yellow	-	C. K. Williams Co.
R-1599 Pure Red Oxide	-	C. K. Williams Co.
BS-4070 Burnt Sienna	-	C. K. Williams Co.
R-5098 Red Oxide	-	C. K. Williams Co.
Dark Portland Cement	61061	Lone Star Cement Co.
" " "	"	Ideal Cement Co.
BK-250 Black Iron Oxide	-	C. K. Williams Co.
BK-247 " " "	-	C. K. Williams Co.
Ideal Cement	61061	Ideal Cement Co. - Baton Rouge, La.

RETURN TO J-M RESEARCH FILE ROOM

X — INDICATES CHANGE — REASON: Show use of CW-3995 Whiting.

AUTHORITY FOR CHANGE — H. R. Congdon's letter 6-9-55.

MT-000149

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. CTES	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONTROL

SUPERSEDES: Same Specification, Page 3, issued 2-11-55. DATE ISSUED

CANCELLED 440-VF pg 1

BLACK VENEER SLURRY - FORMULA AND MIXING

Formula No.	1		2 (Alternate)	
	%	Lbs.	%	Lbs.
Dark Portland Cement	94.8	94.0	92.5	94.0
BK-250 Black Iron Oxide	5.2	5.2	—	—
BK-247 Black Iron Oxide	—	—	7.5	7.6
Total Dry Materials	100.0	99.2	100.0	101.6

Note: Use alternate formula No. 2 when BK-250 Black Iron Oxide is not available.

The above materials are mixed with 35 gals. of warm water (temp. 110-140°F) in the top mixer of the Black Veneer mixing equipment to produce Black Veneer Slurry of proper consistency.

APPROVED VENEER MATERIALS

RAW MATERIALS	PURCH. SPEC.	VENDOR
7F04 Asbestos Fibre	-	J-M (Asbestos Fibre Division)
White Cement	61001	Medusa Cement Co.
" "	"	Trinity White Cement
" "	"	Atlas White Cement
Light Color Cement	61061	Lone Star Cement Co.
No. 10 Whiting	63386	Thompson-Weinman Co.
X OW-3995 Whiting	63387	Thompson-Weinman Co.
White Silex	61281	Wedron Silica
" "	"	Western Materials
" "	"	Pioneer Silica
" "	"	Pennsylvania Glass Sand Corp.
SO-Mesh Sand	61272	Western Materials
Titanium Dioxide	-	Titanium Pigment Corp. (Titanox A-MO)
" "	-	E. I. Dupont (Ti-Pure FF)
" "	-	Calco Chemical Co. (Unitane C-220)
" "	-	Glidden Co. (Zopaque SD)
G-4099 Chromium Oxide	-	C. K. Williams Co.
YC-2835 Ceramic Yellow	-	C. K. Williams Co.
R-1599 Pure Red Oxide	-	C. K. Williams Co.
BS-4070 Burnt Sienna	-	C. K. Williams Co.
R-5098 Red Oxide	-	C. K. Williams Co.
Dark Portland Cement	61061	Lone Star Cement Co.
" " "	"	Ideal Cement Co.
BK-250 Black Iron Oxide	-	C. K. Williams Co.
BK-247 " " "	-	C. K. Williams Co.
Ideal Cement	61061	Ideal Cement Co. - Baton Rouge, La.

RETURN TO RESEARCH FILE ROOM

X—INDICATES CHANGE — REASON: Add Purch. Spec. Number for OW-3995 Whiting.

AUTHORITY FOR CHANGE — Additional information.

MT-000148

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL CONTR

SUPERSEDES: Same Specification, Page 3, Issued 6-16-55.

DATE ISSUED 1-10-56

FORM 80132-10

CANCELLED 3/18/54

PIPE AND BOARD DEPARTMENT NOV 26 1953

10 minutes for all other Formulae before dropping mixed materials into the bottom mixer.

3. Veneer in the bottom mixer is mixed continuously and is discharged at intervals by means of a screw conveyor and bucket elevator into the Rietz Disintegrator -- the amount discharged being controlled automatically, based on the amount of Veneer in the Surge Bin above the Solectro Screen.
4. From the Rietz Disintegrator, Veneer is discharged into the Surge Bin (Small Mixer) from which it is fed, by means of a fluted roll into the Solectro Screen, which applies the Veneer to the Base Sheet.

BLACK VENEER SLURRY - FORMULA AND MIXING

Formula No.	1		2 (Alternate)	
	%	Lbs.	%	Lbs.
Dark Portland Cement	94.8	82.2	92.5	80.2
BK-250 Black Iron Oxide	5.2	4.5	—	—
BK-247 Black Iron Oxide	—	—	7.5	6.5
Total Dry Materials	100.0	86.7	100.0	86.7

Note: Use alternate Formula No. 2 when BK-250 Black Iron Oxide is not available.

The above materials are mixed with 35 Gals. of warm water (Temp. 110-140°F) in the top mixer of the Veneer mixing equipment to produce Black Veneer slurry of proper consistency.

APPROVED VENEER MATERIALS

RAW MATERIAL	PURCH. SPEC.	VENDOR
7F04 Asbestos Fibre	———	J-M (Asbestos Fibre Division)
White Cement	61001	Medusa Cement Co.
" "	"	Trinity White Cement
" "	"	Atlas White Cement
Light Color Cement	61061	Lone Star Cement
Dry Ground Whiting	63386	Thompson-Weinman Co.
" " "	"	Georgia Marble Co.
White Silex	61281	Wedron Silica
" "	"	Western Materials
" "	"	Pioneer Silica
80-Mesh Sand	61272	Western Materials

MT-000147

X— INDICATES CHANGE — REASON: To cover all Veneers by a single Specification.

AUTHORITY — FOR CHANGE: Rearrangement of all Asbestos Shingle Mfg. Specs.

FILE-HOLDERS		H. OTIS	PLANT MGR.	IND. ENG.	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONTROL

SUPERSEDES: [illegible]

DATE ISSUED 5-5-53

RETURN TO J-M RESEARCH FILE ROOM

CANCELLED 1/10/56

NOTE 1

Pastel Green & Valley Green - 6.9 Lbs. G-4099 Chromium Oxide
Pastel Sun Tan - 6.9 Lbs. YC-2835 Ceramic Yellow
Pastel Coral - 1.4 Lbs. R-1599 Pure Red Oxide
" " - 5.5 Lbs. BS-4070 Burnt Sienna
Red-1 - 75.0 Lbs. R-5098 Red Oxide
Green-1 - 59.0 Lbs. G-4099 Chromium Oxide

PIPE AND BOARD DEPT. APR 5 1954 G. B. [illegible]

X DRY VENEER MIXING

Dry Veneer materials are mixed in a set of double mixers and by a Rietz Disintegrator, equipped with 1/8" screens, in the following manner:

1. Veneer materials, in the order listed in the respective formulae (except pigment in formulae 4, 5, and 6), are charged into the top mixer. Charging for No. 3 Machine is accomplished by screw feed hopper and bucket elevator. No. 4 Machine veneer mixer is charged by dumping materials into the top mixer.

2. After materials are in the top mixer, pigments for formulae 4, 5, and 6 are then added directly to the top mixer. After all formula ingredients are in the top mixer, mixing is continued for not less than 20 minutes for formula 4, not less than 40 minutes for formulae 5 and 6, and for not less than 10 minutes for all other formulae, before dropping mixed materials into the bottom mixer.

3. Veneer in the bottom mixer is mixed continuously and is discharged at intervals by means of screw conveyor and bucket elevator into the Rietz Disintegrator - the amount discharged being controlled automatically, based on the amount of veneer in the surge bin above the selectro screen.

4. From the Rietz Disintegrator, veneer is discharged into the surge bin (small mixer) from which it is fed, by means of a fluted roll, into the selectro screen, which applies the veneer to the base sheet.

RETURN TO J-M RESEARCH FILE ROOM

X—INDICATES CHANGE—REASON: Include mixing instructions for Formulae 5 and 6.

AUTHORITY FOR CHANGE: Additional information.

MT-000146

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR QUA CONT

SUPERSEDES: Same Specification, Page 2, issued 5-5-53.

DATE ISSU 3-18-5

Form 10132 10

CANCELLED 4/24/58 by 4 40-17

NOTE 1

Pastel Green & Valley Green - 6.9 Lbs. G-4099 Chromium Oxide
Pastel Sun Tan - 6.9 Lbs. YC-2835 Ceramic Yellow
Pastel Coral - 1.4 Lbs. R-1599 Puro Red Oxide
" " - 5.5 Lbs. RS-4070 Burnt Sienna
Red-1 - 75.0 Lbs. R-5093 Red Oxide
Green-1 - 59.0 Lbs. G-4099 Chromium Oxide

DRY VENEER MIXING

Dry Veneer materials are mixed in a set of double mixers and by a Rietz Disintegrator, equipped with 1/8" screens, in the following manner:

X 1. Veneer materials, in the order listed in the respective formulae (except pigment in formulae 4, 5, 6 and 8), are charged into the top mixer. Charging for No. 3 Machine is accomplished by screw feed hopper and bucket elevator. No. 4 Machine veneer mixer is charged by dumping materials into the top mixer.

X 2. After materials are in the top mixer, pigments for formulae 4, 5, 6 and 8 are then added directly to the top mixer. X After all formula ingredients are in the top mixer, mixing is continued for not less than 20 minutes for formula 4, not less than 40 minutes for formulae 5, 6 and 8, and for not less than 10 minutes for all other formulae, before dropping mixed materials into the bottom mixer.

3. Veneer in the bottom mixer is mixed continuously and is discharged at intervals by means of screw conveyor and bucket elevator into the Rietz Disintegrator - the amount discharged being controlled automatically, based on the amount of veneer in the surge bin above the selectro screen.

4. From the Rietz Disintegrator, veneer is discharged into the surge bin (small mixer) from which it is fed, by means of a fluted roll, into the selectro screen, which applies the veneer to the base sheet.

BOARD DEPARTMENT
JAN 21 1956
BROWN
RETURN TO
J-M RESEARCH
FILE ROOM

MT-000145

X—INDICATES CHANGE — REASON: Add Formula No. 8.

AUTHORITY — FOR CHANGE: Product Proposal Research 423-PP-39, Supplements 2 and 3
H. R. Congdon's Letter 12-6-55.

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	REG. QUAL. CONTROL	DIR. QUAL. CONTROL

SUPERSEDES: Sarco Specification, Page 2, Issued 3-18-54.

DATE ISSUED 1-10-56

FORM 80138-10
PRINTED IN U.S.A.

DRY VENEER FORMULAE (CONTINUED)

CANCELLED 10/30/56

Products	Formula No.
No. 80 Black	8
No. 40 Black-1	8
No. 80 White	9

Formula No.	8		9	
	%	LBS.	%	LBS.
7F04 Fibre	6.7	100	7.0	100
White Cement	---	---	26.4	376
Lone Star Dark Cement	25.0	376	---	---
No. 10 Whiting	---	---	38.6	550
No. 10 or OW-3995 Whiting	36.6	550	---	---
White Silex	20.0	300	21.0	300
80-Mesh Sand	6.7	100	7.0	100
BK-250 Black Iron Oxide	5.0	75	---	---
Batch Total	100.0	1501	100.0	1426

PIPE AND BOARD DEPARTMENT
JAN 21 1956
C. B. BROWN

RETURN TO
J-M RESEARCH
FILE ROOM

X—INDICATES CHANGE — REASON: None - New Page.

MT-000144

AUTHORITY — FOR CHANGE: Product Proposal Research 423-PR-39, Supplements 2 and 3
H. R. Congdon's Letters 12-6-55.

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONTROL

SUPERSEDES: None - New Page.

DATE ISSUED 1-10-56

Form 50132-10

DRY VENEER FORMULAE (CONTINUED)

4 x 4 40-16

Products	Formula No.
No. 80 Black-1	8
No. 40 Black-2	8
No. 80 White	9

Formula No.	8		9	
	%	LBS.	%	LBS.
7F04 Fibre	6.7	100	7.0	100
White Cement	--	--	26.4	376
Lone Star Dark Cement	25.0	376	--	--
No. 10 Whiting	--	--	33.6	550
No. 10 or (No. 2995 Whiting	36.6	550	--	--
White Silex	20.0	300	21.0	300
80-Mesh Sand	6.7	100	7.0	100
BK-250 Black Iron Oxide	5.0	75	--	--
Batch Total	100.0	1501	100.0	1426

RETURN TO
J-M RESEARCH
FILE ROOM

MT-000143

X — INDICATES CHANGE — REASON 2X = Change suffix to -2 (increase Rhoplex solids from 8% to 15%)
1X = Change suffix to -2 (increase Rhoplex solids from 8% to 15%)

AUTHORITY — FOR CHANGE 1X and 2X = H. R. Congdon's letters 10-26-56.

FILE-HOLDERS			Plant Mgr.	Ind. Eng.	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONT.

SUPERSEDES: Same Specification, Page 1A, issued 1-10-56. DATE ISSUED 10-30-56

Form 50132-10

MANUFACTURING SPECIFICATIONS

ASBESTOS SHINGLE DEPT. 1X

MARICERO PLANT

PRODUCT: MASTER SHEET
ASBESTOS SHINGLE VENEER
FORMULAE AND MIXING INSTRUCTIONS

DIVISION BP

SPEC. NO. 440-VF

PAGE NO. 1

CANCELLED 4-23
11/11/53

2X

DRY VENEER FORMULAE

Products	Formula No.
Dover White Siding	1
Blended Gray Siding	3
Smoothgrain Siding (White Veneer)	2
Smoothgrain Siding (Colored Veneers)	4
Dover White Roofing Shingles	2
607 Smoothgrain	2
#40 & #70 Permatone White	2

BOARD DEPARTMENT
MAY 23 1953
G. E. BROWN

Formula No.	1		2		3		4	
	%	Lbs.	%	Lbs.	%	Lbs.	%	Lbs.
7F04 Fibre	10.0	150	7.0	100	11.3	150	10.12	150.0
White Cement	25.0	376	26.4	376	—	—	25.35	376.0
Light Color Cement	—	—	—	—	28.4	376	—	—
Dry Ground Whiting	36.6	550	38.6	550	30.2	400	37.09	550.0
White Silex	20.0	300	21.0	300	22.6	300	20.23	300.0
80-Mesh Sand	6.7	100	7.0	100	7.5	100	6.74	100.0
Titanium Dioxide	1.7	26	—	—	—	—	—	—
Pigment (Note 1)	—	—	—	—	—	—	0.47	6.9
Batch Total	100.0	1502	100.0	1426	100.0	1326	100.00	1482.9

Note 1

Pastel Green & Valley Green — 6.9 Lbs. C-4099 Chromium Oxide
Pastel Sun Tan — 6.9 Lbs. YC-2835 Ceramic Yellow
Pastel Coral & Canyon Brown — 1.4 Lbs. R-1599 Pure Red Oxide And
5.5 Lbs. BS-4070 Burnt Sienna

DRY VENEER MIXING

Dry Veneer materials are mixed in a set of Double Mixers and by a Rietz Disintegrator, equipped with 1/8" Screens, in the following manner:

1. Veneer materials, in the order listed in the respective Formulae, (Except Pigment In Formula No. 4) are charged into a screw feed hopper, from which they are carried by screw conveyor and bucket elevator to the top mixer.
2. After materials are in the top mixer, pigment for Formula No. 4 is then added directly to the top mixer. After all Formula ingredients are in the top mixer, mixing is continued for not less than 20 minutes for Formula No. 4 and for not less than

RETURN TO J-M RESEARCH FILE ROOM

MT-000142

X— INDICATES CHANGE — REASON: 1X - To cover all Veneers by a single Specification.
2X - Elimirate Celite in Formulas, 1, 2, and 4.

AUTHORITY — FOR CHANGE: 1X - Rearrangement of all Asbestos Shingle Mfg. Specs.
2X - Umbrogen P.P. 440-537 and H. R. Congdon's letter 3-19-53.

FILE-HOLDERS		H. [illegible]	[illegible]	[illegible]	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	QUAL. CONTRO

SUPERSEDES: DATE ISSUED

MANUFACTURING SPECIFICATIONS

ASBESTOS SHINGLE DEPT.

MARTERO PLANT

PRODUCT:

DIVISION BP

MASTER SHEET
ASBESTOS SHINGLE VENEER
FORMULAE AND MIXING INSTRUCTIONS

440-7F

PAGE NO. 1

CANCELLED 3/18/54 4 x 3

PIPE AND BOARD DEPARTMENT NOV 23 1953 G. B. BROWN

DRY VENEER FORMULAE

Products	Formula No.
Dover White Siding	1
Blended Grey Siding	3
Smoothgrain Siding (White Veneer)	2
Smoothgrain Siding (Colored Veneers)	4
Dover White Roofing Shingles	2
607 Smoothgrain	2

X

Formula No.	1		2		3		4	
	%	Lbs.	%	Lbs.	%	Lbs.	%	Lbs.
7F04 Fibre	10.0	150	7.0	100	11.3	0	10.12	150.0
White Cement	25.0	376	26.4	376	—	—	25.35	376.0
Light Color Cement	—	—	—	—	28.4	376	—	—
Dry Ground Whiting	36.6	550	38.6	550	30.2	400	37.09	550.0
White Silex	20.0	300	21.0	300	22.6	300	20.23	300.0
80-Mesh Sand	6.7	100	7.0	100	7.5	100	6.74	100.0
Titanium Dioxide	1.7	26	—	—	—	—	—	—
Pigment (Note 1)	—	—	—	—	—	—	0.47	6.9
Batch Total	100.0	1502	100.0	1426	100.0	1326	100.00	1482.9

Note 1

Pastel Green & Valley Green — 6.9 Lbs. C-4099 Chromium Oxide
Pastel Sun Tan — 6.9 Lbs. YC-2835 Ceramic Yellow
Pastel Coral & Canyon Brown — 1.4 Lbs. R-1599 Pure Red Oxide And
5.5 Lbs. BB-4070 Burnt Sienna

DRY VENEER MIXING

Dry Veneer materials are mixed in a set of Double Mixers and by a Rietz Disintegrator, equipped with 1/8" Screens, in the following manner:

1. Veneer materials, in the order listed in the respective Formulae, (Except Pigment In Formula No. 4) are charged into a screw feed hopper, from which they are carried by screw conveyor and bucket elevator to the top mixer.
2. After materials are in the top mixer, pigment for Formula No. 4 is then added directly to the top mixer. After all Formula ingredients are in the top mixer, mixing is continued for not less than 20 minutes for Formula No. 4 and for not less than

RETURN TO
J-M RESEARCH
FILE ROOM

X— INDICATES CHANGE — REASON: Eliminate #40 and #70 Permatone White.

AUTHORITY FOR CHANGE — Sales request.

MT-000141

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONTROL

SUPERSEDES: Same Specification, Page 1, dated 5-5-53.

DATE ISSUED: 11-27-53

MANUFACTURING SPECIFICATIONS

WARREN PLANT

ASBESTOS SHINGLE DEPT.

PRODUCT: MASTER SHEET ASBESTOS SHINGLE VENEER FORMULAE AND MIXING INSTRUCTIONS

DIVISION 22

SPEC. NO. 440-VF

PAGE NO. 1

CANCELLED 6/11/54

423

PIPE AND BOARD DEPARTMENT APR 5 1954 G. B. BROWN

DRY VENEER FORMULAE

PRODUCTS	FORMULA NO.
Dover White-1 Siding	1
Blended Gray Siding	3
Smoothgrain Siding (White Veneer)	2
Smoothgrain Siding (Colored Veneers)	4
Dover White Roofing Shingles	2
607 Smoothgrain	2
Red-1 Roofing Shingles	5
Green-1 Roofing Shingles	6

FORMULA NO.	1		2		3	
	%	LBS.	%	LBS.	%	LBS.
7F04 Fibre	9.8	150	7.0	100	11.3	150
White Cement	24.6	376	26.4	376	—	—
Light Color Cement	—	—	—	—	28.4	376
Dry Ground Whiting	36.0	550	38.6	550	30.2	400
White Silex	19.7	300	21.0	300	22.6	300
80-Mesh Sand	6.6	100	7.0	100	7.5	100
Titanium Dioxide	3.3	50	—	—	—	—
Batch Totals	100.0	1526	100.0	1426	100.0	1326

FORMULA NO.	4		5		6	
	%	LBS.	%	LBS.	%	LBS.
7F04 Fibre	6.93	100.0	6.7	100	6.7	100
White Cement	26.24	376.0	—	—	—	—
Ideal Cement	—	—	25.0	376	25.3	376
Dry Ground Whiting	38.38	550.0	36.6	550	37.1	550
White Silex	20.94	300.0	20.0	300	20.2	300
80-Mesh Sand	6.98	100.0	6.7	100	6.7	100
Pigment (Note 1)	.48	6.9	5.0	75	4.0	59
Batch Totals	100.00	1432.9	100.0	1501	100.0	1485

RETURN TO J-M RESEARCH FILE ROOM

MT-000140

X—INDICATES CHANGE—REASON: 1X-Add Formulas No. 5 and No. 6; 2X-Revise Formula No. 1; 3X-Revise Formula No. 4.

AUTHORITY FOR CHANGE — 1X-Product Proposal 423-PP-23 & Congdon's letter 12-2-53; 2X-Product Proposal 423-PP-24 & Congdon's letter 2-8-54; 3X-Product Proposal 926-PP-2 & Congdon's letter 2-18-54.

FILE-HOLDERS		PLANT MGR.	[illegible]	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONTROL

SUPERSEDES: Same Specification, Page 1, Issued 11-11-53.

DATE ISSUED 2-13-54

FORM 50132-10 PRINTED IN U. S. A.

MARRERO PLANT

ASBESTOS SHINGLE DEPT.

PRODUCT: DIVISION

MASTER SHEET
ASBESTOS SHINGLE VENEER
FORMULAE AND MIXING INSTRUCTIONS 423

SEC. NO. 440-VF

PAGE NO. 1

CANCELLED 2/11/55

PIPE AND BOARD DEPARTMENT JUN 16 1954 C. B. BROWN

DRY VENEER FORMULAE

PRODUCTS	FORMULA NO.
Dover White-1 Siding	1
Blended Gray Siding	3
Smoothgrain Siding (White Veneer)	2
Smoothgrain Siding (Colored Veneers)	4
Dover White Roofing Shingles	2
607 Smoothgrain	2
Red-1 Roofing Shingles	5
Green-1 Roofing Shingles	6

FORMULA NO.	1		2		3	
	%	LBS.	%	LBS.	%	LBS.
7F04 Fibre	6.8	100	7.0	100	11.3	15
White Cement	25.5	376	26.4	376	—	—
Light Color Cement	—	—	—	—	28.4	376
Dry Ground Whiting	37.2	550	38.6	550	30.2	400
White Silex	20.3	300	21.0	300	22.6	300
80-Mesh Sand	6.8	100	7.0	100	7.5	100
Titanium Dioxide	3.4	50	—	—	—	—
Batch Totals	100.0	1476	100.0	1426	100.0	1326

FORMULA NO.	4		5		6	
	%	LBS.	%	LBS.	%	LBS.
7F04 Fibre	6.98	100.0	6.7	100	6.7	100
White Cement	26.24	376.0	—	—	—	—
Ideal Cement	—	—	25.0	376	25.3	376
Dry Ground Whiting	38.38	550.0	36.6	550	37.1	550
White Silex	20.94	300.0	20.0	300	20.2	300
80-Mesh Sand	6.98	100.0	6.7	100	6.7	100
Pigment (Note 1)	.48	6.9	5.0	75	4.0	59
Batch Totals	100.00	1432.9	100.0	1501	100.0	1485

MT-000139

X—INDICATES CHANGE—REASON: Reduce Fibre to 100 Lbs. per batch for Formula No. 1.

AUTHORITY FOR CHANGE: H. R. Congdon's letter 6-1-54.

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONTRO

SUPERSEDES: Same Specification, Page 1, issued 3-18-54.

DATE ISSUED 6-4-54

FORM 80132-10 PRINTED IN U. S. A.

RETURN TO J-M RESEARCH FILE ROOM

MANUFACTURING SPECIFICATIONS

ASBESTOS SHINGLE DEPT.

MARRERO PLANT

PRODUCT: DIVISION BP

MASTER SHEET
ASBESTOS SHINGLE VENEER
FORMULAE AND MIXING INSTRUCTIONS

SPEC. NO 440-VI

PAGE NO 1

CANCELLED 6/16/55

PIPE AND BOARD DEPARTMENT MAR 7 1955 C. B. BROWN

DRY VENEER FORMULAE:

Products	Formula No.
Dover White-1 Siding	1
Blended Gray Siding	3
Smoothgrain Siding (White Veneer)	2
Smoothgrain Siding (Colored Veneers)	4
Dover White Roofing Shingles	2
607 Smoothgrain	2
Red-1 Roofing Shingles	5
Green-1 Roofing Shingles	6
1X No. 319 Colorbestos Siding (White Veneer)	2

Formula No.	1		2		3	
	%	Lbs.	%	Lbs.	%	Lbs.
7F04 Fibre	6.76	100	7.0	100	11.3	150
White Cement	25.42	376	26.4	376	—	—
Light Color Cement	—	—	—	—	28.4	376
Dry Ground Whiting	37.20	550	38.6	550	30.2	400
White Silex	20.28	300	21.0	300	22.6	300
80-Mesh Sand	6.76	100	7.0	100	7.5	100
Titanium Dioxide	3.38	50	—	—	—	—
2X Moulding Plaster	.20	3	—	—	—	—
Batch Totals	100.00	1479	100.0	1426	100.0	1326

Formula No.	4		5		6	
	%	Lbs.	%	Lbs.	%	Lbs.
7F04 Fibre	6.98	100.0	6.7	100	6.7	100
White Cement	26.24	376.0	—	—	—	—
Ideal Cement	—	—	25.0	376	25.3	376
Dry Ground Whiting	38.38	550.0	36.6	550	37.1	550
White Silex	20.94	300.0	20.0	300	20.2	300
80-Mesh Sand	6.98	100.0	6.7	100	6.7	100
Pigment (Note 1)	.48	6.9	5.0	75	4.0	59
Batch Total	100.00	1432.9	100.0	1501	100.0	1485

RETURN TO
J-M RESEARCH
FILE ROOM

MT-000138

X—INDICATES CHANGE — REASON: 1X - Add No. 319 Colorbestos Siding.
2X - Use Moulding Plaster in Dover White-1 Siding Veneer.

AUTHORITY FOR CHANGE — 1X-Product Proposal Research 423-PP-29A, H.R. Congdon's Letter 12-8-54.
2X-H.R. Congdon's Letter to S.E. Stumpf 6-28-54.

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONTRO

SUPERSEDES: Same Specification, Page 1, issued 6-4-54 and Notice of Deviation No. 4-13 dated 7-26-54.

DATE ISSUED 2-11-55

FORM 80132 10 PRINTED IN U.S.A.

MANUFACTURING SPECIFICATIONS

MARBERC PLANT

ASBESTOS SHINGLE DEPT.

PRODUCT: MASTER SHEET
ASBESTOS SHINGLE VENEER
FORMULAE AND MIXING INSTRUCTIONS

DIVISION BP

SPEC. NO. 440-V

PAGE NO. 1

4v3

DRY VENEER FORMULAE:

Products	Formula No.
Dover White-1 Siding	1
Blended Grey Siding	3
Smoothgrain Siding (White Veneer)	2
Smoothgrain Siding (Colored Veneers)	4
Dover White Roofing Shingles	7
607 Smoothgrain	2
Red-1 Roofing Shingles	5
Cream-1 Roofing Shingles	6
No. 319 Colorbestos Siding (White Veneer)	2

PIPE AND BOARD DEPARTMENT
JUN 21 1955
G. B. BROWN

CANCELLED 11/2/56

Formula No.	1		2		3	
	%	Lbs.	%	Lbs.	%	Lbs.
7F04 Fibre	6.76	100	7.0	100	11.3	150
White Cement	25.42	376	26.4	376	-	-
Light Color Cement	-	-	-	-	28.4	376
No. 10 Whiting	37.20	550	-	-	-	-
No. 10 or OW-3995 Whiting	-	-	38.6	550	30.2	400
White Silex	20.28	300	21.0	300	22.6	300
80-Mesh Sand	6.76	100	7.0	100	7.5	100
Titanium Dioxide	3.38	50	-	-	-	-
Moulding Plaster	.20	3	-	-	-	-
Batch Total	100.00	1479	100.0	1426	100.0	1326

Formula No.	4		5		6		7	
	%	Lbs.	%	Lbs.	%	Lbs.	%	Lbs.
7F04 Fibre	6.98	100.0	6.7	100	6.7	100	7.0	100
White Cement	26.24	376.0	-	-	-	-	26.4	376
Ideal Cement	-	-	25.0	376	25.3	376	-	-
No. 10 Whiting	-	-	-	-	-	-	38.6	550
No. 10 or OW-3995 Whiting	38.38	550.0	36.6	550	37.1	550	-	-
White Silex	20.94	300.0	20.0	300	20.2	300	21.0	300
80-Mesh Sand	6.98	100.0	6.7	100	6.7	100	7.0	100
Pigment (Note 1)	.48	6.9	5.0	75	4.0	59	-	-
Batch Total	100.00	1432.9	100.0	1501	100.0	1485	100.0	1426

MT-000137

RETURN TO J-M RESEARCH FILE ROOM

X—INDICATES CHANGE — REASON: Show use of OW-3995 Whiting in all Formulae except Dover White Siding and Dover White Roofing.

AUTHORITY FOR CHANGE: H. R. Congdon's Letter 6-9-55.

FILE-HOLDERS		PLANT MGR.	IND. ENG.	H. OTIS	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH LAB.	MGR. QUAL. CONTROL	DIR. QUAL. CONTROL

SUPERSEDES: Same Specification, Form 1, dated 2-13-55 DATE ISSUED

MARRERO PLANT

ASBESTOS SHINGLE DEPT.

PRODUCT: DIVISION BP

423

MASTER SHEET
ASBESTOS SHINGLE VENEER
FORMULAE AND MIXING INSTRUCTIONS

440-VF
PAGE NO. 1

DRY VEINER FORMULAE:

Products	Formula No.
Dover White-l Siding	1
Blended Gray Siding	3
Smoothgrain Siding (White Veneer)	2
Smoothgrain Siding (Colored Veneers)	4
Dover White Roofing Shingles	7
607 Smoothgrain	2
Red-l Roofing Shingles	5
Green-l Roofing Shingles	6

CANCELLED

1/16/57

X

Formula No.	1		2		3	
	%	Lbs.	%	Lbs.	%	Lbs.
7F04 Fibre	6.76	100	7.0	100	11.3	150
White Cement	25.42	376	26.4	376	-	-
Light Color Cement	-	-	-	-	28.4	376
No. 10 Whiting	37.20	550	-	-	-	-
No. 10 or OW-3995 Whiting	-	-	38.6	550	30.2	400
White Silex	20.28	300	21.0	300	22.6	300
80-Mesh Sand	6.76	100	7.0	100	7.5	100
Titanium Dioxide	3.38	50	-	-	-	-
Moulding Plaster	.20	3	-	-	-	-
Batch Total	100.00	1479	100.0	1426	100.0	1326

Formula No.	4		5		6		7	
	%	Lbs.	%	Lbs.	%	Lbs.	%	Lbs.
7F04 Fibre	6.98	100.0	6.7	100	6.7	100	7.0	100
White Cement	26.24	376.0	-	-	-	-	26.4	376
Ideal Cement	-	-	25.0	376	25.3	376	-	-
No. 10 Whiting	-	-	-	-	-	-	38.6	550
No. 10 or OW-3995 Whiting	38.38	550.0	36.6	550	37.1	550	-	-
White Silex	20.94	300.0	20.0	300	20.2	300	21.0	300
80-Mesh Sand	6.98	100.0	6.7	100	6.7	100	7.0	100
Pigment (Note 1)	.48	6.9	5.0	75	4.0	59	-	-
Batch Total	100.00	1432.9	100.0	1501	100.0	1485	100.0	1426

RETURN TO
J-M RESEARCH
FILE ROOM

X—INDICATES CHANGE — REASON: Delete No. 319 Shingle Formula.

AUTHORITY FOR CHANGE — Veneer Formulae For No. 319 Shingles included in Mfg. Spec. 440-14 issued 11-20-56.

MT-000136

FILE-HOLDERS			Plant Mgr.	Ind. Eng.	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH	MGR. QUAL. CONTROL	DIR. QUAL. CONTRO

SUPERSEDES: Same Specification, Page 1, issued 6-16-55.

DATE ISSUED

Form 80138-10

MANUFACTURING SPECIFICATIONS

MARRERO PLANT

ASBESTOS SHINGLE DEPT.

PRODUCT: DIVISION BP

MASTER SHEET
ASBESTOS SHINGLE VENEER
FORMULAE AND MIXING INSTRUCTIONS

440-VF
PAGE NO. 1

KV3

CANCELLED 1/24/58 by 440-17

DRY VENEER FORMULAE:

Products	Formula No.
Dover White-1 Siding	1
Blended Gray Siding	3
Smoothgrain Siding (White Veneer)	2
Smoothgrain Siding (Colored Veneers)	4
Dover White Roofing Shingles	7
607 Smoothgrain	2
Red-1 Roofing Shingles	5
Green-1 Roofing Shingles	6

Formula No.	1		2		3	
	%	Lbs.	%	Lbs.	%	Lbs.
7T04 Fibre	6.8	100	7.0	100	11.3	150
White Cement	25.5	376	26.4	376	-	-
Light Color Cement	-	-	-	-	28.4	376
No. 10 Whiting	37.2	550	-	-	-	-
No. 10 or OW-3995 Whiting	-	-	38.6	550	30.2	400
White Silex	20.3	300	21.0	300	22.6	300
80-Mesh Sand	6.8	100	7.0	100	7.5	100
Titanium Dioxide	3.4	50	-	-	-	-
Batch Total	100.0	1476	100.0	1426	100.0	1326

Formula No.	4		5		6		7	
	%	Lbs.	%	Lbs.	%	Lbs.	%	Lbs.
7T04 Fibre	6.98	100.0	6.7	100	6.7	100	7.0	100
White Cement	26.24	376.0	-	-	-	-	26.4	376
Ideal Cement	-	-	25.0	376	25.3	376	-	-
No. 10 Whiting	-	-	-	-	-	-	38.6	550
No. 10 or OW-3995 Whiting	38.38	550.0	36.6	550	37.1	550	-	-
White Silex	20.94	300.0	20.0	300	20.2	300	21.0	300
80-Mesh Sand	6.98	100.0	6.7	100	6.7	100	7.0	100
Pigment (Note 1)	.48	6.9	5.0	75	4.0	59	-	-
Batch Total	100.00	1432.9	100.0	1501	100.0	1485	100.0	1426

X

RETURN TO
J-M RESEARCH
FILE ROOM

X—INDICATES CHANGE — REASON: Delete Moulding Plaster

MT-000135

AUTHORITY FOR CHANGE: Correction - use of Moulding Plaster discontinued.

FILE-HOLDERS			Plant Mgr.	Ind. Eng.	SUPR. QUAL. CONTROL	PROD. SUPT.	PLANT FINANCE OFFICE	RESEARCH	EGR. QUAL. CONTROL	DI QU CON

SUPERSEDES: Same specification, Page 1, issued 11-20-56

DATE ISSUED 1-16-57

Form 80138-10

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: MASTER SHEET ASBESTOS SHINGLES APPROVED VENEER MATERIALS	PLANT & DIV.	MARRERO, B.P.
		SPEC NO.	440-MP
		PAGE NO.	1

4/15/59 CANCELLED

RAW MATERIAL	PURCH. SPEC.	VENDOR
7704 Asbestos Fibre	-	J-M (Asbestos Fibre Division)
7105 Asbestos Fibre	-	J-M (Asbestos Fibre Division)
White Portland Cement	61001	Trinity Cement Co.
Standard Portland Cement (Dark)	61061	Lone Star Cement Co.
Light Colored Portland Cement	61063	Ideal Cement Co.
No. 10 Whiting	BR-3386	Thompson-Weinman Co.
" " "	"	Sylacauga Calcium Products Co.
OK-3995 Whiting	BR-3387	Thompson-Weinman Co.
" " "	"	Sylacauga Calcium Products Co.
White Silex	BR-1281	Wedron Silica
" " "	"	Western Materials
" " "	"	Pioneer Silica
" " "	"	Pennsylvania Glass Sand Corp.
80-Mesh Sand	61272	Western Materials
" " "	"	Pennsylvania Glass Sand Corp.
Titanium Dioxide	BR-3126	Titanium Pigment Corp. (Titanox-AMO)
" " "	"	E. I. Dupont (Ti-Pure RF)
" " "	"	Celco Chemical Co. (Unitane O-220)
" " "	"	Glidden Co. (Zopaque SD)
G-4099 Chromium Oxide	-	C. K. Williams Co.
YC-2835 Ceramic Yellow	-	C. K. Williams Co.
R-1599 Pure Red Oxide	-	C. K. Williams Co.
R-5098 Red Oxide	-	C. K. Williams Co.
BK-247 Black Oxide	-	C. K. Williams Co.
BU-7052 Burnt Umber	-	C. K. Williams Co.
Mapico Tan 20	-	Columbian Carbon Co.
F-6330 Black	-	Ferro Pigment Corp.
F-13264 Blue	-	Ferro Pigment Corp.
YC-2030 Yellow	-	C. K. Williams Co.

RETURN TO
J-M RESEARCH
FILE ROOM

Ptd. In U.S.A.

Form 333-2

X— INDICATES CHANGE —REASON:	Delete Black Veneer Slurry Formula.
AUTHORITY FOR CHANGE	Correction.
SUPERSEDES:	Same Specification, Page 3, Issued 1-10-56.

DIR.	MGR.	SUPR.	PROD.	PLNT.	RES.	IND.	DATE

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: MASTER SHEET ASBESTOS SHINGLES APPROVED VENEER MATERIALS	PLANT & DIV.	MARRERO, B.P.
		SPEC NO.	440-VF
		PAGE NO.	1

	RAW MATERIAL	PURCH. SPEC.	VENDOR
	7K05 Asbestos Fibre	-	J-M (Asbestos Fibre Division)
	White Portland Cement	61001	Trinity Cement Co.
	Standard Portland Cement (Dark)	61061	Lone Star Cement Co.
	Light Colored Portland Cement	61063	Ideal Cement Co.
	No. 10 Whiting	BP-3386	Thompson-Weinman Co.
	"	"	Sylacauga Calcium Products Co.
	CW-3995 Whiting	BP-3387	Thompson-Weinman Co.
	"	"	Sylacauga Calcium Products Co.
	White Silex	BP-1281	Wedron Silica
	"	"	Western Materials
	"	"	Pioneer Silica
	"	"	Pennsylvania Glass Sand Corp.
	80-Mesh Sand	61272	Western Materials
	"	"	Pennsylvania Glass Sand Corp.
	Titanium Dioxide	BP-3126	Titanium Pigment Corp. (Titanox-AMO)
	"	"	E. I. Dupont (Ti-Pure FF)
	"	"	Calco Chemical Co. (Unitane O-220)
	"	"	Glidden Co. (Zopaque SD)
	G-4099 Chromium Oxide	-	C. K. Williams Co.
	YC-2835 Ceramic Yellow	-	C. K. Williams Co.
	R-1599 Pure Red Oxide	-	C. K. Williams Co.
	R-5098 Red Oxide	-	C. K. Williams Co.
	BK-247 Black Oxide	-	C. K. Williams Co.
	BU-7052 Burnt Umber	-	C. K. Williams Co.
	Mapico Tan 20	-	Columbian Carbon Co.
	F-6330 Black	-	Ferro Pigment Corp.
	F-13264 Blue	-	Ferro Pigment Corp.
	YC-2030 Yellow	-	C. K. Williams Co.
X	X-1156 Green	-	C. K. Williams Co.

RETURN TO
J-M RESEARCH
FILE ROOM

Ptd. In U.S.A.

Form 333-2

X— INDICATES CHANGE —REASON:	Show new pigment used in 339 Clapboard shingles.
AUTHORITY FOR CHANGE	H. R. Congdon's letter 3-26-59.
SUPERSEDES:	Same specification, page 1, issued 11-12-58.

DIR.	MGR.	SUPR.	PROD. SUPT.	PLNT. FIN.	RES. LAB.	IND.		DATE ISSUED
								4-13-59

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: MASTER SHEET ASBESTOS SHINGLES APPROVED VENEER MATERIALS	PLANT & DIV.	MARRERO, B.P.
		SPEC NO.	440-VF
		PAGE NO.	1

CANCELLED

	RAW MATERIAL	PURCH. SPEC.	VENDOR
	7K05 Asbestos Fibre	-	J-M (Asbestos Fibre Division)
	White Portland Cement	61001	Trinity Cement Co.
	Standard Portland Cement (Dark)	61061	Lone Star Cement Co.
	Light Colored Portland Cement	61063	Ideal Cement Co.
	No. 10 Whiting	BP-3386	Thompson-Weinman Co.
	"	"	Sylacauga Calcium Products Co.
	OW-3995 Whiting	BP-3387	Thompson-Weinman Co.
	"	"	Sylacauga Calcium Products Co.
	White Pulverized Silica	BP-1281	Wedron Silica
	"	"	Western Materials
	"	"	Pioneer Silica
	"	"	Pennsylvania Glass Sand Corp.
X	Marrero Pulverized Silica	-	Ground at Marrero Plant
	80-Mesh Sand	61272	Western Materials
	"	"	Pennsylvania Glass Sand Corp.
	Titanium Dioxide	BP-3126	Titanium Pigment Corp. (Titanox-AMO)
	"	"	E. I. Dupont (Ti-Pure FF)
	"	"	Calco Chemical Co. (Unitane 0-220)
	"	"	Glidden Co. (Zopaque SD)
	G-4099 Chromium Oxide	-	C. K. Williams Co.
	YC-2835 Ceramic Yellow	-	C. K. Williams Co.
	R-1599 Pure Red Oxide	-	C. K. Williams Co.
	R-5098 Red Oxide	-	C. K. Williams Co.
	BK-247 Black Oxide	-	C. K. Williams Co.
	BU-7052 Burnt Umber	-	C. K. Williams Co.
	Mapico Tan 20	-	Columbian Carbon Co.
X	YLO-1788 Yellow	-	C. K. Williams Co.
X	G-4099 Green	-	C. K. Williams Co.

RETURN TO
J-M RESEARCH
FILE ROOM

X— INDICATES CHANGE —REASON: Show new pigments used in Rock Shake shingles.

AUTHORITY FOR CHANGE Product Proposal 423-83 and Product Line Change dated 9-29-60.

SUPERSEDES: Spec. 440-VF, page 1, issued 4-13-59.

MT-000132

DIR. Q.C.	MGR. Q.C.	SUPR. C.C.	PROD. SUPT.	PLNT. FIN.	DIS.	Ind. Eng.			DATE ISSUED 3-9-61

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Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: MASTER SHEET ASBESTOS SHINGLES APPROVED VENEER MATERIALS	PLANT & DIV.	MARRERO, B.P.
		SPEC NO.	440-VF
		PAGE NO.	1

	RAW MATERIAL	PURCH. SPEC.	VENDOR
X	7R06 Asbestos Fibre	-	J-M(Asbestos Fibre Division)
	7R05 Asbestos Fibre	-	J-M(Asbestos Fibre Division)
	White Portland Cement	BP-1001	Trinity Cement Co.
	Standard Portland Cement (Dark)	61061	Lone Star Cement Co.
	No. 10 Whiting	BP-3386	Thompson-Weinman Co.
	"	"	Sylacauga Calcium Products Co.
	OW-3995 Whiting	BP-3387	Thompson-Weinman Co.
	"	"	Sylacauga Calcium Products Co.
	White Pulverized Silica	BP-1281	Wedron Silica
	"	"	Western Materials
	"	"	Pioneer Silica
	"	"	Pennsylvania Glass Sand Corp.
	Marrero Pulverized Silica	-	Ground at Marrero Plant
	80-Mesh Sand	BP-1272	Western Materials
	"	"	Pennsylvania Glass Sand Corp.
	Titanium Dioxide	BP-3126	Titanium Pigment Corp.(Titanox-AMO)
	"	"	E. I. Dupont (Ti-Pure FF)
	"	"	Calco Chemical Co. (Unitane O-220)
	"	"	Glidden Co. (Zopaque SD)
	YC-2835 Ceramic Yellow	-	C. K. Williams Co.
	R-1599 Pure Red Oxide	-	C. K. Williams Co.
	R-5098 Red Oxide	-	C. K. Williams Co.
	BK-247 Black Oxide	-	C. K. Williams Co.
	BU-7052 Burnt Umber	-	C. K. Williams Co.
	Mapico Tan 20	-	Columbian Carbon Co.
	G-4099 Green	-	C. K. Williams Co.
	NO-502 Filler	-	Sylacauga Calcium Products Co.
	Busan #11	-	Buckman Laboratories

RETURN TO
J-M RESEARCH
FILE ROOM

X— INDICATES CHANGE —REASON: Show use of 7R06 Fibre in Veneers.

AUTHORITY FOR CHANGE L. L. Liggett's letter to the Plant Managers dated 5/8/62.

SUPERSEDES: Spec. 440-VF, page 1, issued 3/9/61

DIR. O.C.	MGR. O.C.	SUPR. O.C.	PROD. SUPT.	PLNT. FIN	RES			DATE ISSUED
								5/22/62

MT-000131

Form 333-2 Ptd. In U.S.A.

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: MASTER SHEET ASBESTOS SHINGLES APPROVED VENEER MATERIALS	PLANT & DIV.	MARRERO, B.P.
		SPEC NO.	440-VF
		PAGE NO.	1

RAW MATERIAL	PURCH. SPEC.	VENDOR
7R06 Asbestos Fiber	-	J-M (Asbestos Fiber Division)
7K05 Asbestos Fiber	-	J-M (Asbestos Fiber Division)
White Portland Cement	BP-1001	Trinity Cement Co.
X Standard Portland Cement (Gray)	61061	Ideal Cement Corp.
No. 10 Whiting	BP-3386	Thompson-Weinman Co.
"	"	Sylacauga Calcium Products Co.
OW-3995 Whiting	BP-3387	Thompson-Weinman Co.
"	"	Sylacauga Calcium Products Co.
White Pulverized Silica	BP-1281	Wodron Silica
"	"	Western Materials
"	"	Pioneer Silica
"	"	Pennsylvania Glass Sand Corp.
Marrero Pulverized Silica	-	Ground at Marrero Plant
80-Mesh Sand	BP-1272	Western Materials
"	"	Pennsylvania Glass Sand Corp.
Titanium Dioxide	BP-3126	Titanium Pigment Corp. (Titanox-AMO)
"	"	E.I. Dupont (Ti-Pure FF)
"	"	Calco Chemical Co. (Unitane O-220)
"	"	Glidden Co (Zopaque SD)
YC-2835 Ceramic Yellow	-	C. K. Williams Co.
R-5098 Red Oxide	-	C. K. Williams Co
R-1599 Pure Red Oxide	-	C. K. Williams Co.
BK-247 Black Oxide	-	C. K. Williams Co.
BU-7052 Burnt Umber	-	C. K. Williams Co.
Mapico Tan 20	-	Columbian Carbon Co.
G-4099 Green	-	C. K. Williams Co.
No-502 Filler	-	Sylacauga Calcium Products Co.
Busan #11	-	Buckman Laboratories

RETURN TO
J-M RESEARCH
FILE ROOM

X— INDICATES CHANGE —REASON: Show Std Portland Cement (Gray), purchased from Ideal Cement Corp.

AUTHORITY FOR CHANGE: Correction

SUPERSEDES: Spec. 440-VF, page 1, issued 5-22-62.

MT-000130

DIR.	MGR.	SUPR.	PROD.	PLNT.	RES.	Ind.			DATE

Form 333-2 Ptd. In U.S.A.

Johns-Manville
MANUFACTURING
SPECIFICATION

PRODUCT:
APPROVED VENEER MATERIALS FOR ALL ASBESTOS SHINGLES

PLANT & DIV.	MARRERO, B.P.
SPEC NO.	440-VF 473
PAGE NO.	1

MATERIAL	PURCH. SPEC.NO.	VENDOR
7R Asbestos Fiber	-	J-M Asbestos Fiber Div.
7K Asbestos Fiber	-	J-M Asbestos Fiber Div.
White Portland Cement	BP-1001	Trinity Cement Co. Houston Pl
Standard Portland Cement(Gray)	BP-1061	Ideal Cement(General)BatonRou
No. 10 Whiting	BP-3386	Thompson-Weinman Co.
"	"	Sylacauga Calcium Prod. Co.
White Pulverized Silica	BP-1281	Wedron Silica Co.
"	"	Western Materials Co.
"	"	Pioneer Silica Co.
"	"	Pennsylvania Glass Sand Co.
Marrero Pulverized Silia	-	Ground at Marrero Plant
80 Mesh Sand	BP-1272	Western Materials Co.
"	"	Pennsylvania Glass Sand Co.
Titanium Dioxide(Titanox-AMO)	BP-3126	Titanium Pigment Corp.
" (Ti-Pure FF)	"	E. I DuPont,de Nemours Co.
" (Unitane O-220)	"	Calco Chemical Co.
" (Zopaque SD)	"	Glidden Co.
YC-2835 Ceramic Yellow	-	C. F. Pfizer & Co., Inc.
R-1599 Pure Red Oxide	-	"
BK-4799 Black Iron Oxide	-	"
BU-7052 Burnt Umber	-	"
G-4099 Green Oxide	-	"
Mapico Tan 20	-	Columbian Carbon Co.
No. 502 Filler	-	Sylacauga Calcium Prod. Co.
Busan No. 11	-	Buckman Laboratories

...ON TO
...RCH
LIBRARY (MM)

X— INDICATES CHANGE —REASON: X: Change title; X-1: Change Vendor Name; delete obsolete materials

AUTHORITY FOR CHANGE: Manufacturing Spec. Audit & W. M. Rogers' letter to Plt.Mgrs. 9-8-67 re: Compliance with Mfg. Specs.

SUPERSEDES: Same Specification, Page 1, issued 3-27-63

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	Ind.Eng.			DATE ISSUED
								10-11-67

MT-000129

Form 333-2 Ptd. In U.S.A.

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: APPROVED MATERIALS FOR USE IN VENEERS OF ALL ASBESTOS ROOFING AND SIDEWALL SHINGLES.	PLANT & DIV.	Marrero, RP
		SPEC NO.	440-VF
		PAGE NO.	1

PURCH. SPEC.	MATERIAL	VENDOR CANCELLED
-	7R Asbestos Fiber	J-M.
-	7K Asbestos Fiber	J-M.
BP-1001	Portland Cement (White)	Trinity Cement Co., Houston, Tex.
BP-1061	Portland Cement (Gray)	Ideal (General Cement)Baton Rouge.
BP-3386	No. 10 Whiting	Sylacauga Calcium Products Co.
BP-3386	No. 10 Whiting (Alternate vendor)	Thompson-Weinman Co.
-	OW-3910 Whiting	Sylacauga Calcium Products Co.
BP-1281	White Pulverized Silica	Wedron Silica Co.
"	" " " (Alternate vendor)	Western Materials Co.
"	" " " (Alternate vendor)	Pioneer Silica Co.
"	" " " (Aleternate vendor)	Penn. Glass Sand Co.
-	Marrero Pulverized Silica	J-M, Marrero, Pipe Div.
BP-1272	80 Mesh Sand	Wedron Silica Co.
BP-1272	80 Mesh Sand (Alternate vendor)	Penn. Glass Sand Co.
BP-3126	Titanium Dioxide(Zopaque SD)	Glidden Co.
"	" " (Titanox-AMO)(Alt.vendor)	Titanium Pigment Corp.
"	" " (TiPure FF)(Alt.vendor)	DuPont
"	" " (Unitane - O-220(Alt.vend.)	Calco Chemical Co.
-	R-1599 Pure Red Oxide	C. F. Pfizer & Co.
-	5098 Red Oxide	"
-	YC-2835 Ceramic Yellow	"
-	BK-4799 Black Iron Oxide	"
-	BU-7052 Burnt Umber	"
-	G-4099 Pure Chromium(Green)Oxide	"
-	Mapico Tan 20	"
-		
-	No. 502 Filler	Sylacauga Calcium Products Co.

PLEASE RETURN TO J-M RESEARCH LIBRARY (MM)

X— INDICATES CHANGE — REASON: X1 = To delete Busan No.11; add OW-3910 Whiting

MT-000128

AUTHORITY FOR CHANGE: Busan: PLC-046-32-69 OW-3910 Whiting: Vendor designation change.

SUPERSEDES: Same specification, Page 1, issued 10-11-67

DIR.	MGR.	SUPR.	PROD.	PLNT.	ENG.	Ind.	DATE

Form 333-2 Pld. In U.S.A.

COPY FORM	INITIALS	DATE
		12/3/2002

BOX NUMBER	SEGMENT NO.	REQUESTING PARTY
P-440		Baron & Budd

NOTES

MT-000127