Operating Division PRODUCT PROCEDURE Approved: JS	**CONFIDENTIAL** **DO NOT REPRODUCE OR COPY** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - CHAMBLEE	No. 61-2-24-1 Date 6-20-67 Page 3 Cancels Page 3 Dated 4-13-67

FORMULA: Je-217

	% Non-Volatile	Lbs. (for 100 gal. batch approx.)
Mica JC	(2/3 Formula V)	80 approx.
C DXW Mineralite (Note 1)	30.0	240
Asbestos Floats	(as required)	24 approx.
Huber CWF Clay	10.0	80
Methyl Cellulose	0.8	6 - 6 oz.
Ferrite Yellow	(to match manila color of Sheetrock face paper)	
#9 Marble	(to make 100%)	(to make 800 lbs. total non-volatile)
PM-4366	5.5	73
Carbitol	-	7
PMA Preservative	-	8 oz.
Water	-	53 gals. approx.

A Notes: (1) DXW Mineralite, Ser-X, or CE-F-1 Sericite may be used in pigmented Ready Mix.

RAW MATERIALS

PM-4366	Per Bulletin	6-104-55
Methyl Cellulose	" "	6-25-5, 6-25-6
Solvent	" "	6-149-3
Mica	" "	6-143-1
DXW Mineralite	" "	6-146-2
Asbestos 7RF9	" "	6-7-1
Nuodex PMA-18	" "	6-100-2
Troysan PMA-30	" "	6-100-3
Huber CWF Clay	" "	6-36-5
#9 Georgia Marble	" "	6-24-9
Ferrite Yellow	" "	

C Indicates Change
A Indicates Addition

FORMULAS

A. Formula JE-304C - Special White and Regular (Tinted)

Fillers	% Non-Volatile	(for 250 gal.) Lbs. (batch approx.)
Mica JC	Formula V	275 (Approx.)
DKW Mineralite	10.0	200
Asbestos PC7RF9	3.5	70
#400 Whiting or Marble White 325	To make 94%	To make 1880 lbs.
Methocel 65HG	0.8	16

Paste Mix	% Non-Volatile	Lbs. (for 250 gal batch appr)
Fillers	94.0	1880
C Plast. Resin Emulsion	6.0*	218
D		
PMA-30	-	1
Water	-	140 gallons (approx.)

C *Contains 5.4% Resin Emulsion solids and 0.6% dibutyl phthalate.

B. Formula JE-201

Filler Mix	% Non-Volatile	Lbs. (for 945# Filler Charge)
Mica JC	Formula V	150 approx
MTO-50	30.0	300
Asbestos Floats	As req'd	35 approx
Huber Clay	10.0	100
Methocel HG	0.8	8
Ferrite Yellow	To match manila color of Sheetrock Face Paper	
400 Whiting or Marble White 325	To make 94.5%	To make up 945 lbs.

**Plant to manufacture unpigmented form when requested by Sales Dept.

Paste Mix	% Non-Volatile	Lbs. (for approx. 130 gal.)
Fillers	94.5	945
C Plasticized Resin Emulsion	5.5	96
D		
PMA Preservative	-	4 oz.
Water	-	71 gal. approx.

C *Contains 5.0% Resin Emulsion solids and 0.5% dibutyl phthalate.

No. 61-2-24-4 Date 8-3-67 Page 4	**CONFIDENTIAL** **DO NOT REPRODUCE OR COPY**
Cancels Page 4 Dated 5-1-67	USG READY-MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE

RAW MATERIALS

Resin	Per PMS Bulletin	6-104-17
Methocel HG		6-25-6
Dibutyl Phthalate		6-98-1
P80F Mica		6-143-1
DXW Mineralite		6-146-2
Ser-X		6-146-2
Asbestos		6-14-5
#400 Whiting or Marble White 325		6-24-1
Stonelite		6-24-2
Nuodex PMA-18		6-100-2
Huber CWF Clay		6-36-5
Troysan PMA-30		6-100-3
M350 and MTO-50 Sericite		6-146-2
A Dolomite	Per Bulletin	58-2-2
Astracal M Sericite	Per PMS Bulletin	6-164-2

MANUFACTURING PROCEDURE

Emulsion Plasticization for Formula FE-304C

The Resin emulsion as supplied has an average of 58% solid, dispersed, p.v.ac. resin. Stir into the emulsion 5-1/2 lbs. of water (exactly 5 pints, 4-1/2 oz.) per 100 lbs. of Resin Emulsion to reduce the solids to 55%. Next, weigh the drum of emulsion (plus added water) and determine net weight of the diluted emulsion. Fifty-five per cent of this weight is the weight of the p.v.ac. solids present. The amount of dibutyl phthalate to use is simply 10% of the p.v.ac. solids weight. This will be 5.5 lbs. of dibutyl phthalate per 100 lbs. of diluted resin emulsion. The dibutyl phthalate is then poured slowly into the Resin Emulsion while the latter is being stirred with a suitable high speed mixer, i.e., a "Lightnin Mixer". The stirring should continue for a minimum of 20 minutes after all the dibutyl phthalate has been added. The temperature of the dibutyl phthalate and Resin Emulsion must be above 65°F for this operation.

Also Cancels Special Bulletin [illegible] dated 9-8-66

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND - ALL PURPOSE — SOUTH GATE	No. 61-2-24-4 Date 9-29-67 Page 3 Cancels Page 3 Dated 8-3-67

FORMULAS

A. Formula JE-304C - Special White and Regular (Tinted)

Fillers	% Non-Volatile	(for 250 gal.) Lbs. (batch approx.)
Mica JC	Formula V	275 (Approx.)
DXW Mineralite	10.0	200
Asbestos PC7RF9	3.5	70
#400 Whiting or Marble White 325	To yield 64%	To make 1880 lbs.
Methocel 65HG	0.8	16

Paste Mix	% Non-Volatile	Lbs. (for 250 gal batch appr)
Fillers	94.0	1880
C VA-301P	6.0	218
PMA-30	-	1
Water	-	140 gallons (approx.)

D

B. Formula JE-201

Filler Mix	% Non-Volatile	Lbs. (for 945# Filler Charge)
Mica JC	Formula V	150 approx
MTO-50	50.0	300
Asbestos Floats	As req'd	35 approx
Huber Clay	100.0	100
Methocel HG	0.8	8
C Ferrite Yellow		Match color of Sheetrock Face Paper
400 Whiting or Marble White		To make up 945 lbs.

C *Plant to [illegible] this color when requested by Sales Dept.

Paste Mix	% Non-Volatile	Lbs. (for approx. 130 gal.)
Fillers		945
C VA-301P		96
PMA Preservative		4 oz.
Water		71 gal. approx.

D

QP009 1136

C Indicates Change
D Indicates Deletion

No. 61-2-24-1 Date 11-27-72 Page 2 Cancels Page 2 Dated 11-6-67	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE - CHAMBLEE

FINISHED PRODUCT SPECIFICATIONS

D

Viscosity

To be 600-650 Regular Consistency Brabender units 24 hours after manufacture when tested at 77°F with a standard pin paddle on a viscometer operating at 75 rpm and having a 250 cm-gm torsion head.

Application

To match that of standard sample.

Bond-To-Tape

5 minimum at 77°F, 50% R.H.

Tape Edge-Cracking or Check-Cracking (In Bond Test Application)

None

Grit and Lumps

None. Each batch must be checked by spreading the compound on SHEETROCK (using a broadknife) to a fine feather edge. The first batch of compound made after a change to a new shipment of asbestos or mica must be tested with an Ames finishing tool (10 or 12") for grit.

Weight Per Gallon

To be determined on each batch and recorded. This is done by filling a 5 gallon can to the known 5 gallon level, determine net weight and divide by 5.

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** USG JOINT COMPOUND - TOPPING (FE-294 D)	No. 61-2-23-X Date 11-27-72 Page 3 Cancels NEW Dated

RAW MATERIALS	FE-294D
Gelvatol 6000	6-3-6
Sorbitol (Crystalline-Powder)	Chas. Pfizer, Atlas Chemical
Soluble Glyoxal Powder (100% minus 50 mesh)	Centerchem Products, Inc.
Ziram (95% Tech. Grade)	6-100-11
Natrosol 250 HXR (SG-61)	6-151-1
P-80F Mica	6-143-1
CMC-4H1	Hercules, Inc.
Bentone LT	National Lead
Attagel 40	6-36-20
Nopco PD#1	6-40-21
Stonelite	6-24-2
Quincy #3	6-24-22
Ferrite Yellow	No PMS required.

END

NP007 1761

O-5791-C 1/68 (Printed in U.S.A.)T

No. 61-2-24-4 Date 9-29-67 Page 4 Cancels Page 4 Dated 8-3-67	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY-MIXED JOINT COMPOUND ALL PURPOSE SOUTH CAROLINA

RAW MATERIALS

C	VA-301P	Per MIS Bulletin	6-104-55
	Methocel HG		6-25-6
D			
	P80F Mica		6-143-1
	DXW Mineralite		6-146-2
	Ser-X		6-146-2
	Asbestos		6-14-5
	#400 Whiting or Marble White 325		6-24-1
	Stonelite		6-24-2
	Nuodex PMA-18		6-100-2
	Huber CWF Clay		6-56-5
	Troysan PMA-30		6-100-3
	M350 and MTO-50 Sericite		6-146-2
	A Dolomite	[illegible]	6-24-2
	Astracal M Sericite	Per MIS Bulletin	6-164-2

D

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND ALL PURPOSE SOUTH GATE	No. 01-2-24-4 Date 9-29-67 Page 5 Cancels Page 5 Dated 5-1-67

MANUFACTURING PROCEDURE

Mixing Procedure on Hockmeyer Mixer:
Approximately 90% of the total amount of water that will be required is put into the Hockmeyer mixer. (The quantity of water used initially should be the smallest amount which can be used without overloading the motor when the dry materials are added). The Carbitol and PMA-30 are then added and the mixer is run for a few turns to disperse these materials. The dry materials and plasticized emulsion are then added and the batch is mixed until all lumps are broken down and all materials thoroughly mixed. The mixer is then turned off and the viscosity of a sample is determined on a Brabender Viscosimeter. Additional water, as required, is then added and the batch mixed until a smooth, homogeneous mixture is obtained. The mixer is then stopped and another sample is checked on the viscosimeter. If the viscosity is still too high, this procedure is repeated until the proper viscosity is reached.

Filling
All 5 gallon containers are to be filled by weight, based on the weight per gallon of each batch.

QUALITY CONTROL

A. Viscosity

1. Compound to be at [illegible] in a standard 1/2 pint paint can with paddle immersed to mark on paddle stem.

2. Can spindle to rotate [illegible], 250 gm. cm. head, Brabender Viscometer.

3. Pin bladed paddle to be used in the Brabender.

B. Application Properties - [illegible] sample from Research.

C. Grit - None

D. Bond to Perforated Paper - [illegible] 70 - 90°F, 40 - 60% R.H. -

E. Reset Test - [illegible]

F. Tape Edge Cracking - [illegible] and Tape Application) None

G. Color - Formula [illegible] of Research Standard (Natural White) [illegible] Manila face paper (tinted).

H. Odor - Characteristic

Note - These tests [illegible] as used for dry powder Perf-A-Tape [illegible] 1-2-22.

End

M-5791-C 7/65 (Printed [illegible])

[illegible] States Gauge

DP009 1733

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND - ALL PURPOSE - DALLAS	No. 61-2-24-2 Date 9-29-67 Page 3 Cancels Page 3 Dated 5-1-67

FORMULA: JE 320F

		% Non Volatile	lbs. for 260 gal. batch (2000 lbs. non volatile)
	Mica JC	(1.2 formula V)	320 to 350 approximately
	Carey 7HF9 asbestos	as req'd for correct BB and water content	70 to 90 approximately
	Carbonate Filler	To make 100% N.V.	To make up 2000 lbs. non volatile (about 1400 - 1500 lbs)
	Methocel	0.8%	16 lbs.
C C C	PM-4386 emulsion, including PMA	6.05% (and 1.2 lb. PMA per 211 lbs. plasticized emulsion)	212.2 lbs.
C	Carbitol (or equivalent)(Note 1)	----	18 lbs.
	Water	----	155 ± 1 gal.
	Pigment	----	As req'd for std. manila color.

A Note 1 - Omit Carbitol when this formula is being manufactured for five (5) gallon containers only.

RAW MATERIALS

	Mica	per unit. 6-143-1
	Asbestos	6-14-3
	Carbonate Filler	6-24-9
	Methocel	6-25-0
C	PM-4386	6-104-55
	Carbitol	6-149-3
D		
	PMA-18 or	6-100-2
	PMA-30	6-100-3
	Ferrite Yellow Pigment	6-94-7

D Indicates Deletion
C Indicates Change

Cancels Page 5 dated 5-1-67.

No. 61-2-24-2 Date 9-29-67 Page 4	CONFIDENTIAL DO NOT REPRODUCE
Cancels Page 4 Dated 5-1-67	USG READY MIXED JOINT [illegible]

MANUFACTURING PROCEDURE

Compound Mixing:

Note - Be sure there is sufficient Ready Mixed Compound from [illegible] batch left around the outlet gate to insure a water tight [illegible]

1. Run approx. 100 gal. of water into the mixer and add [illegible] oil. Mix 1/4 minute. Check a teaspoon of the emulsion with a [illegible] phenyl carbazone - gives an intense purple color if the oil is present. If OK add the emulsion to the mixer.

2. Start the mixer and add the weighed dry powder [illegible] for ten minutes after completing the addition of the dry material.

3. If at the end of this time the batch is too stiff, [illegible] more water may be added to bring it to consistency; if too thin, [illegible] more asbestos may be added to stiffen it. Mixing is continued after [illegible] such additions for at least 5 minutes, then the [illegible] the batch is checked. If satisfactory the compound is ready for [illegible] shipment. If the viscosity is outside the permissible [illegible] following the maximum permissible addition of water, or [illegible] batch should be reconditioned by working it off in [illegible]

Note: The viscosity of the compound and [illegible] fication properties are affected by the total [illegible] the batch. Hence when the best mixing procedure [illegible] the plant it should be closely adhered to in [illegible], the temperature of wet mix. and the total [illegible] the batch prior to packing should both be [illegible] ing packing the mixer should be on for the [illegible] minimize product viscosity difference from the [illegible] ons packed.

And

M-3791-C (Jack)

Gene[illegible]

JP009 1455

CONFIDENTIAL

DO NOT REPRODUCE OR COPY

USG READY MIXED JOINT COMPOUND
ALL PURPOSE

FORMULAS (Cont'd)

Formula JE-295C - Gypsum only

Fillers	% Non-Volatile	lbs. (For 250 gal batch approx.
Mica JC	Formula V	270 approx.
Ser-X	15.0	300
JM-7RF9 Asbestos	(as required)	60 approx.
Methyl Cellulose	0.8%	16
Stonelite (or A-Dolomite)	to make 94.0%	to make 1880 lbs.
Ferrite Yellow	to match Sheetrock Paper	

Paste Mix	% Non-Volatile	lbs. (for 250 gal. batch approx)
Fillers	94.0	1880
C FM-4386	6.0	218
Carbitol	-	19
FMA-30	-	1.0
Water	-	130 gal. (approx.)

D

RAW MATERIALS:

C FM-4386	Per FMS Bul. 6-104-55
Methyl Cellulose	6-25-5, 6-25-6
D	
Solvent	6-149-3
Mica	6-143-1
Sericite	6-146-2
Asbestos Floats	6-14-5
Carbonate Filler	6-24-1, 6-24-2, 6-24-7, 58-2-2
FMA Preservative	6-100-2, 6-100-3
Clay	6-36-5

D

D Indicates Deletion
C Indicates Change

No. 61-2-24-1 Date 11-6-67 Page 2		USG READY MIXED JOINT COMPOUND ALL PURPOSE
Cancels Page 2 Dated 4-13-67		CHAMBLEE

FINISHED PRODUCT SPECIFICATIONS

A. Consistency

A 100 gallon batch of compound shall take no more than 54 gallons and no less than 52 gallons of water to reach the required Brabender viscosity.

B. Viscosity

C To be 600-650 Regular Consistency Brabender units 24 hours after manufacture when tested at 77°F with a standard pin paddle on a viscometer operating at 75 rpm and having a 250 cm-gm torsion head.

C. Application

To match that of standard sample.

D. Bond-To-Tape

5 minimum at 77°F, 50% R.H.

E. Tape Edge-Cracking or Check-Cracking (In Bond Test Application)

None

F. Grit and Lumps

None. Each batch must be checked by spreading the compound on SHEETROCK (using a broadknife) to a fine feather edge. The first batch of compound made after a change to a new shipment of asbestos or mica must be tested with an Ames finishing tool (10 or 12") for grit.

G. Weight Per Gallon

To be determined on each batch and recorded. This is done by filling a 5 gallon can to the known 5 gallon level, determine net weight and divide by 5.

- 0 -

DP009 1379

C Indicates Change

Operating Division	CONFIDENTIAL	No. 61-2-11-3-C
PRODUCT PROCEDURE	DO NOT REPRODUCE OR COPY	Date 11-6-67
Approved:	USG JOINT COMPOUND ALL PURPOSE (AP-275-B)	Page 3
		Cancels Page 3 Dated 9-21-67

FORMULA — AP-275-B

CEA 216	1.5%
B329	4.0
Gum Arabic (powd.)	.5
Tylose UM 4000 P	.6
Advacide TJP	.1
Dicyandiamide	.7
Mica JC	Per formula V
7RF02 Asbestos	As req'd for consistency control - 2.5% in lab batches
7RF9 "	3.0
Flo Float JF	To make 100%
A Nopco PD-1	0.3%

RAW MATERIALS

A Nopco PD-1 - A dry powder defoamer from Nopco Chemical Co., Chicago, Ill.
Cea 216 - A special starch binder from Hercules Inc.
B 329* - A special starch binder from A. E. Staley Co.
Gum Arabic - #2 sorts ground to pass 60 mesh practially 100%.
Dicyandiamide - Per Bulletin 6-44-1
Tylose UM 4000 P - Per Bulletin 6-25-5
Advacide TJP - A 5% dispersion of tributyl tin oxide on $CaCO_3$ from Carlisle Chemical Works.
Mica JC - Per Bulletin 6-143-1
Asbestos 7RF02 and 7RF9 - Per Bulletin 6-14-5
Flo Float JF - Per Bulletin 6-24-9
* Raw Material Testing Procedures per PMS 12-45.

MANUFACTURING PROCEDURE

This compound is borate sensitive, hence should be run after AP-100 or other non-borate containing compounds, and then with the equipment well brushed down. Weighing, mixing and Mikropulverizing are the same as for other joint compounds.

QUALITY CONTROL

Per 61-2-26 and 61-2-22.

End

No. 61-2-24-2-1 Date 12-4-67 Page 2	USG READY MIXED JOINT COMPOUND - ALL PURPOSE
Cancels NEW Dated	JE-598-D - DALLAS

FINISHED PRODUCT SPECIFICATIONS

A. Viscosity
To be 550 - 600 twenty four hours after manufacture at 77° F. Test conditions - std 1/2 pint can size container, VC-3 Brabender at 75 RPM, standard pin paddle, 250 cgm spring suspension (calibrated, and corrected if necessary to match Research VC-3 Brabender Viscometer.)

For orders to be used with mechanical tools the ready mixed compound is to be thinned to 360 to 390 VC-3 Brabender (at 75 RPM) by adding extra water.

On orders specifying "Extra Heavy", or if approved by Dept. 147-2, plant to manufacture and ship Extra Heavy Viscosity Ready Mixed P.A.T. Compound (CC 2689). Viscosity 730 plus or minus 30 Brabender units 24 hours after mixing. Viscosity to be obtained by using a less than normal volume of water.

B. Color
Manila, to approximately match SHEETROCK paper color when dry.

C. Application
To match standard sample (as supplied by Research).

D. Bond To Tape
5 minimum at 77° 50% RH. If a bond less than 5 is obtained retest using another roll of tape. If bond is again below 5, reject the compound for poor bond. If the second test is ok, the poor first test may indicate poor bonding tape, (i.e., tape inadequately sanded on the back side to insure good bond. Such tape should also be rejected for shipment.).

E. Grit and Lumps
None permitted. For routine tests spread to a fine feathered edge on SHEETROCK using a broadknife or trowel. For a more critical test, dilute the compound to about 250 BB, and spread it on SHEETROCK with a 10" or 12" Ames finishing box tool, using a tight crown setting on the tool (#4 or #5 setting).

F. Tape Edge Cracking or Check Cracking
Observe the dried bond test application for cracking (use a hand lens). There should be no cracking.

G. Weight Per Gallon
Mark the exact height of 5 gal. on a 5 gal. can. Fill the can exactly to this mark with the compound and weigh contents. Divide weight obtained by 5. It should be between 12.6 and 12.9 lbs. per gal. A lower weight indicates excessive air entrainment.

- 0 -

D0009 1564

M-5791 (Back)

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND - ALL PURPOSE - JE-598-D - DALLAS	No. 61-2-2--2-1 Date 12-4-67 Page 2 Cancels NEW Dated

FORMULA JE-598-D

	% Non Volatile	lbs. for 230 gal. batch (1775 lbs. non volatile)
Mica P80F	1.0% Formula V	250 approximately
Carey TRF9 Asbestos	As req'd for correct EB and water content	66 approximately
Flo Floats Carbonate Filler	To make 100% N.V.	To make up 1775 lbs. non volatile (1360 lbs.)
Powdered Methocel	0.8%	14 lbs. 2 ozs.
PM-4386 emulsion, including PMA	5.5% (and 1.0 lb. PMA-30 per 164 lbs. plasticized emulsion)	164 lbs.
Carbitol (Note 1)	- - - - -	18 lbs.
Water	- - - - -	137 plus or minus 1 gal.
1987 Ferrite Yellow	- - - - -	Approx. 1 lb. as required for std. manila color.

Note 1 - Add Carbitol when this formula is being manufactured for one (1) gallon containers only.

RAW MATERIALS

Mica	Per Bulletin 6-143-1
ASBESTOS	Per Bulletin 6-14-5
Carbonate Filler	Per Bulletin 6-24-9
Methocel	Per Bulletin 6-25-6
PM-4386	Per Bulletin 6-104-55
Carbitol	Per Bulletin 6-149-3
PMA-18	Per Bulletin 6-100-2
PMA-30	Per Bulletin 6-100-3
Ferrite Yellow Pigment	Per Bulletin 6-94-7

JP0009 1571

Operating Division PRODUCT PROCEDURE Approved:	USG READY MIXED JOINT COMPOUND - ALL PURPOSE	No. 61-2-24-1 Date 1-18-68 Page 1 Cancels Page 1 Dated 11-6-67

DESCRIPTION

A resin-emulsion base, ready-mixed joint compound, with a package life of one year.

MANUFACTURING PLANT

Chamblee

PRODUCT LINE

A. USG Ready Mixed Joint Compound - All Purpose. Regular Consistency 600-650 Brabender.

B. Ames Consistency

A USG Ready Mixed Joint Compound - All Purpose at an Ames Tool Consistency of 375-425 Brabender units, at 77° F, by diluting with extra water.

C. Heavy Consistency

On special order only. Brabender range to be 700-750. Cans to be marked "Heavy".

D. "EXTRA HEAVY" on special order only, 800-850 BB. Cans to be marked "Extra Heavy".

E. Special Ames Consistency

Brabender to be on the high side of the Ames range. Cans will not be marked special for customers who use this for hand application.

IDENTIFICATION AND PACKAGING

A. 1 Gallon Can
Per PMS 8-15-2. Master carton per PMS 8-10-26 or PMS 8-10-27. Label as directed by 147-2.

A B. 4 Gallon Carton
Per PMS 8-10-29. Liner per PMS 8-5-4.

/ C. 5 Gallon Pail
Per PMS 8-29-3.

/ D. 5 Gallon Carton
Per PMS 8-10-17 with liner per PMS 8-5-4.

/ E. 100' System
Two gallon cans per PMS 8-15-12 of compound packed with a 100' roll of PERF-A-TAPE on top of each can. Master carton per PMS 8-10-16. Label as directed by 147-2. Two (2) WB-34 folders to be included in each master carton.

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** **DO NOT REPRODUCE OR COPY** USG READY MIXED JOINT COMPOUND - ALL PURPOSE	No. 61-2-24 Date 3-12-68 Page 3 Cancels Page 3 Dated 9-29-67

C FORMULA JX186A - New Brighton Only

Filler Mix:	% Non-Volatile	lbs. (For 945 lbs. filler charge)
Mica JC	(2/3 For. V)	100 approx.
Ser-X	30.0	300
Asbestos Floats	(as Required)	35 approx.
Huber Clay	10.0	100
Methyl Cellulose	0.8	8
Ferrite Yellow	(to match the manila color of Sheetrock face paper)	
± Dolomite (or Stonelite)	(to make 94.5%)	(to make up 945 lbs.)

Paste Mix:	% Non-Volatile	lbs. (For approx. 130 gal. batch)
Fillers	94.5	945
PM-4386	5.5	96
Carbitol	-	9
PMA Preservative	-	8 oz.
Water	-	66 gal. approx.

DP009 0573

C Indicates Change

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND - ALL PURPOSE - DALLAS	No. 61-2-24-2 Date 5-1-68 Page 3 Cancels Page 3 Dated 9-29-67

FORMULA: JE 320F

	% Non Volatile	lbs. for 260 gal. batch (2000 lbs. non volatile)
Mica JC	(1.2 formula V)	320 to 350 approximately
Carey 7RF9 asbesots	As req'd for correct BB and water content	70 to 90 approximately
Carbonate Filler	To make 100% N.V.	To make up 2000 lbs. non volatile (about 1400 - 1500 lbs)
Methocel	0.8%	16 lbs.
PM-4386 emulsion, including PMA	6.05% (and 1.2 lb. PMA per 211 lbs. plasticized emulsion)	212.2 lbs.
Water	----	155 ± 1 gal.
Pigment	----	As req'd for std. manila color.

D

D

D

RAW MATERIALS

Mica	per bul.	6-143-1
Asbestos		6-14-5
Carbonate Filler		6-24-9
Methocel		6-25-6
PM-4386		6-104-55
PMA-18 or		6-100-2
PMA-30		6-100-3
Ferrite Yellow Pigment		6-94-?

D

UPC09 1459

D Indicates Deletion

No. 61-2-24-2 Date 5-1-66 Page 4 Cancels Page 4 Dated 9-29-67	**CONFIDENTIAL** DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND - ALL PURPOSE

DALLAS

MANUFACTURING PROCEDURE

Compound Mixing:

Note - Be sure there is sufficient Ready Mixed Compound from the previous batch left around the outlet gate to insure a water tight seal.

1. Run approx. 100 gal. of water into the mixer. Mix 1/4 minute. Check a teaspoon of the emulsion with a drop of diphenyl carbazone - gives an intense purple color if the PMA is present. If OK add the emulsion to the mixer.

2. Start the mixer and add the weighed dry powder ingredients. Mix for ten minutes after completing the addition of the dry materials.

3. If at the end of this time the batch is too stiff, up to 2 gal. more water may be added to bring it to consistency; if too thin, up to 20 lbs. more asbestos may be added to stiffen it. Mixing is continued after completing such additions for at least 5 minutes, then the viscosity of the batch is checked. If satisfactory the compound is ready for packing for shipment. If the viscosity is outside the permissible consistency range following the maximum permissible addition of water, or of asbestos, the batch should be reconditioned by working it off in succeeding batches.

   Note: The viscosity of the compound and to some degree the application properties are affected by the total mixing time given the batch. Hence when the best mixing procedure is worked out at the plant it should be closely adhered to in succeeding batches (i.e., the temperature of wet mix, and the total mixing time given the batch prior to packing should both be closely controlled.) During packing the mixer should be on for the minimum possible time to minmize product viscosity difference from the first to the last cans packed.

End

DP009 1459

C-5791-C (Back)

Operating Division	CONFIDENTIAL	No. 61-2-22
PRODUCT PROCEDURE	DO NOT REPRODUCE OR COPY	Date 5-22-68
Approved:	USG READY MIXED JOINT COMPOUND - ALL PURPOSE	Page 3
		Cancels Page 3 Dated 3-12-68

FORMULA J-1866A - New Brighton Only

Filler Mix:	% Non-Volatile	lbs. (For 945 lbs. filler charge)
Mica JC	(2/3 For. V)	100 approx.
Ser-A	30.0	300
Asbestos Floats	(as Required)	35 approx.
Huber Clay	10.0	100
Methyl Cellulose	0.8	8
Ferrite Yellow	(to match the manila color of Sheetrock face paper)	
C Carbonate Filler	(to make 94.5%)	(to make up 945 lbs.)

Paste Mix:	% Non-Volatile	lbs. (For approx. 130 gal. batch)
Fillers	94.5	945
PM-4386	5.5	96
Carbitol	-	9
PMA Preservative	-	8 oz.
Water	-	66 gal. approx.

DP009 0554

C Indicates Change

No. 61-2-24
Date 5-22-68
Page 4
Cancels Page 4
Dated 9-29-67

CONFIDENTIAL

DO NOT REPRODUCE OR COPY

USG READY MIXED JOINT COMPOUND
ALL PURPOSE

FORMULA: (Cont'd)

Formula JE-295C - Gypsum only

Fillers	% Non-Volatile	lbs. (For 250 gal batch approx.
Mica JC	Formula V	270 approx.
Scr-X	15.0	300
JM-7RF9 Asbestos	(as required)	60 approx.
Methyl Cellulose	0.8%	16
C Carbonate Filler	to make 94.0%	to make 1880 lbs.
Ferrite Yellow	to match Sheetrock Paper	

Paste Mix	% Non-Volatile	lbs. (for 250 gal. batch approx)
Fillers	94.0	1880
PM-4386	6.0	218
Carbitol	-	19
PMA-30	-	1.0
Water	-	130 gal. (approx.)

RAW MATERIALS:

PM-4386	Per PMS Bul. 6-104-55
Methyl Cellulose	6-25-5, 6-25-6
Solvent	6-149-3
Mica	6-143-1
Sericite	6-146-2
Asbestos Floats	6-14-5
C Carbonate Filler (A Dolomite, Stonelite, or #325 Mineral Filler)	6-24-1, 6-24-2, 6-24-7, 58-2-2, and 6-24-17.
PMA Preservative	6-100-2, 6-100-3
Clay	6-36-5

C Indicates Change

Also Cancels Special Bulletin 61-2-24-1-G dated 9-17-68.

Operating Division PRODUCT PROCEDURE Approved:	USG READY MIXED JOINT COMPOUND - ALL PURPOSE	No. 61-2-24-1 Date 4-3-69 Page 1 Cancels Page 1 Dated 1-18-68

DESCRIPTION

A resin-emulsion base, ready-mixed joint compound, with a package life of one year.

MANUFACTURING PLANT

Chamblee

PRODUCT LINE

A. USG Ready Mixed Joint Compound - All Purpose. Regular Consistency 600-650 Brabender.

B. Ames Consistency

A USG Ready Mixed Joint Compound - All Purpose at an Ames Tool Consistency of 375-425 Brabender units, at 77° F, by diluting with extra water.

C. Heavy Consistency

On special order only. Brabender range to be 700-750. Cans to be marked "Heavy".

D. "EXTRA HEAVY" on special order only, 800-850 BB. Cans to be marked "Extra Heavy".

E. Special Ames Consistency

Brabender to be on the high side of the Ames range. Cans will not be marked special for customers who use this for hand application.

IDENTIFICATION AND PACKAGING

A. 1 Gallon Can
Per PMS 8-15-2. Master carton per PMS 8-10-26 or PMS 8-10-27. Label as directed by 147-2.

B. 4 Gallon Carton
C Per PMS 8-10-29-2. Liner per PMS 8-5-4.

C. 5 Gallon Pail
Per PMS 8-29-3.

D. 5 Gallon Carton
Per PMS 8-10-17 with liner per PMS 8-5-4.

E. 100' System
Two gallon cans per PMS 8-15-12 of compound packed with a 100' roll of PERF-A-TAPE on top of each can. Master carton per PMS 8-10-16. Label as directed by 147-2. Two (2) WB-34 folders to be included in each master carton.

DP009 1310

Operating Division PRODUCT PROCEDURE Approved:	USG READY MIXED JOINT COMPOUND - ALL PURPOSE	No. 61-2-24-1 Date 4-16-69 Page 1 Cancels Page 1 Dated 4-3-69

DESCRIPTION

A resin-emulsion base, ready-mixed joint compound, with a package life of one year.

MANUFACTURING PLANT

Chamblee

PRODUCT LINE

A. USG Ready Mixed Joint Compound - All Purpose. Regular Consistency 600-650 Brabender.

B. Ames Consistency

A USG Ready Mixed Joint Compound - All Purpose at an Ames Tool Consistency of 425-475 Brabender units, at 77° F, by diluting with extra water.

C. Heavy Consistency

On special order only. Brabender range to be 700-750. Cans to be marked "Heavy".

D. "EXTRA HEAVY" on special order only, 800-850 BB. Cans to be marked "Extra Heavy".

E. Special Ames Consistency

Brabender to be on the high side of the Ames range. Cans will not be marked special for customers who use this for hand application.

IDENTIFICATION AND PACKAGING

A. 1 Gallon Can
Per PMS 8-15-2. Master carton per PMS 8-10-26 or PMS 8-10-27. Label as directed by 147-2.

B. 4 Gallon Carton
Per PMS 8-10-29-2. Liner per PMS 8-5-4.

C. 5 Gallon Pail
Per PMS 8-29-3.

D. 100' System
Two gallon cans per PMS 8-15-12 of compound packed with a 100' roll of PERF-A-TAPE on top of each can. Master carton per PMS 8-10-16. Label as directed by 147-2. Two (2) WB-34 folders to be included in each master carton.

SPECIAL BULLETIN

Operating Division	CONFIDENTIAL	No. 61-2-24-1...
PRODUCT PROCEDURE	DO NOT REPRODUCE OR COPY	Date 4-16-69
Approved:	READY-MIXED JOINT COMPOUND - ALL PURPOSE (JT-684A)	Page 3
		Cancels Dated N.E.

FORMULA

	% Non-Volatile	Pounds-2000 Lbs. N. V.
Mica JC	V	280 to 300 approx.
PC7RF9 Asbestos	As req'd for visc. 4.5 to 5.5% normal	90 to 110 approx.
Methocel 65 HG	0.7	14
Flo-Float	to 100% N. V.	1500 approx.
Hamaco 267	2.0%	40
PM4386 (w/o PMA-30)	2.5%	83.3
Tamol 850	——	3 to 4 as req'd
PMA-30	——	1
Water		160 to 162 gal. approx. for regular viscosity

RAW MATERIALS

Per Bulletin 61-2-24-2 plus:

Tamol 850	PMS 6-177-9
Hamaco 267	A. E. Staley Mfg. Co., Decatur, Ill.

MANUFACTURING PROCEDURE

General procedures as per Bulletin 61-2-42-2.

Note: 1. Add Tamol 850 to water and emulsion and mix before adding dry ingredients.

2. If PMA-30 is normally added to the emulsion in bulk, extra PMA-30 will be necessary since the amount of emulsion has been reduced. This extra preservative should be added to the water/emulsion premix.

END

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND - ALL	No. 61-2-24-2-1 Date 4-30-69 Page 3 Cancels Page 3 Dated 5-1-68

PURPOSE - JE-598-D - DALLAS

FORMULA JE-598-D

	% Non Volatile	lbs. for 230 gal. batch (1775 lbs. non volatile)
C Mica P80F	1.2 Formula V	300 approximately
Carey 7RF9 Asbestos	As req'd for correct BB and water content	66 approximately
Flo Floats Carbonate Filler	To make 100% N.V.	To make up 1775 lbs. non volatile (1360 lbs.)
Powdered Methocel	0.8%	14 lbs. 2 ozs.
PM-4386 emulsion, including PMA	5.5% (and 1.0 lb. PMA-30 per 164 lbs. plasticized emulsion)	164 lbs.
Water	- - - - -	137 plus or minus 1 gal.
1987 Ferrite Yellow	- - - - -	Approx. 1 lb. as required for std. manila color.

RAW MATERIALS

Mica	Per Bulletin 6-143-1
ASBESTOS	Per Bulletin 6-14-5
Carbonate Filler	Per Bulletin 6-24-9
Methocel	Per Bulletin 6-25-6
PM-4386	Per Bulletin 6-104-55
PMA-18	Per Bulletin 6-100-2
PMA-30	Per Bulletin 6-100-3
Ferrite Yellow Pigment	Per Bulletin 6-94-?

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND - ALL PURPOSE - CHAMBLEE	No. 61-2-24-1 Date 5-15-69 Page 3 Cancels Page 3 Dated 4-11-68

FORMULA: Je-217

	% Non-Volatile	Lbs. (for 100 gal. batch approx.)
Mica JC	(2/3 Formula V)	80. approx.
DXW Mineralite (Note 1)	30.0	240
Asbestos Floats	(as required)	24 approx.
Huber CWF Clay	10.0	80
Methyl Cellulose	0.8	6 - 6 oz.
Ferrite Yellow	(to match manila color of SHEETROCK face paper)	
#9 Marble	(to make 100%)	(to make 800 lbs. total non-volatile)
C PVAc Resin Emulsion, Plasticized	5.5	73
Carbitol (Note 2)	-	7
PMA Preservative	-	8 oz.
Water	-	53 gals. approx.

Notes: (1) DXW Mineralite, Ser-X, or CE-F-1 Sericite may be used in pigmented Ready Mix.
(2) Omit Carbitol when formulating for packaging in 5 gal. containers.

RAW MATERIALS

C PVAc Resin Emulsion, Plasticized	Per Bulletin 6-104-55
Methyl Cellulose	Per Bulletin 6-25-5, 6-25-6
Solvent	Per Bulletin 6-149-3
Mica	Per Bulletin 6-143-1
DXW Mineralite	Per Bulletin 6-146-2
Asbestos 7RF9	Per Bulletin 6-7-1
Nuodex PMA-18	Per Bulletin 6-100-2
Troysan PMA-30	Per Bulletin 6-100-3
Huber CWF Clay	Per Bulletin 6-36-5
#9 Georgia Marble	Per Bulletin 6-24-9
Ferrite Yellow	

SPECIAL BULLETIN

Operating Division	CONFIDENTIAL	No. 61-2-24-12-E
PRODUCT PROCEDURE	DO NOT REPRODUCE OR COPY	Date 2-27-70
Approved:	USG READY-MIXED JOINT COMPOUND - ALL PURPOSE (JE807A) NEW BRIGHTON	Page 2
		Cancels NEW
		Dated

FORMULA - JE 807 A

Filler Mix	% Non-volatile	Lbs. (500 gal. Batch)
P-80-F Mica	2/3 Formula V	400
Narvon CE-F-1	30.0	1200
JM 7 RF02 Asbestos	2.5 average	100
Huber CWF Clay	10.0	400
Methyl Cellulose	.8	32
Mono-basic Ammonium Phosphate, Technical Grade	.15	6
No. 1 Terra Alba	To make 94.4%	To make 3776 lbs.
Ferrite Yellow	To match SR	ca. 5

Paste Mix	% Non-volatile	Materials for 500 gal. batch
Fillers	94.4	3776 lbs.
*PM4386 (60% N.V.)	5.5	40 gal.
Troysan 174 Preservative	.1	4 lbs.
Water	-	250-260 gal(approx.)

*NOTE: PM4386 @ 50% N.V. use 46.8 gal.; PM4386 @ 46% N.V. use 53.4 gal.

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND - ALL PURPOSE - JE-598-D - DALLAS	No. 61-2-24-2-1 Date 5-1E-70 Page 3 Cancels Page 3 Dated 4-30-69

FORMULA JE-598-D

	% Non Volatile	lbs. for 250 gal. batch (2000 lbs. N.V.)
Mica P80F	Formula V	300 approximately
JMTRF02 Asbestos	As req'd for correct BB and water content	70 approximately
Flo Floats	To make 100% N.V.	To make up 1890 lbs. N.V.
PM-4386 emulsion	5.5%	183.3 lbs.
Methocel 65HG	0.8%	16 lbs.
PMA-30		1 lb.
Water	- - - - -	approx. 130 gal.

RAW MATERIALS

Mica	Per Bulletin 6-143-1
ASBESTOS	Per Bulletin 6-14-10
Carbonate Filler	Per Bulletin 6-24-9
Methocel	Per Bulletin 6-25-6
PM-4386	Per Bulletin 6-104-55
PMA-18	Per Bulletin 6-100-2
PMA-30	Per Bulletin 6-100-3

SPECIAL BULLETIN

Operating Division	CONFIDENTIAL	No. 61-2-24-4-G
	DO NOT REPRODUCE OR COPY	Date 7-8-70
PRODUCT PROCEDURE	USG READY-MIXED JOINT COMPOUND - ALL PURPOSE - LOW SHRINKAGE - JE 836 G	Page 2
Approved:		Cancels NEW Dated

FORMULA JE 836G

	% Non Volatile	Lbs. for approx 250 gal batch
P80F Mica	Per Formula V	Approx. 340 lbs.
UC210 Asbestos	2.5	50
-60 Mesh Gelvatol 20/90 BP	1.0	20
Natrosol 250 HHX	.5	10
MW325	To make 100%	To make 2000 lbs. Non Volatile
UCAR131 or Amsco 3001P Polyvinyl acetate emulsion	2.5	Approx. 83 lbs.
40% Glyoxal solution	.4	20
70% Sorbitol "	.35	10
Troysan 174	-	2.5

PROCESSING

Must be mixed by the CF process. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without vacuum treatment.

RAW MATERIAL SPECIFICATIONS

P80F Mica	Per Bulletin 6-143-1
UC 210 Std. grade asbestos	" " 6-14-11
-60 Mesh Gelvatol 20/90 BP	Polyvinyl alcohol, cold water soluble, high viscosity - from Monsanto Chemical Co.
Natrosol 250 HHX (-60 mesh)	An unretarded grade of extra high viscosity Hydroxy ethyl cellulose from Hercules, Inc.
MW325	Per Bulletin 6-24-1
Polyvinyl acetate emulsion	" " 6-104-55
40% glyoxal aqueous solution (tech.)	From Union Carbide Corp.
70% sorbitol solution (tech.)	From Chas. Pfizer or Atlas Chemical Co.
Troysan 174	Per Bulletin 6-100-14

END

GP009 1824

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND -	No. [illegible] Date 10-30-70 Page 3 Cancels Page 3 Dated 5-15-69

ALL PURPOSE - CHAMBLEE

FORMULA: Je-217

	% Non-Volatile	Lbs. (for 100 gal. batch approx.)
Mica JC	(2/3 Formula V)	80 approx.
DXW Mineralite (Note 1)	30.0	240
Asbestos Floats	(as required)	24 approx.
Huber CWF Clay	10.0	80
Methyl Cellulose	0.8	6 - 6 oz.
Ferrite Yellow	(to match manila color of SHEETROCK face paper)	
#9 Marble	(to make 100%)	(to make 800 lbs. total non-volatile)
PVAc Resin Emulsion, Plasticized	5.5	73
Carbitol (Note 2)	-	7
C CTP Acetate	-	10 oz.
Water	-	53 gals. approx.

Notes: (1) DXW Mineralite, Ser-X, or CE-F-1 Sericite may be used in pigmented Ready Mix.
(2) Omit Carbitol when formulating for packaging in 5 gal. containers.

RAW MATERIALS

PVAc Resin Emulsion, Plasticized	Per Bulletin 6-104-55
Methyl Cellulose	Per Bulletin 6-25-5, 6-25-6
Solvent	Per Bulletin 6-149-3
Mica	Per Bulletin 6-143-1
DXW Mineralite	Per Bulletin 6-146-2
D Asbestos 7RF9	Per Bulletin 6-7-1
Huber CWF Clay	Per Bulletin 6-36-5
#9 Georgia Marble	Per Bulletin 6-24-9
Ferrite Yellow	
A CTP Acetate	Per Bulletin 6-100-5

No. 61-2-24-4-G Date 11-23-70 Page 2 Cancels Page 2 Dated 7-8-70	USG READY-MIXED JOINT COMPOUND - ALL PURPOSE - LOW SHRINKAGE - JE-836-G

FORMULA JE 836G

		% Non Volatile	Lbs. for approx 250 gal batch
	P80F Mica	Per Formula V	Approx. 340 lbs.
	UC210 Asbestos	2.5	50
	-60 Mesh Gelvatol 20/90 BP	1.0	20
	Natrosol 250 HHX	.5	10
	MW325	To make 100%	To make 2000 lbs. Non Volatile
	UCAR131 or Amsco 3001P Polyvinyl acetate emulsion	2.5	Approx. 83 lbs.
	40% Glyoxal solution	.4	20
	70% Sorbitol "	.35	10
A	Troysan CMP Acetate	-	1
C	Troysan 174		1

PROCESSING

Must be mixed by the CF process. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without vacuum treatment.

RAW MATERIAL SPECIFICATIONS

P80F Mica	Per Bulletin 6-143-1
UC 210 Std. grade asbestos	" " 6-14-11
-60 Mesh Gelvatol 20/90 BP	Polyvinyl alcohol, cold water soluble, high viscosity - from Monsanto Chemical Co.
Natrosol 250 HHX (-60 mesh)	An unretarded grade of extra high viscosity Hydroxy ethyl cellulose from Hercules, Inc.
MW325	Per Bulletin 6-24-1
Polyvinyl acetate emulsion	" " 6-104-55
40% glyoxal aqueous solution (tech.)	From Union Carbide Corp.
70% sorbitol solution (tech.)	From Chas. Pfizer or Atlas Chemical Co.
Troysan 174	Per Bulletin 6-100-14
A Troysan CMP Acetate	Per Bulletin 6-100-5

END

JP009 1919

Cperating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No. 61-2-24-4 Date 12-4-70 Page 3 Cancels Page 3 Dated 5-28-70

FORMULAS

A. Formula JE-304C - Special White and Regular (Tinted)

Fillers	% Non-Volatile	(For 250 Gal.) Lbs. (Batch Approx.)
Mica JC	Formula V	275 (Approx.)
Astracal M Sericite	10.0	200
Asbestos UC210	2.5 (approx.)	50
#400 Whiting or Marble White 325	To Make 94%	To Make 1880 Lbs.
Methocel 65HG	0.8	16

Paste Mix	% Non-Volatile	Lbs. (for 250 gal. batch appr.)
Fillers	94.0	1880
VA-301P	6.0	218
Troysan CMP acetate (liquid)	-	1
C Troysan 174		1 lb..
Water	-	140 gallons (approx.)

B. Formula JE-201

Filler Mix	% Non-Volatile	Lbs. (For 945# Filler Charge)
Mica JC	Formula V	150 approx.
MTO-50	30.0	300
Asbestos Floats	As Req'd.	35 approx.
Huber Clay	10.0	100
Methocel HG	0.8	8
Ferrite Yellow*	To match manila color of SHEETROCK Face Paper.	
400 Whiting or Marble White 325	To make 94.5%	To make up 945 lbs.

* Plant to manufacture unpigmented form when requested by Sales Dept.

Paste Mix	% Non-Volatile	Lbs. (for approx. 130 gal.)
Fillers	94.5	945
VA-301P	5.5	90
Troysan CMP acetate (liquid)	-	8 oz.
C Troysan 174		8 oz.
Water	-	71 gal. approx.

7P009 1717

C Indicates Change

Operating Division PRODUCT PROCEDURE Approved:	USG READY MIXED JOINT COMPOUND - ALL PURPOSE	No. 61-2-24-1 Date 3-9-71 Page 1 Cancels Page 1 Dated 1-5-70

DESCRIPTION

A resin-emulsion base, ready-mixed joint compound, with a package life of one year.

MANUFACTURING PLANT

Chamblee

PRODUCT LINE

A. USG Ready Mixed Joint Compound - All Purpose. Regular Consistency 600-650 Brabender.

B. Ames Consistency

A USG Ready Mixed Joint Compound - All Purpose at an Ames Tool Consistency of 425-475 Brabender units, at 77° F, by diluting with extra water.

C. Heavy Consistency

On special order only. Brabender range to be 700-750. Cans to be marked "Heavy".

D. "EXTRA HEAVY" on special order only, 800-850 BB. Cans to be marked "Extra Heavy".

E. Special Ames Consistency

Brabender to be on the high side of the Ames range. Cans will not be marked special for customers who use this for hand application.

IDENTIFICATION AND PACKAGING

C A. 1 Gallon Can
Per PMS 8-15-12. Master carton per PMS 8-10-34. Label as directed by 147-2.

B. 4 Gallon Carton
Per PMS 8-10-29-2. Liner per PMS 8-5-4.

C. 5 Gallon Pail
Per PMS 8-29-3.

D. 100' System
Two gallon cans per PMS 8-15-12 of compound packed with a 100' roll of PERF-A-TAPE on top of each can. Master carton per PMS 8-10-16. Label as directed by 147-2. Two (2) WB-34 folders to be included in each master carton.

Operating Division PRODUCT PROCEDURE Approved:	USG READY MIXED ALL PURPOSE JOINT COMPOUND - JE 686	No. 61-2-24-14 Date 3-29-71 Page 1 Cancels NEW Dated

DESCRIPTION

A USG Ready Mixed All Purpose Joint Compound which contains a fine ground raw gypsum filler, New Brighton No. 1 Terra Alba, and is denser (less air voids) than the standard JE 924 formula.

MANUFACTURING PLANT - New Brighton

SHIPMENTS - On all orders for the Baltimore Special formula.

IDENTIFICATION AND PACKAGING

Per Bulletin 61-2-24. This formula to have the letter "BS" after the manufacturing code.

DP009 2273

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY USG READY MIXED ALL PURPOSE JOINT COMPOUND - JE 686	No. 61-2-24-14 Date 3-29-71 Page 2 Cancels NEW Dated

FORMULA JE 686

Filler Mix	% Non-Volatile	lb. (500 gallon batch)
UMC P80F Mica	2/3 formula V	400
Marvon Sericite	15.0	600
JM/RFO2 Asbestos Floats	ca 3.0	120
Huber CWF Clay	5.0	200
*Natrosol 250 HXR	.8	32
Ferrite Yellow	pigmented only	6
Nopco PD #1 Powder	.35	14
**No. 1 Terra Alba	to make 94.5%	2500

* 2-8 min hydration time per PMS 6-151-6.
**Falls Village A Dolomite or Thompson-Weiman Rambo #4 may be substituted if no Terra Alba is available.

Paste Mix	% Non-Volatile	lb. (500 gallon batch)
Fillers	94.5%	3872 lb.
*PM 4386 (60% N.V.)	5.5	40 gal.
Troysan CMP Acetate	----	3 lb.
Water	----	250-265 gal.

*PM 4386 at 50% N.V. use 48.8 gal. and PM 4386 at 46% N.V. use 53.4 gal.

RAW MATERIALS

UMC P80F Mica	PMS 6-143-3
Marvon Sericite	PMS 6-146-2
JM/RFO2 Asbestos Floats	PMS 6-14-10
Huber CWF Clay	PMS 6-36-5
Natrosol 250 HXR	PMS 6-151-6
Ferrite Yellow	None Required
No. 1 Terra Alba	Bul 52-17-1
A Dolomite	Bul 58-2-2
Rambo #4	PMS 6-24-9
Nopco PD #1 Powder	PMS 6-40-21
PM 4386	PMS 6-104-55
Troysan CMP Acetate	PMS 6-100-5

MANUFACTURING PROCEDURE

Per 61-2-24

END

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** **DO NOT REPRODUCE OR COPY** USG ALL PURPOSE READY MIXED JOINT COMPOUND (JE-906D)	No. 61-2-24-FP Date 3-22-71 Page 2 Cancels New Dated

FORMULA	% Non-Volatile	Lbs/2000 lbs. N.V.
JM7RFO2	3.0	60
Methocal 65HG	0.8	16
Southard #1 Terra Alba	to make 100%	1859
PM-4386 (60% solids)	3.0	100
Tamol 850	0.15	3
CMP Acetate	0.05	1
Troysan 174	0.05	1
Water	---	115 Gal. approx.

RAW MATERIALS

Per bulletin 61-2-24 except:

Southard #1 Terra Alba	Bul. 52-22-2
Tamol 850	PMS 6-177-9
Troysan 174	PMS 6-100-14

MANUFACTURING PROCEDURE

Per bulletin 61-2-24.

End

JP009 1117

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** **DO NOT REPRODUCE OR COPY** USG READY MIXED JOINT COMPOUND ALL PURPOSE	No. 61-2-24-1-X Date 4-20-71 Page 3 Cancels NEW Dated

JE-921C

FORMULA (Je-921C)

Filler Mix	% Non-Volatile	Lbs. (for 250 Gal. Batch Approx.)
Mica JC	.05 Formula V	160 Approx.
Sercite (Note 1)	15.0	300
JM 7RF02 Asbestos	as required	60 approx.
Huber Clay	5.0	100
Cellosize 31	0.45	9
Ferrite Yellow (Note 2)	(To match manila color of SHEETROCK face paper)	
#9 NCS	(To make 94.5% filler mix)	(to make 1890 lbs. of filler mix)

Paste Mix		
Filler Mix	94.5	1890
PM-4386 (60% solids)	5.5	183
CMP Acetate	----	1
Troysan 174	----	1
Water	----	126 gal. approx.

Note 1: DXW Mineralite, Ser-X, or Marvon CE-P-1 sercite may be used in pigmented Ready Mix. Only DXW Mineralite to be used in unpigmented Ready-Mix.

Note 2: Ferrite Yellow to be omitted on orders for white (unpigmented) Ready Mix.

USG 1611

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** DO NOT REPRODUCE OR COPY USG READY MIXED ALL PURPOSE JOINT	No. 61-2-24 Date 4-14-71 Page 3 Cancels Page 3 Dated 5-22-68

COMPOUND - JE924 NEW BRIGHTON

FORMULA JE 924

Filler Mix	% Non-Volatile	lb. (500 gallon batch)
WMC P8CF Mica	2/3 formula V	400
Narvon Sericite	15.0	600
JM7HF02 Asbestos Floats ca.	3.0	120
Huber CWF Clay	5.0	200
Dow Methocel 65 HG 4000 cps	.8	32
Ferrite Yellow	pigmented only	5
*No. 1 Terra Alba	to make 94.5%	2500

*Falls Village A Dolomite or Thompson-Weiman Rambo #4 may be substituted if no No. 1 Terra Alba is available.

Paste Mix

Fillers	94.5%	3857 lb.
*PM 4386 (60% n.v.)	5.5	40 gal.
Troysan CMP Acetate	-	3 lb.
Water	-	250-265 gal.

*PM 4386 at 50% n.v. use 48.8 gal and PM 4386 @ 46% n.v. use 53.4 gal.

RAW MATERIALS

WMC P8CF Mica	PMS 6-143-3
Narvon Sericite	PMS 6-146-2
JM7HF02 Asbestos Floats	PMS 6-14-10
Huber CWF Clay	PMS 6-36-5
Dow Methocel 65HG 4000 cps	PMS 6-25-6
Ferrite Yellow	None Required
No. 1 Terra Alba	Bul. 52-17-1
A Dolomite	Bul. 58-2-2
Rambo #4	PMS 6-24-9
PM 4386	PMS 6-104-55
Troysan CMP Acetate	PMS 6-100-5

CONFIDENTIAL

USG READY MIXED ALL PURPOSE JOINT COMPOUND

JE924 NEW BRIGHTON

MANUFACTURING PROCEDURE

A. Mixing Procedure on Hockmeyer Mixer:
Approximately 90% of the total water that will be required is put into the Hockmeyer mixer, simultaneous with the latex, preservative and dry materials with the mixer running. Batch is to be mixed at heavy viscosity until all lumps are broken down and all materials thoroughly mixed. The mixer is then turned off and the viscosity of a sample determined on a Brabender Visco Corder. Additional water as required, is then added and the batch mixed until a smooth homogeneous mixture is obtained. The mixer is then stopped and another sample is checked on the Visco Corder. If the viscosity is still too high, this procedure is repeated until the proper viscosity is reached.

B. Filling:
All 5 gallon containers are to be filled by weight based on the weight per gallon of each batch.

QUALITY CONTROL

Viscosity: To be determined after the compound has stood for 24 hours, using the following setup.

(a) Compound to be at 77°F ± 5°F in a 1/2 pint paint can with pin paddle immersed to mark on the paddle stem.

(b) Can spindle to rotate at 75 r.p.m. on VC-3, 250 gm. cm. head, Brabender Visco Corder.

Application Properties: To match standard sample from Research

SPECIAL BULLETIN

Operating Division	CONFIDENTIAL	No. 61-2-24-2-1-A
PRODUCT PROCEDURE	DO NOT REPRODUCE OR COPY	Date 7-2-71
Approved:	USG READY MIXED JOINT COMPOUND (JE-947B)	Page 2
		Cancels NEW Dated

FORMULA	% NON-VOLATILE	LBS/2000 LBS. N.V.
JM7RF02	3.0	60
WRA-51	0.5	10
Southard #1 Terra Alba	To make 100%	1850
PM-4386 (60% solids)	4.0	131
Tamol 850		3
CMP Acetate		1
Troysan 174		1
Water		Approx. 95 Gal.

RAW MATERIALS

Per Bulletin 61-2-24 except:

Southard #1 Terra Alba	Bulletin 52-22-2
WRA-51	Union Carbide
Tamol 850	PMS 6-177-9
Troysan 174	PMS 6-100-14

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24

END

USG 009 1574

special bulletin

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** DO NOT REPRODUCE OR COPY USG READY MIXED ALL PURPOSE JOINT COMPOUND - JE 686	No. 61-2-24-14-A Date 7-9-71 Page 3 Cancels NEW Dated

FORMULA JE 686

Filler mix	% Non-Volatile	lb. (500 gallon batch)
WMC P80F Mica	2/3 formula V	400
Marvon Sericite	15.0	600
JM7RF02 Asbestos Floats	ca 3.0	120
Huber CWF Clay	5.0	200
SG-61*	.8	32
Ferrite Yellow	pigmented only	6
Nopco PD #1 Powder	.35	14
Stonelite	to make 94.5%	2500

* 2-8 min hydration time per PMS 6-151-6.

Paste Mix	%Non-Volatile	lb. (500 gallon batch)
Fillers	94.5%	3872 lb.
*PM 4386 (60% N.V.)	5.5	40 gal.
Troysan CMP Acetate	-----	3 lb.
Water	-----	250-265 gal.

*PM 4386 at 50% N.V. use 48.8 gal. and PM 4386 at 46% N.V. use 53.4 gal.

RAW MATERIALS

WMC P80F Mica	PMS 6-143-3
Marvon Sericite	PMS 6-146-2
JM7RF02 Asbestos Floats	PMS 6-14-10
Huber CWF Clay	PMS 6-36-5
SG-61	PMS 6-151-6
Ferrite Yellow	None Required
Stonelite	
A Dolomite	Tul 58-2-2
Rambo #4	PMS 6-24-9
Nopco PD #1 Powder	PMS 6-40-21
PM 4386	PMS 6-104-55
Troysan CMP Acetate	PMS 6-100-5

MANUFACTURING PROCEDURE

Per 61-2-24

END

OP009 2219

Operating Division PRODUCT PROCEDURE Approved:	USG READY MIXED JOINT COMPOUND - ALL PURPOSE - JE-598-D	No. 61-2-24-2-1 Date 7-22-71 Page 3 Cancels Page 3 Dated 4-14-71

FORMULA JE-598-D

	% Non Volatile	lbs. for 250 gal. batch (2000 lbs. N.V.)
Mica P80F	Formula V	300 approximately
JM7RF02 Asbestos	As req'd for correct BB and water content	70 approximately
Carbonate Filler*	To make 100% N.V.	To make up 1890 lbs. N.V.
PM-4386 emulsion	5.5%	183.3 lbs.
Methocel 65HG	0.8%	16 lbs.
PMA-30		1 lb.
Water	- - - - -	approx. 130 gal.

C * 1. Dallas to use Flo-Floats
C * 2. Midway to use Quincy #3

RAW MATERIALS

Mica	Per Bulletin 6-143-1
ASBESTOS	Per Bulletin 6-14-10
C Carbonate Filler	Per Bulletin 6-24-9 and 6-24-22
Methocel	Per Bulletin 6-25-6
PM-4386	Per Bulletin 6-104-55
PMA-18	Per Bulletin 6-100-2
PMA-30	Per Bulletin 6-100-3

No. 61-2-24-4-G Date 10-6-71 Page 2 Cancels Page 2 Dated 11-23-70	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - LOW SHRINKAGE - JE-836-G

FORMULA JE-836-G

	% Non Volatile	Lbs. for approx 230 gal batch
P-85 Mica	4.0	75 lbs.
Mica S	20.0	Approx. 375 lbs.
UC210 Asbestos	2.5	45
-60 Mesh Celvatol 20/90 EP	1.0	18
Natrosol 250 HHX	.55	10
MW325	To make 100%	To make 1810 lbs. Non Volatile
Tetra Sodium Pyro Phosphate	0.1	2
UCARI31 or Amsco 3001P Polyvinyl acetate emulsion	2.5	Approx. 75 lbs.
40% Glyoxal solution	.2	4
70% Sorbitol "	.35	7
Troysan CMP Acetate	-	1
Troysan 174		1

PROCESSING

Must be mixed by the CF process. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without vacuum treatment.

RAW MATERIAL SPECIFICATIONS

P-85 Mica	Per Bulletin 6-143-3
Mica S	Per Bulletin 6-143-5
UC 210 Std. grade asbestos	Per Bulletin 6-14-11
-60 Mesh Celvatol 20/90 EP	Polyvinyl alcohol, cold water soluble, high viscosity - from Monsanto Chemical Co.
Natrosol 250 HHX (-60 mesh)	An unretarded grade of extra high viscosity Hydroxy ethyl cellulose from Hercules, Inc.
MW325	Per Bulletin 6-24-1
Polyvinyl acetate emulsion	Per Bulletin 6-104-55
40% glyoxal aqueous solution (tech.)	From Union Carbide Corp.
70% sorbitol solution (tech.)	From Chas. Pfizer or Atlas Chemical Co.
Troysan 174	Per Bulletin 6-100-14
Troysan CMP Acetate	Per Bulletin 6-100-5
Tetra Sodium Pyro Phosphate	Per Bulletin 6-177-4

END

No. 61-2-24-4-G Date 10-6-71 Page 2 Cancels Page 2 Dated 11-23-70	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - LOW SHRINKAGE - JE-836-G

FORMULA JE-836-G

	% Non Volatile	Lbs. for approx 230 gal batch
P-85 Mica	4.0	75 lbs.
Mica S	20.0	Approx. 375 lbs.
UC210 Asbestos	2.5	45
-60 Mesh Gelvatol 20/90 HP	1.0	18
Natrosol 250 HHX	.55	10
MW325	To make 100%	To make 1810 lbs. Non Volatile
Tetra Sodium Pyro Phosphate	0.1	2
UCARI31 or Amsco 3001P Polyvinyl acetate emulsion	2.5	Approx. 75 lbs.
40% Glyoxal solution	.2	4
70% Sorbitol "	.35	7
Troysan CMP Acetate	-	1
Troysan 174		1

PROCESSING

Must be mixed by the CF process. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without vacuum treatment.

RAW MATERIAL SPECIFICATIONS

P-85 Mica	Per Bulletin 6-143-3
Mica S	Per Bulletin 6-143-5
UC 210 Std. grade asbestos	Per Bulletin 6-14-11
-60 Mesh Gelvatol 20/90 HP	Polyvinyl alcohol, cold water soluble, high viscosity - from Monsanto Chemical Co.
Natrosol 250 HHX (-60 mesh)	An unretarded grade of extra high viscosity Hydroxy ethyl cellulose from Hercules, Inc.
MW325	Per Bulletin 6-24-1
Polyvinyl acetate emulsion	Per Bulletin 6-104-55
40% glyoxal aqueous solution (tech.)	From Union Carbide Corp.
70% sorbitol solution (tech.)	From Chas. Pfizer or Atlas Chemical Co.
Troysan 174	Per Bulletin 6-100-14
Troysan CMP Acetate	Per Bulletin 6-100-5
Tetra Sodium Pyro Phosphate	Per Bulletin 6-177-4

END

No. 61-2-24-15 Date 2-4-72 Page 2 Cancels NEW Dated	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE - LOW SHRINKAGE JE-836-G

FORMULA JE-836-G

	% Non Volatile	Lbs. for approx 230 gal batch
P-85 Mica	4.0	75 lbs.
Mica S	20.0	Approx. 375 lbs.
UC210 Asbestos	2.5	45
-60 Mesh Gelvatol 20/90 BP	1.0	18
Natrosol 250 HHXR	.55	10
MW325	To make 100%	To make 1810 lbs.
		Non Volatile
Tetra Sodium Pyro Phosphate	0.1	2
UCARI31 or Amsco 3001P Polyvinyl acetate emulsion	2.5	Approx. 75 lbs.
40% Glyoxal solution	.2	4
70% Sorbitol "	.35	7
Troysan CMP Acetate	-	1
Troysan 174		1

PROCESSING

Must be mixed by the CF process. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without vacuum treatment.

RAW MATERIAL SPECIFICATIONS

P-85 Mica	Per Bulletin 6-143-3
Mica S	Per Bulletin 6-143-5
UC 210 Std. grade asbestos	Per Bulletin 6-14-11
-60 Mesh Gelvatol 20/90 BP	Polyvinyl alcohol, cold water soluble, high viscosity - from Monsanto Chemical Co.
Natrosol 250 HHXR (-60 mesh)	Per Bulletin 6-151-1
MW325	Per Bulletin 6-24-1
Polyvinyl acetate emulsion	Per Bulletin 6-104-55
40% glyoxal aqueous solution (tech.) -	From Union Carbide Corp.
70% sorbitol solution (tech.)	From Chas. Pfizer or Atlas Chemical Co.
Troysan 174	Per Bulletin 6-100-14
Troysan CMP Acetate	Per Bulletin 6-100-5
Tetra Sodium Pyro Phosphate	Per Bulletin 6-177-4

END

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL USG READY MIXED JOINT COMPOUND - ALL PURPOSE - CHAMBLEE	No. 61-2-24-1 Date 3-15-72 Page 3 Cancels Page 3 Dated 2-9-71

FORMULA: Je-217

		% Non-Volatile	Lbs. (for 100 gal. batch approx.)
	Mica JC	(2/3 Formula V)	80 approx.
	DXW Mineralite (Note 1)	30.0	240
	Asbestos Floats	(as required)	24 approx.
	Huber CWF Clay	10.0	80
	Methyl Cellulose	0.8	6 - 6 oz.
	Ferrite Yellow	(to match manila color of SHEETROCK face paper)	
	#9 Marble	(to make 100%)	(to make 800 lbs. total non-volatile)
	PVAc Resin Emulsion, Plasticized	5.5	73
C	Vancide MZ96	-	12-4/5 oz.
	Water	-	53 gals. approx.
C	Troysan 174	-	16 oz.

Notes: (1) DXW Mineralite, Ser-X, or CE-F-1 Sericite may be used in pigmented Ready Mix.

D

RAW MATERIALS

	PVAc Resin Emulsion, Plasticized	Per Bulletin 6-104-55
	Methyl Cellulose	Per Bulletin 6-25-5, 6-25-6
	Solvent	Per Bulletin 6-149-3
	Mica	Per Bulletin 6-143-1
	DXW Mineralite	Per Bulletin 6-146-2
	Asbestos 7RF9	Per Bulletin 6-7-1
	Huber CWF Clay	Per Bulletin 6-36-5
	#9 Georgia Marble	Per Bulletin 6-24-9
D	Ferrite Yellow	
	Troysan 174	Per Bulletin 6-100-14
A	Vancide MZ96	R. T. Vanderbilt Co.

No. 61-2-24-1 Date 3-15-72 Page 4 Cancels Page 4 Dated 2-9-71	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - CHAMBLEE

MANUFACTURING PROCEDURE

A. Mixing Procedure on Hockmeyer Mixer - Approx. 140 gal. batch.

Approximately 50 gallons of water are put into the Hockmeyer mixer. (The quantity of water used initially should be the smallest amount which can be used without overloading the motor when the dry materials are added). The Troysan and Vancide MZ96 are then added and the mixer is run for a few turns to disperse these materials. The dry materials and plasticized emulsion are then added, and the batch is mixed until all lumps are broken down and all materials thoroughly mixed. The mixer is then turned off and the viscosity of a sample is determined on a Brabender viscosimeter. Additional water, as required, is then added and the batch mixed until a smooth, homogeneous mixture is obtained. The mixer is then stopped and another sample is checked on the viscosimeter. If the viscosity is still too high, this procedure is repeated until the proper viscosity is reached.

B. Filling: All 5 gallon containers are to be filled by weight, based on the weight per gallon of each batch.

C

D

END

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL USG READY MIXED JOINT COMPOUND - ALL PURPOSE JE-598-D	No. 61-2-24-2-1 Date 3-30-72 Page 1 Cancels Page 1 Dated 1-19-71

DESCRIPTION

A resin-emulsion base, ready mixed joint compound.

MANUFACTURING PLANTS

Dallas and Midway

PRODUCT LINE

USG Ready Mixed Joint Compound - All Purpose

IDENTIFICATION AND PACKAGING

C A. 1 Gallon Can (Dallas only)

Per PMS 8-15-12. Master carton per PMS 8-10-34.
Label as directed by 147-2.

B. 5 Gallon Pail

Per PMS 8-29-3.

C C. 5 Gallon Carton (Dallas Only)

Per PMS 8-10-17. Liner per PMS 8-5-4.

D. 4 Gallon Carton

Per 8-10-29-2. Liner per PMS 8-5-4.

No. 61-2-24-15 Date 4-25-72 Page 2 Cancels Page 2 Dated 4-6-72	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE - LOW SHRINKAGE JE-957B

FORMULA

	% Non Volatile	Lbs. for approx 230 gal batch
P-85 Mica	4.0	75 lbs.
Mica S	20.0	Approx. 375 lbs.
UC210 Asbestos	2.5	45
-60 Mesh Gelvatol 20/90 BP	1.0	18
Natrosol 250 HHXR	.55	10
MW325	To make 100%	To make 1810 lbs. Non Volatile
Tetra Sodium Pyro Phosphate	0.1	2
UCARI31 or Amsco 3001P Polyvinyl acetate emulsion	2.5	Approx. 75 lbs.
40% Glyoxal solution	.2	4
70% Sorbitol "	.35	7
Troysan CMP Acetate	-	1
Troysan 174		1
Water	-	135-137 gal. approx. for Regular Viscosity

PROCESSING

Must be mixed by the CF process. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without vacuum treatment.

RAW MATERIAL SPECIFICATIONS

P-85 Mica	Per Bulletin 6-143-3
Mica S	Per Bulletin 6-143-5
UC 210 Std. grade asbestos	Per Bulletin 6-14-11
C -60 Mesh Gelvatol 20/90 BP	Per Bulletin 6-3-7
Natrosol 250 HHXR (-60 mesh)	Per Bulletin 6-151-1
MW325	Per Bulletin 6-24-1
Polyvinyl acetate emulsion	Per Bulletin 6-104-55
40% glyoxal aqueous solution (tech.)	From Union Carbide Corp.
70% sorbitol solution (tech.)	From Chas. Pfizer or Atlas Chemical Co.
Troysan 174	Per Bulletin 6-100-14
Troysan CMP Acetate	Per Bulletin 6-100-5
Tetra Sodium Pyro Phosphate	Per Bulletin 6-177-4

END

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JE-1030) - MIDWAY	No. 61-2-24-JJ Date 6-2-72 Page 1 Cancels NEW Dated

This bulletin expires 6-1-73.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANT

Midway

IDENTIFICATION AND PACKAGING

Packaging per Bulletin 61-2-24-2-1. Normal code to be followed by the suffix C.

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 5 minimum.
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

FORMULA

	% NON-VOLATILE	LBS/2000 LBS. N. V.
P-80F Mica	Formula V	About 300 lbs.
JMTRF02 Asbestos	3.0	60
Cellosize QP-100M	0.8	16
Quincy #3	To make 95.0%	About 152⅘ lbs.
PM-4386 (60%)	5.0	167
Troysan 174	-	1
CMP Acetate	-	1

RAW MATERIALS - Per Bulletin 61-2-24-2-1 except:

Cellosize QP-100M	Union Carbide
Quincy #3	PMS 6-24-22
CMP Acetate	PMS 6-100-5
Troysan 174	PMS 6-100-14

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24-2-1 except it is recommended that the Troysan 174 be added to the paste mix to avoid possible lumpy mixing. Make sure the mixer is stopped when the Troysan is added and the lid closed prior to restarting the mixer.

END

JPC09 1153

O-5791-C 1/68 (Printed in U.S.A.)

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** USG READY MIXED ALL PURPOSE JOINT COMPOUND - JE1020 (B FORMULA)	No. 61-2-24-[illegible]-B Date 5-16-72 Page 1 Cancels NEW Dated

This Bulletin expires 6-1-73.

DESCRIPTION: A Ready Mixed all Purpose Joint Compound which is low cratering and has excellent initial slip and reworkability.

MANUFACTURING PLANT: New Brighton

SHIPMENTS: On all orders for "B Formula" or as directed by Dept. 991.

IDENTIFICATION AND PACKAGING: Per Bulletin 61-2-24. This formula to have the letter "B" after the manufacturing code.

FINISHED PRODUCT SPECIFICATIONS:

Viscosity:	Mid-Atlantic Orders	450-510 B.U.
	Regular	640-680
	Heavy	700-750
	Extra heavy	750-800
Color:	White on orders to Mid-Atlantic. Others to be white or pigmented as ordered.	
Bond:	6 minimum, oven dried at 110-120°F.	

FORMULA JE1020

Filler Mix	% non-volatile	lb. (500 gal. batch)
WMC P80F Mica	2/3 Formula V	400
Harvon Sericite	15.0%	600
JM7RF02 Asbestos	ca. 3.0	120
Cellosize QP100M	0.8	32
*Terra Alba	to make 95.0%	2800
Ferrite Yellow	for pigmented only	5

*Pfizer FP Limestone or Thompson-Weiman Rambo #4 may be substituted if no Terra Alba is available.

Paste Mix	% non-volatile	lb. (500 gal. batch)
Fillers	95.0%	3872 lb.
*UCAR 131 60% (n.v.)	5.0	36-1/2 gal.
Troysan CMP Acetate	-	3 lb.
Water	-	250-265 gal.

*UCAR 131 at 46.5% N.V. use 48 gal.

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** ~~DO NOT REPRODUCE OR COPY~~ USG READY MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No: 61-2-24~~~ Date ~~12-4-70~~ 7-5-72 Page 3 Cancels Page 3 Dated ~~5-20-70~~

FORMULAS

C A. Formula JE-304C - Special White and Regular (Tinted) *

Fillers	% Non-Volatile	(For 250 Gal.) Lbs. (Batch Approx.)
C Mica JC MICA =	Formula V (14%)	~~250~~ ~~275~~ (Approx.)
~~Asbestos M Serpentine~~	10.0	~~200~~ 175
Asbestos UC210	1.5 ~~2.5~~ (approx.)	~~50~~ 26
#400 Whiting or Marble White 325	To Make 94%	To Make 1880 Lbs.
Methocel 65HG	0.8	16
A TSPP	0.05	1.0

Paste Mix	% Non-Volatile	Lbs. (for 250 gal. batch appr.)
Fillers	94.0	1880
C VA-~~301P~~ 300/P	6.0	218
Troysan CMP acetate (liquid)	-	1
S Troysan 174		1 lb.
Water	-	140 gallons (approx.)

C A * NOTE - ALL SHIPMENTS AS DIRECTED BY ~~J.B. THOMPSON~~, L.A. #961 Prod. Mgr. 4/23/71 S 7-3

B. Formula JE-201

Filler Mix	% Non-Volatile	Lbs. (For 945# Filler Charge)
Mica JC	Formula V	150 approx.
MTO-50	30.0	300
Asbestos Floats	As Req'd.	35 approx.
Huber Clay	10.0	100
Methocel HG	0.8	8
Ferrite Yellow*	To match manila color of SHEETROCK Face Paper.	
400 Whiting or Marble White 325	To make 94.5%	To make up 945 lbs.

* Plant to manufacture unpigmented form when requested by Sales Dept.

Paste Mix	% Non-Volatile	Lbs. (for approx. 130 gal.)
Fillers	94.5	945
VA-301P	5.5	90
Troysan CMP acetate (liquid)	-	S 8 oz.
Troysan 174		8 oz.
Water	-	71 gal. approx.

MPC09 1171

C-5791-C 1/68 (Printed in U.S.A.) C Indicates Change

A - INDICATES IDENTITY

Original Date of Issue 6-2-72 SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JE-1030)	No. 61-2-24-JJ Date 9-28-72 Page 1 Cancels Page 1 Dated 7-7-72

This bulletin expires 6-1-73.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANT

Gypsum and Midway

IDENTIFICATION AND PACKAGING

Packaging per Bulletin 61-2-24-2-1. Normal code to be followed by the suffix C.

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 5 minimum.
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

FORMULA

		% NON-VOLATILE	LBS/2000 LBS. N. V.
	P-80F Mica	Formula V	About 300 lbs.
	JM7RF02 Asbestos	3.0	60
	Cellosize QP-100M	0.8	16
	Carbonate Filler*	To make 95.0%	About 1524 lbs.
	PM-4386 (60%)	5.0	167
C	Troysan 174 (Note 1)	-	1
C	CMP Acetate (Note 1)	-	1

*Midway to use Quincy #3. Gypsum to use Stonelite.

A Note 1: Gypsum to use Cosan 158 instead of Troysan 174 and CMP Acetate.

RAW MATERIALS - Per Bulletin 61-2-24-2-1 except:

Cellosize QP-100M	Union Carbide
Stonelite	PMS 6-24-2
Quincy #3	PMS 6-24-22
CMP Acetate	PMS 6-100-5
Troysan 174	PMS 6-100-14
A Cosan	PMS _____

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24-2-1 except it is recommended that the Troysan 174 be added to the paste mix to avoid possible lumpy mixing. Make sure the mixer is stopped when the Troysan is added and the lid closed prior to restarting the mixer.

END

Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - JE-598-D	No. 61-[illegible] Date 11-16-72 Page 3 Cancels Page 3 Dated 7-22-71

FORMULA JE-598-D

	% Non Volatile	lbs. for 250 gal. batch (2000 lbs. N.V.)
Mica P80F	Formula V	300 approximately
JM7RF02 Asbestos	As req'd for correct EB and water content	70 approximately
Carbonate Filler*	To make 100% N.V.	To make up 1890 lbs. N.V.
PM-4386 emulsion	5.5%	183.3 lbs.
Methocel 65HG	0.8%	16 lbs.
PMA-30		1 lb.
Water	- - - - -	approx. 130 gal.

A * 1. Dallas to use Flo-Floats
Dallas to use Southard's #1 Terra Alba when directed by Product Managers in CCPD or SCPD.
* 2. Midway to use Quincy #3

RAW MATERIALS

Mica	Per Bulletin 6-143-1
ASBESTOS	Per Bulletin 6-14-10
Carbonate Filler	Per Bulletin 6-24-9 and 6-24-22
Methocel	Per Bulletin 6-25-6
PM-4386	Per Bulletin 6-104-55
PMA-18	Per Bulletin 6-100-2
PMA-30	Per Bulletin 6-100-3
A #1 Terra Alba	Per Bulletin 52-22-2

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CONFIDENTIAL

USG READY MIXED JOINT COMPOUND ALL PURPOSE - LOW SHRINKAGE JE-957B

FORMULA	% Non Volatile	Lbs. for approx 230 gal batch
P-85 Mica	4.0	75 lbs.
Mica S	20.0	Approx. 375 lbs.
UC210 Asbestos	2.5	45
-60 Mesh Gelvatol 20/90 BP	1.0	18
Natrosol 250 HHXR	.55	10
MW325	To make 100%	To make 1810 lbs. Non Volatile
Tetra Sodium Pyro Phosphate	0.1	2
UCARI31 or Amsco 3001P Polyvinyl acetate emulsion	2.5	Approx. 75 lbs.
C 40% Glyoxal solution	.2	9
C 70% Sorbitol "	.35	9
Troysan CMP Acetate	-	1
Troysan 174		1
Water	-	135-137 gal. approx. for Regular Viscosity

A NOTE: Crystalline Glyoxal and Crystalline Sorbitol (Powder) may be used in place of the solutions as follows:

Crystalline Glyoxal	.2%	3.6 Lbs.
Crystalline Sorbitol (Powder)	.35	6.3 Lbs.

Be sure the Crystalline materials are blended well in other dry ingredients prior to addition to liquids to insure complete dispersion and solubility.

PROCESSING

Must be mixed by the CF process. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without vacuum treatment.

RAW MATERIAL SPECIFICATIONS

P-85 Mica	Per Bulletin 6-143-3
Mica S	Per Bulletin 6-143-5
UC 210 Std. grade asbestos	Per Bulletin 6-14-11
-60 Mesh Gelvatol 20/90 BP	Per Bulletin 6-3-7
Natrosol 250 HHXR (-60 mesh)	Per Bulletin 6-151-1
MW325	Per Bulletin 6-24-1
Polyvinyl acetate emulsion	Per Bulletin 6-104-55
40% glyoxal aqueous solution (tech.)	From Union Carbide Corp.
70% sorbitol solution (tech.)	From Chas. Pfizer or Atlas Chemical Co.
Troysan 174	Per Bulletin 6-100-14
Troysan CMP Acetate	Per Bulletin 6-100-5
Tetra Sodium Pyro Phosphate	Per Bulletin 6-177-4

END

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG READY MIXED JOINT COMPOUND - ALL PURPOSE JE-598-D	No. 61-2-24-2-1 Date 1-3-73 Page 2 Cancels Page 2 Dated 3-30-72

FINISHED PRODUCT SPECIFICATIONS

A. Viscosity

To be 570 - 630 twenty four hours after manufacture at 77° F. Test conditions - std 1/2 pint can size container, VC-3 Brabender at 75 RPM, standard pin paddle, 250 cgm spring suspension (calibrated, and corrected if necessary to match Research VC-3 Brabender Viscometer). Midway to use Solo P-7A Plastic Cup for Container on Brabender. Material will be retained in these containers with a 57 PL plastic lid.

For orders to be used with mechanical tools the ready mixed compound is to be thinned to 360 to 400 VC-3 Brabender (at 75 RPM) by adding extra water. SEE NOTE 1.

On orders specifying "Extra Heavy", or if approved by Div. Prod. Manager, plant to manufacture and ship "Extra" Ready Mixed. Viscosity 700 plus or minus 30 Brabender units 24 hours after mixing. Viscosity to be obtained by using a less than normal volume of water. Container to be labeled "EXTRA".

C NOTE 1 - Midway will produce mechanical tools viscosity only on request of Division Product Manager.

B. Color - White

Pigmented may be specially ordered with five days lead time to produce or the Division Product Manager's approval; these orders must be in batch increments of 500 gallons.

C. Application

To match standard sample (as supplied by Research).

D. Bond To Tape

5 minimum at 77° 50% RH. If a bond less than 5 is obtained retest using another roll of tape. If bond is again below 5, reject the compound for poor bond. If the second test is ok, the poor first test may indicate poor bonding tape, (i.e., tape inadequately sanded on the back side to insure good bond. Such tape should also be rejected for shipment.).

E. Grit and Lumps

None permitted. For routine tests spread to a fine feathered edge on SHEETROCK using a broadknife or trowel. For a more critical test, dilute the compound to about 250 BB, and spread it on SHEETROCK with a 10" or 12" Ames finishing box tool, using a tight crown setting on the tool (#4 or #5 setting).

F. Tape Edge Cracking or Check Cracking

Observe the dried bond test application for cracking (use a hand lens). There should be no cracking.

G. Weight Per Gallon

Mark the exact height of 5 gal. on a 5 gal. can. Fill the can exactly to this mark with the compound and weigh contents. Divide weight obtained by 5. It should be between 12.6 and 12.9 lbs. per gal. A lower weight indicates excessive air entrainment.

SPECIAL BULLETIN

Operating Division	CONFIDENTIAL	No. 61-2-25-Q
PRODUCT PROCEDURE	USG READY MIXED JOINT COMPOUND TOPPING JE-10108 - DALLAS	Date 1-19-73 Page 1 Cancels Page 1 Dated 6-2-72

This bulletin expires 6-1-73.

DESCRIPTION

C A low shrinkage topping compound, containing Southard Terra Alba, designed for joint finishing with minimum cratering.

MANUFACTURING PLANT

Dallas

IDENTIFICATION AND PACKAGING

5 gal. tin pails per PMS 8-29-3-1 and 4 gal. cartons per PMS 8-10-29-4. Normal code to be followed by the suffix S.

FINISHED PRODUCT SPECIFICATIONS

A. Color Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 2 minimum
D. Weight per Gal. about 13.1 lbs. per gal.

FORMULA

		% NON-VOLATILE	LBS/200 LBS. N. V.
A	P-80F Mica	1.25%	25
	7RF02 Asbestos	2.0%	40
	Cellosize QP-100M	0.7	14
C	Southard Terra Alba to make	92.05%	1841
	PM-4386 (60%)	4.0	133
	CTP Acetate	-	1
	Troysan 174	-	1
	Emulsified Mineral Spirits*		34

See Manufacturing Procedure for details on preparation and addition of emulsified mineral spirits.

ORIG 2501

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND TOPPING JE-1010S - DALLAS	No. 61-2-25-Q Date 1-19-73 Page 2 Cancels Page 2 Dated 6-2-72

RAW MATERIALS

Cellosize QP-100M	Union Carbide
Southard #1 Terra Alba	52-22-2
Deodorized Mineral Spirits	PMS 6-149-12
Oleic Acid	PMS 6-1-2
Triethanolamine	PMS 6-131-1
A P80F Mica	PMS 6-143-1

MANUFACTURING PROCEDURE

Add the emulsified mineral spirits to the paste mix after the heavy mix stage and prior to any further water addition and final mixing to adjust viscosity.

*Make up emulsified mineral spirits as follows:

Add 9 lbs. Oleic Acid to 20 lbs. deodorized mineral spirits and mix well. Then add 5 lbs. Triethanolamine and mix thoroughly again.

NOTE: Do not mix Oleic Acid and triethanolamine before adding to mineral spirits or permanent lumps will be formed.

END

DP0C9 2243

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** READY-MIXED JOINT COMPOUND-ALL PURPOSE (JE-774D) - CHAMBLEE & DALLAS	No. 61-2-24-DD Date 1-24-73 Page 2 Cancels Page 2 Dated 11-9-70

FORMULA

	% Non-Volatile	Pounds 2000 lbs. N.V.	
Mica JC	Formula V	280 to 300	approx.
Asbestos JMRF02	as req'd. for visc.	80 to 90	approx.
Methocel 65HG	.8	16	
C #9NCS Carbonate Filler (Note 1)	to 100% N. V.	1430	approx.
Hamaco 267	2.0	40	
Huber Clay	2.5	50	
Defoamer*	.15	3	
PM-4386 (w/o PMA-30)	2.5	83.3	approx.
CMP Acetate	-	1	
Troysan 174		1	

A NOTE 1: Dallas to use Microfil #4.

RAW MATERIALS

Per Bulletin 61-2-24 except:

Hamaco 267	Per PMS 6-124-11
*Nopco PD-1	Nopco Chemical Co.
CMP Acetate	Per PMS 6-100-5
Troysan 174	Per PMS 6-100-14
*Tamol 850	Per PMS 6-177-9
A Microfil #4	Per PMS 6-24-10

MANUFACTURING PROCEDURE

General procedure as 61-2-24 except add CMP Acetate and Troysan 174 separately instead of mixing the two preservatives together. When mixed together in concentrated form and allowed to stand, some of the mercury is precipitated from solution.

NOTE: 1. Add *Nopco PD-1 or *Tamol 850 and the two preservatives to the water and emulsion and mix before adding dry ingredients.

2. Dallas to add *Tamol 850, Chemblee to add *Nopco PD-1.

END

TP009 1032

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - JE-598-D	No. 61-2-24-2-1 Date 1-24-73 Page 3 Cancels Page 3 Dated 11-16-72

FORMULA JE-598-D

	% Non Volatile	lbs. for 250 gal. batch (2000 lbs. N.V.)
Mica P80F	Formula V	300 approximately
JM7RF02 Asbestos	As req'd for correct BB and water content	70 approximately
Carbonate Filler*	To make 100% N.V.	To make up 1890 lbs. N.V.
PM-4386 emulsion	5.5%	183.3 lbs.
Methocel 65HG	0.8%	16 lbs.
PMA-30		1 lb.
Water	- - - - -	approx. 130 gal.

C * 1. Dallas to use Microfil #4.
Dallas to use Southard's #1 Terra Alba when directed by Product Managers in CCPD or SCPD.
* 2. Midway to use Quincy #3

RAW MATERIALS

Mica	Per Bulletin 6-143-1
ASBESTOS	Per Bulletin 6-14-10
C Carbonate Filler	Per Bulletin 6-24-9, 6-24-10 and 6-24-22
Methocel	Per Bulletin 6-25-6
PM-4386	Per Bulletin 6-104-55
PMA-18	Per Bulletin 6-100-2
PMA-30	Per Bulletin 6-100-3
#1 Terra Alba	Per Bulletin 52-22-2

DP009 1516

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG JOINT COMPOUND ALL PURPOSE (AP-275-C)	No. 61-2-11-3-U Date 1-24-73 Page 2 Cancels Page 2 Dated 10-27-72

FORMULA

GP 702	2.5%
Gelvatol 20-60	0.83
GM 65	0.5
Ziram	0.1
TSPP	0.15
TiO_2-R901	0.5
TRFO2 Asbestos	4.5 (As Required)
P80F Mica	5.0
Microfil #4	To make 100%
Sorbitol	0.3

RAW MATERIALS

Same as per Bulletin 61-2-11-5-1 except:

TSPP	PMS 6-177-4
TiO_2-R901	PMS 6-130-8
C Microfil #4	PMS 6-24-10

MANUFACTURING PROCEDURE

Same as per Bulletin 61-2-11-5-1.

END

Original Date of Issue 6-2-72 SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JE-1030)	No. 61-2-24-JJ Date 2-2-73 Page 1 Cancels Page 1 Dated ~~9-8-72~~ 5-25-72

This Bulletin expires 6-1-73.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANT

Gypsum and Midway

IDENTIFICATION AND PACKAGING

Packaging per Bulletin 61-2-24-2-1. Normal code to be followed by the suffix C.

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 5 minimum.
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

FORMULA

	% NON-VOLATILE	LBS/2000 LBS. N. V.
P-80F Mica	Formula V	About 300 lbs.
JM7RF02 Asbestos	3.0	60
Cellosize QP-100M	0.8	16
Carbonate Filler*	To make 95.0%	About 1524 lbs.
PM-4386 (60%)	5.0	167
R X Cosan 158A	-	2

*Midway to use Quincy #3. Gypsum to use Stonelite.

D

RAW MATERIALS - Per Bulletin 61-2-24-2-1 except:

Cellosize QP-100M	Union Carbide
Stonelite	PMS 6-24-2
R Quincy #3	PMS 6-24-22
C Cosan 158A	Cosan Chemical Co.

MANUFACTURING PROCEDURE

C Per Bulletin 61-2-24-2-1.

END

JPC09 1153

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE - LOW SHRINKAGE JE-957B	No. 61-2-24-15 Date 2-13-73 Page 2 Cancels Page 2 Dated 9-12-72

FORMULA	% Non Volatile	Lbs. for approx 230 gal batch
C P-80 Mica	4.0	75 lbs.
Mica S	20.0	Approx. 375 lbs.
UC210 Asbestos	2.5	45
-60 Mesh Gelvatol 20/90 BP	1.0	18
Natrosol 250 HHXR	.55	10
MW325	To make 100%	To make 1810 lbs. Non Volatile
Tetra Sodium Pyro Phosphate	0.1	2
UCAR131 or Amsco 3001P Polyvinyl acetate emulsion	2.5	Approx. 75 lbs.
40% Glyoxal solution	.2	9
70% Sorbitol "	.35	9
Troysan CMP Acetate	-	1
Troysan 174		1
Water	-	135-137 gal. approx. for Regular Viscosity

NOTE: Crystalline Glyoxal and Crystalline Sorbitol (Powder) may be used in place of the solutions as follows:

Crystalline Glyoxal	.2%	3.6 Lbs.
Crystalline Sorbitol (Powder)	.35	6.3 Lbs.

Be sure the Crystalline materials are blended well in other dry ingredients prior to addition to liquids to insure complete dispersion and solubility.

PROCESSING

Must be mixed by the CF process. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without vacuum treatment.

RAW MATERIAL SPECIFICATIONS

C P-80 Mica	Per Bulletin 6-143-1
Mica S	Per Bulletin 6-143-5
UC 210 Std. grade asbestos	Per Bulletin 6-14-11
-60 Mesh Gelvatol 20/90 BP	Per Bulletin 6-3-7
Natrosol 250 HHXR (-60 mesh)	Per Bulletin 6-151-1
MW325	Per Bulletin 6-24-1
Polyvinyl acetate emulsion	Per Bulletin 6-104-55
40% glyoxal aqueous solution (tech.)	From Union Carbide Corp.
70% sorbitol solution (tech.)	From Chas. Pfizer or Atlas Chemical Co.
Troysan 174	Per Bulletin 6-100-14
Troysan CMP Acetate	Per Bulletin 6-100-5
Tetra Sodium Pyro Phosphate	Per Bulletin 6-177-4

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - JE-598-D	No. 61-2-24-2-1 Date 3-1-73 Page 3 Cancels Page 3 Dated 1-24-73

FORMULA JE-598-D

		% Non Volatile	lbs. for 250 gal. batch (2000 lbs. N.V.)
	Mica P80F	Formula V	300 approximately
	JM7RF02 Asbestos	As req'd for correct EB and water content	70 approximately
C	Carbonate Filler (Note 1)	To make 100% N.V.	To make up 1890 lbs. N.V.
	PM-4386 emulsion	5.5%	183.3 lbs.
	Methocel 65HG	0.8%	16 lbs.
C	Preservative (Note 2)		2 lbs.
	Water	- - - - -	approx. 130 gal.

C NOTE: 1. Dallas to use Microfil #4.
Midway to use Quincy #3.
Dallas to use Southard's #1 Terra Alba when directed by Product Managers in CCPD or SCPD.

A NOTE: 2. Dallas to use Troysan EX 364, Midway to use Cosan 158A.

RAW MATERIALS

	Mica	Per Bulletin 6-143-1
	ASBESTOS	Per Bulletin 6-14-10
	Carbonate Filler	Per Bulletin 6-24-9, 6-24-10 and 6-24-22
	Methocel	Per Bulletin 6-25-6
D	PM-4386	Per Bulletin 6-104-55
C	#1 Terra Alba	Per Bulletin 52-227-2B
A	Troysan EX 364	Troy Chemical Corp.
A	Cosan 158A	Cosan Chemical Corp.

DP009 1534

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE JE-598-D	No. 61-2-24-2-1 Date 3-1-73 Page 4 Cancels Page 4 Dated 4-14-71

MANUFACTURING PROCEDURE

Compound Mixing -

Note - Be sure there is sufficient Ready Mixed Compound from the previous batch left around the outlet gate to insure a water tight seal.

C 1. Run approx. 100 gal. of water into the mixer. Mix 1/4 minute. The preservative is then added and the mixer is run for a few turns to disperse this material. The emulsion is then added to the mixer.

2. Start the mixer and add the weighed dry powder ingredients. Mix for ten minutes after completing the addition of the dry materials.

3. If at the end of this time the batch is too stiff, up to 2 gal. more water may be added to bring it to consistency; if too thin, up to 20 lbs. more asbestos may be added to stiffen it. Mixing is continued after completing such additions for an least 5 minutes, then the viscosity of the batch is checked. If satisfactory the compound is ready for packing for shipment. If the viscosity is outside the permissible consistency range following the maximum permissible addition of water, or of asbestos, the batch should be reconditioned by working it off in succeeding batches.

Note: The viscosity of the compound and to some degree the application properties are affected by the total mixing time given the batch. Hence when the best mixing procedure is worked out at the plant it should be closely adhered to in succeeding batches (i.e., the temperature of wet mix, and the total mixing time given the batch prior to packing should both be closely controlled.) During packing the mixer should be on for the minimum possible time to minimize product viscosity difference from the first to the last cans packed.

END

OPC09 1535

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE - LOW SHRINKAGE JE-957B	No. 61-2-24-15 Date 3-7-73 Page 2 Cancels Page 2 Dated 2-13-73

FORMULA	% Non Volatile	Lbs. for approx 230 gal batch
P-80 Mica	4.0	75 lbs.
Mica S	20.0	Approx. 375 lbs.
UC210 Asbestos	2.5	45
-60 Mesh Celvatol 20/90 BP	1.0	18
Natrosol 250 HHXR	.55	10
MW325	To make 100%	To make 1810 lbs. Non Volatile
Tetra Sodium Pyro Phosphate	0.1	2
UCARI31 or Amsco 3001P Polyvinyl acetate emulsion	2.5	Approx. 75 lbs.
40% Glyoxal solution	.2	9
D C 70% Sorbitol "	.35	9
Troysan EX364		2
Water	-	135-137 gal. approx. for Regular Viscosity

NOTE: Crystalline Glyoxal and Crystalline Sorbitol (Powder) may be used in place of the solutions as follows:

Crystalline Glyoxal	.2%	3.6 Lbs.
Crystalline Sorbitol (Powder)	.35	6.3 Lbs.

Be sure the Crystalline materials are blended well in other dry ingredients prior to addition to liquids to insure complete dispersion and solubility.

PROCESSING

Must be mixed by the CF process. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without vacuum treatment.

RAW MATERIAL SPECIFICATIONS

P-80 Mica	Per Bulletin 6-143-1
Mica S	Per Bulletin 6-143-5
UC 210 Std. grade asbestos	Per Bulletin 6-14-11
-60 Mesh Celvatol 20/90 BP	Per Bulletin 6-3-7
Natrosol 250 HHXR (-60 mesh)	Per Bulletin 6-151-1
MW325	Per Bulletin 6-24-1
Polyvinyl acetate emulsion	Per Bulletin 6-104-55
40% glyoxal aqueous solution (tech.)	From Union Carbide Corp.
70% sorbitol solution (tech.)	From Chas. Pfizer or Atlas Chemical Co.
C D Troysan EX364	From Troy Chemical Corp.
Tetra Sodium Pyro Phosphate	Per Bulletin 6-177-4

OP009 2291

Originally Issued 1-19-71 SPECIAL BULLETIN 2nd Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE JE888D - SOUTH GATE	No. 61-2-24-EE Date 3-22-73 Page 1 Cancels Page 1 Dated 9-27-72

C This bulletin expires 2-1-74.

DESCRIPTION

C South Gate plant to manufacture using the CF process and ship as directed by D. E. Shipley, #961, a "LP" filler, low shrinkage all-purpose ready mixed joint compound, formula No. JE888D, per the following specifications.

MANUFACTURING PLANTS

South Gate

IDENTIFICATION AND PACKAGING

In standard 50 lb. Ready Mixed Compound carton and liner. Add the letters "PTL" to the standard date - plant - batch code to identify this product.

0P099 1130

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE JE888D - SOUTH GATE	No. 61-2-24-EE Date 3-22-73 Page 3 Cancels Page 3 Dated 1-19-71

FORMULA JE888D

		% Non-Volatile	Lbs. for approx. 250 Gal. Batch
	Mica JC (P80F)	5.5	110 lbs.
D	UC210 Asbestos	2.5	50
	-60 Mesh Gelvatol 20/90BP	1.0	20
C	Natrosol 250 HHXR	0.5	10
	-120 Mesh Land Plaster From Plaster City	To make 100%	To make 2000 lbs. Non-Volatile
	UCAR 131 or AMSCO 3001P (Polyvinyl acetate emulsion)	2.5	Approx. 83 lbs.
C	80% Glyoxal solution	0.1	5
	70% Sorbitol solution	0.35	10
	CMP Acetate	-	1
	Troysan 174	-	1

PROCESSING

Must be mixed by the "CP" process.

RAW MATERIAL SPECIFICATIONS

	P80F Mica	Per Bulletin 6-143-1
	UC210 Asbestos	Per Bulletin 6-14-11
D	-60 Mesh Gelvatol 20/90BP	Polyvinyl alcohol, cold water soluble high viscosity - from Monsanto Chemical Co.
C	Natrosol 250 HHXR (-60 Mesh)	6-151-1
	-120 Mesh Land Plaster	Supplied by Plaster City
D	Polyvinyl Acetate Emulsion	Per Bulletin 6-104-55
	70% Sorbitol solution (Tech.)	From Pfizer or Atlas Chemical Co.
	CMP Acetate (liquid)	6-100-5
	Troysan 174	6-100-14
A	80% Glyoxal	Centerchem, Inc., New York, N.Y.

END

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG ALL-PURPOSE READY-MIXED JOINT COMPOUND (JE-1128D) - MIDWAY	No. 61-2-24-2-1-E Date 4-25-73 Page 1 Cancels NEW Dated

This Bulletin expires 5-1-74.

DESCRIPTION

An emulsion based product containing half the normal amount of mica in conjunction with sericite to alleviate the current mica shortage.

Field trials and subsequent shipments per direction of Dept. #971-E.

MANUFACTURING PLANT

Midway

IDENTIFICATION AND PACKAGING

Normal code to be followed by the suffix N for Harvon Sericite. Packaging per Bulletin No. 61-2-24-2-1.

FINISHED PRODUCT SPECIFICATIONS

a. Viscosity - 600 ± 30 Brabender with pin paddle at 77°F.
b. Color - Natural unless pigment specified.
c. Bond-to-tape - 5 minimum at 77°F. - 50% R.H.
d. Weight per gallon - 12.8 to 13.0 lbs. per gallon.

RAW MATERIAL NO.	FORMULA	% N.V.	LBS. PER 250 GAL. BATCH
61747	P-80P Mica	1/2 formula V	150
61763	Harvon CE-F-1 Sericite	30.0%	600
61758	TRF9 Asbestos	3.0%	60
66481	Methocel 65HG	0.8%	16
61463	Quincy #3	To make 94.5%	To make 1,890 lbs.
65272	PM-4386 (60%)	5.5%	183
66659	Cosan 158	—	2

RAW MATERIALS

61763	Harvon Sericite	Per PMS 6-146-2
66659	Cosan 158	Cosan Chemical Company

Other Raw Materials per Bulletin No. 6-2-24-2-1.

END

Original Date of Issue 6-2-72 SPECIAL BULLETIN 1st Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JE-1030)	No. 61-2-24-JJ Date 5-22-73 Page 1 Cancels Page 1 Dated 2-2-73

C This Bulletin expires 12-1-73.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANT

Gypsum and Midway

IDENTIFICATION AND PACKAGING

Packaging per Bulletin 61-2-24-2-1. Normal code to be followed by the suffix C.

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C C. Bond - 5 minimum. (Midway to use hot room at 90°F and 10% R.H.).
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

FORMULA

	% NON-VOLATILE	LBS/2000 LBS. N. V.
P-80F Mica	Formula V	About 300 lbs.
C JM7RF02 Asbestos (Note 1)	3.0	60
Cellosize QP-100M	0.8	16
Carbonate Filler*	To make 95.0%	About 1524 lbs.
PM-4386 (60%)	5.0	167
Cosan 158A	-	2

*Midway to use Quincy #3. Gypsum to use Stonelite.

A NOTE 1: - Madway to use 7RF9 Asbestos.

RAW MATERIALS - Per Bulletin 61-2-24-2-1 except:

Cellosize QP-100M	Union Carbide
Stonelite	PMS 6-24-2
Quincy #3	PMS 6-24-22
Cosan 158A	Cosan Chemical Co.

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24-2-1.

END

Originally Issued 6-2-72 SPECIAL BULLETIN 1st Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND TOPPING JE-1010S - DALLAS	No. 61-2-25-Q Date ~~5-25-73~~ Page 1 Cancels Page 1 Dated ~~5-21-73~~

This bulletin expires 6-1-74.

DESCRIPTION

A low shrinkage topping compound, containing Southard Terra Alba, designed for joint finishing with minimum cratering.

MANUFACTURING PLANT

Dallas

IDENTIFICATION AND PACKAGING

C 62 lb. pails per PMS 8-29-3 and 4 gal. cartons per PMS 8-10-29-4. Normal code to be followed by the suffix S.

FINISHED PRODUCT SPECIFICATIONS

A. Color Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 2 minimum
D. Weight per Gal. about 13.1 lbs. per gal.

FORMULA

	% NON-VOLATILE	LBS/200 LBS. N. V.
P-80F Mica	1.25%	25
7RF02 Asbestos	2.0%	40
Cellosize QP-100M	0.7	14
Southard Terra Alba to make	92.05%	1841
PM-4386 (60%)	4.0	133
CMP Acetate	-	1
Troysan 174	-	1
Emulsified Mineral Spirits*		34

See Manufacturing Procedure for details on preparation and addition of emulsified mineral spirits.

QP009 7499

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG ALL-PURPOSE READY-MIXED JOINT COMPOUND (JE-1126D)	No. 61-2-24-2-1-B Date 6-21-73 Page 2 Cancels NEW Dated

RAW MATERIALS

61763	Harvon Sericite	Per PMS 6-146-2
61762	DXW Mineralite	Per PMS 6-146-2
61741	TRF02 Asbestos	Per PMS 6-14-10
66660	CMP Acetate	Per PMS 6-100-5
66685	Troysan 174	Per PMS 6-100-14
61466	Microfil #4	Per PMS 6-24-10

Other Raw Materials per Bulletin 61-2-24-2-1.

END

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE JE-598-D	No. 61-2-24-2-1 Date 7-6-73 Page 2 Cancels Page 2 Dated 7-3-73

FINISHED PRODUCT SPECIFICATIONS

a. Viscosity
To be 570 - 630 twenty four hours after manufacture at 77° F. Test conditions - std 1/2 pint can size container, VC-3 Brabender at 75 RPM, standard pin paddle, 250 cgm spring suspension (calibrated, and corrected
C if necessary to match Research VC-3 Brabender Viscometer).

For orders to be used with mechanical tools the ready mixed compound is to be thinned to 360 to 400 VC-3 Brabender (at 75 RPM) by adding extra water. SEE NOTE 1.

On orders specifying "Extra Heavy", or if approved by Div. Prod. Manager, plant to manufacture and ship "Extra" Ready Mixed. Viscosity 700 plus or minus 30 Brabender units 24 hours after mixing. Viscosity to be obtained by using a less than normal volume of water. Container to be labeled "EXTRA".

NOTE 1 - Midway will produce mechanical tools viscosity only on request of Division Product Manager.

B. Color - White
Pigmented may be specially ordered with five days lead time to produce or the Division Product Manager's approval; these orders must be in batch increments of 500 gallons.

C. Application
To match standard sample (as supplied by Research).

D. Bond To Tape
5 minimum at 77° 50% RH. If a bond less than 5 is obtained retest using another roll of tape. If bond is again below 5, reject the compound for poor bond. If the second test is ok, the poor first test may indicate poor bonding tape, (i.e., tape inadequately sanded on the back side to insure good bond. Such tape should also be rejected for shipment).
A EXCEPTION - Midway 6 minimum using hot room (90°F & 10% R.H.).

E. Grit and Lumps
None permitted. For routine tests spread to a fine feathered edge on SHEETROCK using a broadknife or trowel. For a more critical test, dilute the compound to about 250 BB, and spread it on SHEETROCK with a 10" or 12" Ames finishing box tool, using a tight crown setting on the tool (#4 or #5 setting).

F. Tape Edge Cracking or Check Cracking
Observe the dried bond test application for cracking (use a hand lens). There should be no cracking.

G. Weight Per Gallon
Mark the exact height of 5 gal. on a 5 gal. can. Fill the can exactly to this mark with the compound and weigh contents. Divide weight obtained by 5. It should be between 12.6 and 12.9 lbs. per gal. A lower weight indicates excessive air entrainment.

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG READY MIXED JOINT COMPOUND - ALL PURPOSE - JE-598-D	No. 61-2-24-2-1 Date 7-6-73 Page 3 Cancels Page 3 Dated 3-1-73

FORMULA JE-598-D

		% Non Volatile	lbs. for 250 gal. batch (2000 lbs. N.V.)
	Mica P80F	Formula V	300 approximately
C	JMTRF02 Asbestos (Note 3)	As req'd for correct BB and water content	70 approximately
	Carbonate Filler (Note 1)	To make 100% N.V.	To make up 1890 lbs. N.V.
	PM-4386 emulsion	5.5%	183.3 lbs.
	Methocel 65HG	0.8%	16 lbs.
	Preservative (Note 2)		2 lbs.
	Water	- - - - -	approx. 130 gal.

NOTE: 1. Dallas to use Microfil #4.
Midway to use Quincy #3.
Dallas to use Southard's #1 Terra Alba when directed by Product Managers in CCPD or SCPD.

C NOTE: 2. 1 lb. CMP Acetate and 1 lb. Troysan.

A NOTE: 3. Midway to use PC7RF9 Asbestos.

RAW MATERIALS

	Mica	Per Bulletin 6-143-1
C	ASBESTOS	Per Bulletin 6-14-10 and 6-14-5
	Carbonate Filler	Per Bulletin 6-24-9, 6-24-10 and 6-24-22
	Methocel-	Per Bulletin 6-25-6
	PM-4386	Per Bulletin 6-104-55
D	#1 Terra Alba	Per Bulletin 52-227-2B
X	CMP Acetate	Per Bulletin 6-100-5
A	Troysan - 174	Per Bulletin 6-100-14

DP009 1510

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE - LOW SHRINKAGE JE-957B	No. 61-2-24-15 Date 7-23-73 Page 1 Cancels Page 1 Dated 9-27-72

DESCRIPTION

A low shrink All Purpose Joint Compound. Manufactured using the CP Process.

MANUFACTURING PLANT

South Gate

PACKAGING

C In 50 lb. cartons, per PMS 8-10-29.
D

Liner per PMS 8-5-4.

In 62 lb. pails, per PMS 8-15-15-3. Circular plastic sheet per PMS 8-5-11 to be laid over the surface of compound.

In 12 lb. can, per PMS 8-15-12-3, Master Carton per PMS 8-10-34.

Add the letters "FF" to the standard date - plant - batch code to identify this product.

FINISHED PRODUCT SPECIFICATIONS

1. Color - Either natural white or pigmented to standard joint compound manila color as ordered.

2. Viscosity - 620-700 BB Regular Consistency Code --

3. pH - 7.75 - 8.25

4. Application - to match st'd.

5. Bond - Not more than 1 bond unit less than that of JE304C compound applied and dried under the same conditions with the same tape.

6. Check and edge cracking - none on bond test panels under any drying conditions.

7. Drying shrinkage - expected to be under 23% with 500 BB viscosity.

SPECIAL BULLETIN 1st Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JE-1030)	No. 61-2-24-JJ Date 7-23-73 Page 1 Cancels Page 1 Dated 5-22-73

This Bulletin expires 12-1-73.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANT

Gypsum and Midway

IDENTIFICATION AND PACKAGING

Packaging per Bulletin 61-2-24-2-1. Normal code to be followed by the suffix C.

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30KB units with pin at 75°F.
C C. Bond - 5 minimum at 75°F., 50% R.H. Hot room at 90°F and 10% R.H. 6 minimum.
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

FORMULA

	% NON-VOLATILE	LBS/2000 LBS. N. V.
P-80F Mica	Formula V	About 300 lbs.
JM7RF02 Asbestos (Note 1)	3.0	60
Cellosize QP-100M	0.8	16
Carbonate Filler*	To make 95.0%	About 1524 lbs.
PM-4386 (60%)	5.0	167
Cosan 158A	-	2

*Midway to use Quincy #3. Gypsum to use Stonelite.

NOTE 1: Midway to use 7RF9 Asbestos.

RAW MATERIALS - Per Bulletin 61-2-24-2-1 except:

Cellosize QP-100M	Union Carbide
Stonelite	PMS 6-24-2
Quincy #3	PMS 6-24-22
Cosan 158A	Cosan Chemical Co.

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24-2-1.

END

0-0059 1149

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG ALL-PURPOSE READY-MIXED JOINT COMPOUND (JK-1128D)	No. 61-2-24-2-1-B Date 7-23-73 Page 1 Cancels Page 1 Dated 6-21-73

This Bulletin expires 5-1-74.

DESCRIPTION

An emulsion based product containing half the normal amount of mica in conjunction with sericite to alleviate the current mica shortage.

MANUFACTURING PLANTS

Midway and Dallas

IDENTIFICATION AND PACKAGING

Normal code to be followed by the suffix H for Harvon Sericite on Midway shipments. Packaging for Bulletin No. 61-2-24-2-1.

FINISHED PRODUCT SPECIFICATIONS

a. Viscosity - 600 ± 30 Brabender with pin paddle at 77°F.
b. Color - Natural unless pigment specified.
C c. Bond-to-tape - 5 minimum at 77°F. - 50% R.H. Hot room spec. 6 minimum.
d. Weight per gallon - 12.8 to 13.0 lbs. per gallon.

RAW MATERIAL NO.	FORMULA	% N.V.	LBS. PER 250 GAL. BATCH
61747	P-80F Mica	1/2 formula V	160
61763	Harvon CE-F-1 Sericite (Note 1)	30.0%	600
61743	TRF9 Asbestos (Note 2)	3.0%	60
66481	Methocel 65HG	0.8%	16
61463	Quincy #3 (Note 3)	To make 94.5%	To make 1,890 lbs.
65272 -	PM-4386 (60%)	5.5%	183
66660	CMP Acetate	-	1
66685	Troysan 174	-	1

NOTE 1 Dallas to use 30.0% DXW Mineralite.

NOTE 2 Dallas to use 3.5% TRF02 Asbestos.

NOTE 3 Dallas to use Microfill #4.

SPECIAL BULLETIN — 1st Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JE-1030)	No. 61-2-24-JJ Date 8-1-73 Page 1 Cancels Page 1 Dated 7-23-73

This Bulletin expires 12-1-73.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANT

Gypsum and Midway

IDENTIFICATION AND PACKAGING

Packaging per Bulletin 61-2-24-2-1. Normal code to be followed by the suffix C.

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 5 minimum at 75°F., 50% R.H. Hot room at 90°F and 10% R.H. 6 minimum.
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

FORMULA

		% NON-VOLATILE	LBS/2000 LBS. N. V.
	P-80F Mica	Formula V	About 300 lbs.
C	Asbestos	3.0	60
	Cellosize QP-100M	0.8	16
C	Carbonate Filler	To make 95.0%	About 1524 lbs.
	PM-4386 (60%)	5.0	167
D	Cosan 158A	-	2
D			

RAW MATERIALS - Per Bulletin 61-2-24-2-1 except:

	Cellosize QP-100M	Union Carbide
C	Asbestos	
	Gypsum uses 7RF02	PMS 6-14-10
	Midway uses 7RF66	PMS 6-14-10
C	Carbonate Filler	
	Gypsum uses Stonelite	PMS 6-24-2
	Midway uses Quincy #3	PMS 6-24-22
	Cosan 158A	Cosan Chemical Co.

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24-2-1.

END

JP099 1147

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG ALL-PURPOSE READY-MIXED JOINT COMPOUND (JE-1128D)	No. 61-2-24-2-1-B Date 8-1-73 Page 1 Cancels Page 1 Dated 7-23-73

This Bulletin expires 5-1-74.

DESCRIPTION

An emulsion based product containing half the normal amount of mica in conjunction with sericite to alleviate the current mica shortage.

MANUFACTURING PLANTS

Midway and Dallas

IDENTIFICATION AND PACKAGING

Normal code to be followed by the suffix N for Narvon Sericite on Midway shipments. Packaging for Bulletin No. 61-2-24-2-1.

FINISHED PRODUCT SPECIFICATIONS

a. Viscosity - 600 ± 30 Brabender with pin paddle at 77°F.
b. Color - Natural unless pigment specified.
c. Bond-to-tape - 5 minimum at 77°F. - 50% R.H. Hot room spec. 6 minimum.
d. Weight per gallon - 12.8 to 13.0 lbs. per gallon.

	RAW MATERIAL NO.	FORMULA	% N.V.	LBS. PER 250 GAL. BATCH
	61747	P-80F Mica	1/2 formula V	160
	61763	Narvon CE-F-1 Sericite (Note 1)	30.0%	600
C	61743	Asbestos (Note 2)	3.0%	60
	66481	Methocel 65HG	0.8%	16
	61463	Quincy #3 (Note 3)	To make 94.5%	To make 1,890 lbs.
	65272 -	PM-4386 (60%)	5.5%	183
	66660	CMP Acetate	-	1
	66685	Troysan 174	-	1

NOTE 1 Dallas to use 30.0% DXW Mineralite.

NOTE 2 Dallas to use 3.5% TRF02 Asbestos. Midway to use TRF66 Asbestos.

NOTE 3 Dallas to use Microfill #4.

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY-MIXED JOINT COMPOUND TOPPING (JE-851C)	No. 61-2-25-N Date 8-1-73 Page 2 Cancels Page 2 Dated 7-6-73

	FORMULA	% Non-Volatile	Lbs/2000 Lbs. N. V.
	325 Mesh W. G. Mica	5.0%	100
C	PC7RF9 Asbestos (Note 3)	2.0	40
	Pyrax A or Pyrax B	15.0	300
	CMP Acetate (Note 2)	0.05	1
	Troysan 174 (Note 2)	0.05	1
	GM-65	0.7	14
	#9NCS (Note 1)	to make 96.5%	to make 1476 lbs.
	PM-4386 (60%solids)	3.5	116.5
	Water	—	125 gal. approx.

NOTE 1: Midway to use Quincy #3.
NOTE 2: Gypsum to use Cosan 158 instead of Troysan 174 and CMP Acetate.
A NOTE 3: Midway to use 7RF66.

RAW MATERIALS

Per bulletin 61-2-24 except:

325 W. G. Mica	PMS 6-143-4
Pyrax A	PMS 6-103-1
Pyrax B	PMS 6-103-2
CMP Acetate	PMS 6-100-5
GM-65	Dow Chemical
Troysan 174	PMS 6-100-14
Quincy #3	PMS 6-24-22
Cosan 158	PMS _____

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24.

END

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - JE-598-D	No. 6-2-24-2-1 Date 8-1-73 Page 3 Cancels Page 3 Dated 7-6-73

FORMULA JE-598-D

	% Non Volatile	lbs. for 250 gal. batch (2000 lbs. N.V.)
Mica P80F	Formula V	300 approximately
C Asbestos (Note 3)	As req'd for correct EB and water content	70 approximately
Carbonate Filler (Note 1)	To make 100% N.V.	To make up 1890 lbs. N.V.
PM-4386 emulsion	5.5%	183.3 lbs.
Methocel 65HG	0.8%	16 lbs.
Preservative (Note 2)		2 lbs.
Water	- - - - -	approx. 130 gal.

NOTE: 1. Dallas to use Microfil #4.
Midway to use Quincy #3.
Dallas to use Southard's #1 Terra Alba when directed by Product Managers in CCPD or SCPD.

NOTE: 2. 1 lb. CMP Acetate and 1 lb. Troysan.

C NOTE: 3. Midway to use 7RF66 Asbestos, Dallas to use JM7RF02.

RAW MATERIALS

Mica	Per Bulletin 6-143-1
ASBESTOS	Per Bulletin 6-14-10 and 6-14-5
Carbonate Filler	Per Bulletin 6-24-9, 6-24-10 and 6-24-22
Methocel	Per Bulletin 6-25-6
PM-4386	Per Bulletin 6-104-55
#1 Terra Alba	Per Bulletin 52-227-2B
CMP Acetate	Per Bulletin 6-100-5
Troysan - 174	Per Bulletin 6-100-14

JP009 1534

Original date of issue 6-2-72 SPECIAL BULLETIN 2nd Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JE-1030)	No. 61-2-24-JJ Date 11-20-73 Page 1 Cancels Page 1 Dated 9-20-73

C This Bulletin expires 12-1-74.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANTS

Gypsum and Midway

IDENTIFICATION AND PACKAGING

62 lb. pails per PMS 8-29-3 or PMS 8-15-15-3. 50 lb. cartons per PMS 8-10-29. Normal code to be followed by following suffixes: Gypsum SC; Midway C

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 5 minimum at 75°F., 50% R.H. Hot room at 90°F and 10% R.H. 6 minimum.
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

FORMULA

	% NON-VOLATILE	LBS/2000 LBS. N. V.
P-80F Mica	Formula V	About 300 lbs.
Asbestos	3.0	60
Cellosize QP-100M	0.8	16
Carbonate Filler	To make 95.0%	About 1524 lbs.
PM-4386 (60%)	5.0	167
Cosan 158A	-	2

RAW MATERIALS - Per Bulletin 61-2-24-2-1 except:

Cellosize QP-100M	Union Carbide
Asbestos	
Gypsum uses 7RF02	PMS 6-14-10
Midway uses 7RF06	PMS 6-14-10
Carbonate Filler	
Gypsum uses Stonelite	PMS 6-24-2
Midway uses Quincy #3	PMS 6-24-22
Cosan 158A	Cosan Chemical Co.

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24-2-1.

END

QP009 1146

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG READY MIXED ALL PURPOSE JOINT COMPOUND - JE924 NEW BRIGHTON	No. 61-2-24 Date 12-7-73 Page 3 Cancels Page 3 Dated 4-14-71

FORMULA JE 924

Filler Mix	% Non-Volatile	lb. (500 gallon batch)
WMC P80F Mica	2/3 formula V	400
Harvon Sericite	15.0	600
JM7RF02 Asbestos Floats ca.	3.0	120
Huber CWF Clay	5.0	200
Dow Methocel 65 HG 4000 cps	.8	32
Ferrite Yellow	pigmented only	5
*No. 1 Terra Alba	to make 94.5%	2500

*Falls Village A Dolomite or Thompson-Weiman Rambo #4 may be substituted if no No. 1 Terra Alba is available.

Paste Mix

	Fillers	94.5%	3857 lb.
	*PM 4386 (60% n.v.)	5.5	40 gal.
C	Troysan 174	-	2 lb.
A	Cosan 158 A	-	2 lb.
	Water	-	250-265 gal.

*PM 4386 at 50% n.v. use 48.8 gal and PM 4386 @ 46% n.v. use 53.4 gal.

RAW MATERIALS

	WMC P80F Mica	PMS 6-143-3
	Harvon Sericite	PMS 6-146-2
	JM7RF02 Asbestos Floats	PMS 6-14-10
	Huber CWF Clay	PMS 6-36-5
	Dow Methocel 65 HG 4000 cps	PMS 6-25-6
	Ferrite Yellow	None Required
	No. 1 Terra Alba	Bul. 52-17-1
	A Dolomite	Bul. 58-2-2
	Rambo #4	PMS 6-24-9
D	PM 4386	PMS 6-104-55
A	66685 Troysan 174	PMS 6-100-14
A	66659 Cosan 158 A	Cosan Chemical Co.

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - CHAMBLEE	No. 61-2-24-1 Date 12-12-73 Page 3 Cancels Page 3 Dated 11-27-72

FORMULA: Je-217

	% Non-Volatile	Lbs. (for 100 gal. batch approx.)
Mica JC	(2/3 Formula V)	80 approx.
DXW Mineralite (Note 1)	30.0	240
Asbestos Floats	(as required)	24 approx.
Huber CWF Clay	10.0	80
Methyl Cellulose	0.8	6 - 6 oz.
Ferrite Yellow	(to match manila color of SHEETROCK face paper)	
#9 Marble	(to make 100%)	(to make 800 lbs. total non-volatile)
PVAc Resin Emulsion, Plasticized	5.5	73
Water	-	53 gals. approx.
Troysan 174	-	6-1/2 oz.
C Cosan 158A	-	6-1/2 oz.

Notes: (1) DXW Mineralite, Ser-X, or CE-F-1 Sericite may be used in pigmented Ready Mix.

RAW MATERIALS

PVAc Resin Emulsion, Plasticized	Per Bulletin 6-104-55
Methyl Cellulose	Per Bulletin 6-25-5, 6-25-6
Solvent	Per Bulletin 6-149-3
Mica	Per Bulletin 6-143-1
DXW Mineralite	Per Bulletin 6-146-2
Asbestos 7RF9	Per Bulletin 6-7-1
Huber CWF Clay	Per Bulletin 6-36-5
#9 Georgia Marble	Per Bulletin 6-24-9
Ferrite Yellow	
D Troysan 174	Per Bulletin 6-100-14
A Cosan 158A	Cosan Chemical Company

Operating Division	CONFIDENTIAL	No. 61-2-24-1 Date 12-12-73 Page 4 Cancels Page 4 Dated 11-27-72
PRODUCT PROCEDURE	USG READY MIXED JOINT COMPOUND - ALL PURPOSE - CHAMBLEE	

MANUFACTURING PROCEDURE

A. Mixing Procedure on Hockmeyer Mixer - Approx. 140 gal. batch.

Approximately 50 gallons of water are put into the Hockmeyer mixer. (The quantity of water used initially should be the smallest amount which can be used without overloading the motor when the dry materials are added). The Troysan 174 and Cosan 158A are then added and the mixer is run for a few turns to disperse these materials. The dry materials and plasticized emulsion are then added, and the batch is mixed until all lumps are broken down and all materials thoroughly mixed. The mixer is then turned off and the viscosity of a sample is determined on a Brabender viscosimeter. Additional water, as required, is then added and the batch mixed until a smooth, homogeneous mixture is obtained. The mixer is then stopped and another sample is checked on the viscosimeter. If the viscosity is still too high, this procedure is repeated until the proper viscosity is reached.

B. Filling: All 5 gallon containers are to be filled by weight. Net weight to be equivalent to 5 gallon volume as determined from weight per gallon test.

END

Originally Issued 6-2-72 SPECIAL BULLETIN 1st Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND TOPPING JE-1010S - DALLAS	No. 61-2-25-Q Date 12-12-73 Page 1 Cancels Page 1 Dated 7-23-73

This Bulletin expires 6-1-74.

DESCRIPTION

A low shrinkage topping compound, containing Southard Terra Alba, designed for joint finishing with minimum cratering.

MANUFACTURING PLANT

Dallas

IDENTIFICATION AND PACKAGING

62 lb. pails per PMS 8-29-3 or 8-15-15-3, and 50 lb. cartons per PMS 8-10-29. Normal code to be followed by the suffix S.

FINISHED PRODUCT SPECIFICATIONS

A. Color Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 2 minimum
D. Weight per Gal. about 13.1 lbs. per gal.

C FORMULA

	% NON-VOLATILE	LBS/2000 LBS. N.V.
P-80F Mica	1.25%	25
TRF02 Asbestos	2.0%	40
Cellosize QP-100M	0.7	14
Southard Terra Alba to make	92.05%	1841
PM-4386 (60%)	4.0	133
C Cosan 158A	-	1
Troysan 174	-	1
Emulsified Mineral Spirits*		34

C *See Manufacturing Procedure for details on preparation and addition of emulsified mineral spirits.

TP00, 2745

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND TOPPING JE-1010S - DALLAS	No. 61-2-25-Q Date 12-12-73 Page 2 Cancels Page 2 Dated 1-8-73

RAW MATERIALS

	Cellosize QP-100M	Union Carbide
	Southard #1 Terra Alba	52-22-2
	Deodorized Mineral Spirits	PMS 6-149-12
	Oleic Acid	PMS 6-1-2
	Triethanolamine	PMS 6-131-1
	P80F Mica	PMS 6-143-1
A	Cosan 158A	Cosan Chemical Company
A	Troysan 174	PMS 6-100-14
C	7RF02 Asbestos	PMS 6-14-10
C	PM4386 (60% solids)	PMS 6-104-55

MANUFACTURING PROCEDURE

Add the emulsified mineral spirits to the paste mix after the heavy mix stage and prior to any further water addition and final mixing to adjust viscosity.

*Make up emulsified mineral spirits as follows:

Add 9 lbs. Oleic Acid to 20 lbs. deodorized mineral spirits and mix well. Then add 5 lbs. Triethanolamine and mix thoroughly again.

NOTE: Do not mix Oleic Acid and triethanolamine before adding to mineral spirits or permanent lumps will be formed.

END

0005 2496

A Indicates Addition

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - JE-598-D	No. 61-2-24-2-1 Date 12-12-73 Page 3 Cancels Page 3 Dated 8-1-73

FORMULA JE-598-D

		% Non Volatile	lbs. for 250 gal. batch (2000 lbs. N.V.)
	Mica P80F	Formula V	300 approximately
C	Asbestos (Note 2)	As req'd for correct RB and water content	70 approximately
	Carbonate Filler (Note 1)	To make 100% N.V.	To make up 1890 lbs. N.V.
	PM-4386 emulsion	5.5%	183.3 lbs.
	Methocel 65HG	0.8%	16 lbs.
A	Cosan 158A	-	1 lb.
D			
A	Troysan 174	-	1 lb.
	Water	- - - - -	approx. 130 gal.

NOTE: 1. Dallas to use Microfil #4.
Midway to use Quincy #3.
Dallas to use Southard's #1 Terra Alba when directed by Product Managers in CCPD or SCPD.

D
C NOTE: 2. Midway to use TRF66 Asbestos, Dallas to use JM7RF02.

RAW MATERIALS

	Mica	Per Bulletin 6-143-1
	ASBESTOS	Per Bulletin 6-14-10 and 6-14-5
	Carbonate Filler	Per Bulletin 6-24-9, 6-24-10 and 6-24-22
	Methocel	Per Bulletin 6-25-6
	PM-4386	Per Bulletin 6-104-55
D	#1 Terra Alba	Per Bulletin 52-227-2B
	Troysan - 174	Per Bulletin 6-100-14
A	Cosan 158A	Cosan Chemical Company

DP009 153.7

C Indicates Change A Indicates Addition
D Indicates Deletion

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG ALL-PURPOSE READY-MIXED JOINT COMPOUND (JE-1128D)	No. 61-2-24-2-1-B Date 12-12-73 Page 1 Cancels Page 1 Dated 8-1-73

This Bulletin expires 5-1-74.

DESCRIPTION

An emulsion based product containing half the normal amount of mica in conjunction with sericite to alleviate the current mica shortage.

MANUFACTURING PLANTS

Midway and Dallas

IDENTIFICATION AND PACKAGING

Normal code to be followed by the suffix N for Harvon Sericite on Midway shipments. Packaging for Bulletin No. 61-2-24-2-1.

FINISHED PRODUCT SPECIFICATIONS

a. Viscosity - 600 ± 30 Brabender with pin paddle at 77°F.
b. Color - Natural unless pigment specified.
c. Bond-to-tape - 5 minimum at 77°F. - 50% R.H. Hot room spec. 6 minimum.
d. Weight per gallon - 12.8 to 13.0 lbs. per gallon.

	RAW MATERIAL NO.	FORMULA	% N.V.	LBS. PER 250 GAL. BATCH
	61747	P-80F Mica	1/2 formula V	160
	61763	Harvon CE-F-1 Sericite (Note 1)	30.0%	600
	61743	Asbestos (Note 2)	3.0%	60
	66481	Methocel 65HG	0.8%	16
	61463	Quincy #3 (Note 3)	To make 94.5%	To make 1,890 lbs.
	65272	PM-4386 (60%)	5.5%	183
D A	66659	Cosan 158A	-	1
	66685	Troysan 174	-	1

NOTE 1 Dallas to use 30.0% DXW Mineralite.

NOTE 2 Dallas to use 3.5% TRF02 Asbestos. Midway to use TRF66 Asbestos.

NOTE 3 Dallas to use Microfill #4.

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG ALL-PURPOSE READY-MIXED JOINT COMPOUND (JE-1128D)	No. 61-2-24-2-1-B Date 12-12-73 Page 2 Cancels Page 2 Dated 6-21-73

RAW MATERIALS

61763	Harvon Sericite	Per PMS 6-146-2
61762	DXW Mineralite	Per PMS 6-146-2
61741	7RF02 Asbestos	Per PMS 6-14-10
D A 66659	Cosan 158A	Cosan Chemical Company
66685	Troysan 174	Per PMS 6-100-14
61466	Microfil #4	Per PMS 6-24-10

Other Raw Materials per Bulletin 61-2-24-2-1.

END

DP009 1571

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** READY-MIXED JOINT COMPOUND - ALL PURPOSE - (JE-684F)	No. 61-2-24-AA Date 12-12-73 Page 3 Cancels Page 3 Dated 9-28-72

FORMULA

		% Non-Volatile	Pounds-2000 lbs. N. V.
	Mica JC	V	280 to 300 approx.
	PC7RF9 Asbestos	3.0%	60
	Methocel 65 HG	0.8	16
	Carbonate Filler*	to 100% N. V.	1500 approx.
	Hamaco 267	2.0%	40
	PM4386 (w/o PMA-30)	2.5%	83.3
	Tamol 850	____	3 to 4 as req'd.
C	Cosan 158 A	____	1
	Water	____	160 to 162 gal. approx. for regular viscosity
A	Troysan 174	____	1

*Carbonate Filler to be Stonelite for pigmented product and for "ones" in natural color. White to be 90% #9NCS and 10% Stonelite Filler.

RAW MATERIALS

A	Cosan 158A	Per Cosan Chemical Co.
	PM4386	PMS 6-104-55
	Tamol 850	PMS 6-177-9
	Hamaco 267	PMS 6-124-11
	Methyl Cellulose	PMS 6-25-6
	Asbestos Floats	PMS 6-14-5
	Carbonate Filler	PMS 6-24-2 (Stonelite), 6-24-9 (#9NCS)
A	Troysan 174	PMS 6-100-14

MANUFACTURING PROCEDURE

General procedures as per Bulletin 61-2-24.

Note: 1. Add Tamol 850 and the two preservatives to the water, then emulsion and mix before adding dry ingredients. Add dry ingredients and necessary water to keep at fairly heavy consistency. Mix at heavy consistency for 10 minutes then adjust with water to proper viscosity.

END

TP009 1027

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** READY-MIXED JOINT COMPOUND-ALL PURPOSE JE-1128C - DALLAS	No. 61-2-24-2-2 Date 12-12-73 Page 1 Cancels Page 1 Dated 7-31-73

DESCRIPTION

An emulsion based product containing two-thirds the normal amount of mica in conjunction with DXW Mineralite to alleviate current mica shortage.

MANUFACTURING PLANT

Dallas

IDENTIFICATION AND PACKAGING

Per Bulletin 61-2-24-2-1.

FINISHED PRODUCT SPECIFICATIONS

Viscosity - 600 ± 30 Brabender units with pin paddle at 77°F.
Color - Natural unless pigmented specified.
Bond-to-Tape - 5 minimum at 77°F. - 50% RH.
Weight per gallon - 12.8 to 13.0 lbs. per gallon.

	RAW MATERIAL NO.	FORMULA	% N.V.	LBS. PER 250 GAL.
	61747	P-80F	2/3 formula V	approx. 200
	61762	DXW Mineralite	15.0%	300
	61741	TRF02 Asbestos	3.5 to 4.0%	70 to 80
	66481	Methocel 65HG	0.8%	16
	61466	Microfill #4	To make 94.5%	To make 1,890 lbs.
D	65272	PM-4386 (60%)	5.5	183
	66685	Troysan 174	—	1
A	66659	Cosan 158A	—	1

RAW MATERIALS

61762	DXW Mineralite	Per PMS 6-146-2

Other raw materials per Bulletin 61-2-24-2-1.

D

END

Original date of issue 6-2-72 SPECIAL BULLETIN 2nd Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JE-1030)	No. 61-2-24-JJ Date 12-12-73 Page 1 Cancels Page 1 Dated 11-20-73

This Bulletin expires 12-1-74.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANTS

Gypsum and Midway

IDENTIFICATION AND PACKAGING

62 lb. pails per PMS 8-29-3 or PMS 8-15-15-3. 50 lb. cartons per PMS 8-10-29. Normal code to be followed by following suffixes: Gypsum SC; Midway C

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 5 minimum at 75°F., 50% R.H. Hot room at 90°F and 10% R.H. 6 minimum.
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

	FORMULA	% NON-VOLATILE	LBS/2000 LBS. N.V.
	P-80F Mica	Formula V	About 300 lbs.
	Asbestos	3.0	60
	Cellosize QP-100M	0.8	16
	Carbonate Filler	To make 95.0%	About 1524 lbs.
	FM-4386 (60%)	5.0	167
C	Cosan 158A	-	1
A	Troysan 174	-	1

RAW MATERIALS - Per Bulletin 61-2-24-2-1 except:

Cellosize QP-100M	Union Carbide
Asbestos	
Gypsum uses 7RF02	PMS 6-14-10
Midway uses 7RF66	PMS 6-14-10
Carbonate Filler	
Gypsum uses Stonelite	PMS 6-24-2
Midway uses Quincy #3	PMS 6-24-22
Cosan 158A	Cosan Chemical Co.
A Troysan 174	PMS 6-100-14

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24-2-1.

END

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG READY MIXED JOINT COMPOUND ALL PURPOSE - LOW SHRINKAGE JE-957B	No. 61-2-24-15 Date 12-17-73 Page 2 Cancels Page 2 Dated 3-7-73

FORMULA JE-957B	Commodity Code No.	% Non Volatile	Lbs. for approx. 230 gal. batch
P-80F Mica	61747	4.0	75 lbs.
MICA S	61759	20.0	Approx. 375 lbs.
SG210 Asbestos	61740	2.5	47
Gelvatol 9000	65759	1.0	18.8
Natrosol 250 HHXR	66487	0.55	10.3
Terra Alba Filler (Note 1)	61568	To make 100%	to make 1830 lbs. non/vol.
TSPP	66358	0.1	2
AMSCO 3001P or	65273	2.5	Approx. 78 lbs.
UCAR 131	65272		
40% Glyoxal sol. (Note 2)	67676	0.2	9
70% Sorbitol sol.	67081	0.35	9
Troysan 174	66685	0.05	15 oz.
Troysan EX364	66664	0.05	15 oz.
Water	-	-	135 - 137 gal. approx.

Note 1 - MW325 carbonate filler (61455) can be used in place of terra alba.

Note 2 - Crystalline Glyoxal (67946) and Crystalline Sorbitol powder (67061) may be used in place of the solutions as follows:

Crystalline Glyoxal	0.2%	4 lbs.
Crystalline Sorbitol	0.35	6.5

Be sure the Crystalline materials are blended well in other dry ingredients prior to addition to liquids to insure complete dispersion and solubility.

PROCESSING

"CP" process must be used. This compound comes out much too frothy if mixed only in the Hockmeyer mixers without "CP" treatment.

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG READY MIXED JOINT COMPOUND ALL PURPOSE - LOW SHRINKAGE JE-95TB	No. 61-2-24-15 Date 12-17-73 Page 3 Cancels NEW Dated

RAW MATERIAL SPECIFICATIONS

P-80F Mica	61747	Per 58-61-1
MICA S	61759	6-143-5
SG210 Asbestos	61740	6-14-11
Gelvatol 9000	65759	6-3-7
Natrosol 250HHXR	66487	6-151-1
Terra Alba Filler	61568	52-301-2B Plaster City
TSPP	66358	6-177-4
AMSCO 3001P	65273	6-104-55
UCAR 131	65272	6-104-55
Glyoxal Crystalline	67946	Centerchem Inc., N.Y.
40% Solution	67676	Union Carbide Corp.
Sorbitol Cryst. Powder	67061	Pfizer or Atlas Chem. Co.
70% Solution	67081	Pfizer or Atlas Chem. Co.
MW325 Carbonate	61455	6-24-1
Troysan EX364	66664	Troy Chem. Co.
Troysan 174	66685	6-100-14

END

UPC09 2234

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY-MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No. 61-2-24-4 Date 12-19-73 Page 1 Cancels Page 1 Dated 7-23-73

DESCRIPTION

C A A resin-emulsion base, ready-mixed joint compound. Manufactured using Regular Production Method or the CP Process. All shipments as directed by L. A. #961 Product Manager.

MANUFACTURING PLANT

South Gate

IDENTIFICATION AND PACKAGING

A. Packaging

1. 12 Lb. Pail
   Use 1 gallon plastic pail per PMS 8-15-16. Master carton per PMS 8-10-36.

2. 62 Lb. Pail
   Per PMS 8-15-15-3.

3. 50 Lb. Carton
   Per PMS 8-10-29. Liner per PMS 8-5-4.

B. Identification

C D D 1. Containers to be labeled as directed by Dept. #147-2.

FINISHED PRODUCT SPECIFICATIONS

Viscosity - Regular consistency Brabender of 620-700.

0P009 1679

Contains revised material formerly on pages 3 & 4 dated 3-7-73.

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No. 61-2-2A-4 Date 12-19-73 Page 2 Cancels Page 2 Dated 3-7-73

FORMULA - JE-304C

Fillers	Com.Code	%Non-Vol.	Lbs. per 2000 lb. non-vol.
Mica P-80F	61747	Formula V	280 (approx.)
MICA S (See Note 1)	61759	10.0	200
SG210 Asbestos	61740	2.0 (approx.)	40
Terra alba (See Note 2)	61568	To make 94%	To make 1880 lbs.
Methocel 65HG	66481	0.8	16
TSPP	66358	0.1	2

Paste Mix			Lbs. (for approx 260 gal.)
Fillers	-	94.0	1880
VA 3001P	65273	6.0	200 (based on % solids)
Troysan EX364	66664	-	1
Troysan 174	66685	-	1
Water	-	-	144 gal. (approx.)

Note 1 - Chromocal serecite (61772) can be used in place of MICA S.
Note 2 - MW325 carbonate filler (61455) can be used in place of terra alba (reduce TSPP to 0.5%)

RAW MATERIALS

Mica P-80F	61747	Per Bulletin 58-61-1
MICA S	61759	Per PMS Bul. 6-143-5
SG210 Asbestos	61740	6-14-11
Terra alba filler	61568	U.S. Gypsum - Plaster City Plant 52-301-2B
Methocel 65 HG	66481	Per PMS Bul. 6-25-6
TSPP	66358	6-177-4
VA 3001P	65273	6-104-55
Troysan EX364	66664	Troy Chemical Co.
Troysan 174	66685	Troy Chemical Co.
Chromocal Serecite	61772	6-146-2
MW325 Carbonate	61455	6-24-1

TP009 1TC9

Contains Material Formerly on Page 5 date 3-7-73. Also cancels Pages 4 & 5.

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG READY-MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No. 61-2-24-4 Date 12-19-73 Page 3 Cancels Page 3 Dated 3-7-73

MANUFACTURING PROCEDURE

Mixing Procedure on Hockmeyer Mixer:
Approximately 90% of the total amount of water that will be required is put into the Hockmeyer mixer. (The quantity of water used initially should be the smallest amount which can be used without overloading the motor when the dry materials are added). The Preservative is added and the mixer is run for a few turns to disperse this material. The dry materials and plasticized emulsion are then added and the batch is mixed until all lumps are broken down and all materials thoroughly mixed. The mixer is then turned off and the viscosity of a sample is determined on a Brabender viscosimeter. Additional water, as required, is then added and the batch mixed until a smooth, homogeneous mixture is obtained. The mixer is then stopped and another sample is checked on the viscosimeter. If the viscosity is still too high, this procedure is repeated until the proper viscosity is reached. "CP" Processing is now Performed as required.

Filling
All containers are to be filled by weight.

QUALITY CONTROL

A. Viscosity

1. Compound to be at 77°F ± 5°F in a standard 1/2 pint paint can with paddle immersed to mark on paddle stem.
2. Can spindle to rotate 75 RPM on VC-3, 250 gm. cm. head, Brabender Viscometer.
3. Pin bladed paddle to be used in the Brabender.

B. Application Properties - To match standard sample from Research.

C. Grit - None

D. Bond to PERF-A-TAPE - Applied and dried at 70 - 80°F, 40 - 60% R.H. - 4 min.

E. Revet Test - 2 normal.

F. Tape Edge Cracking or Check-Cracking - (in bond test application) None

G. Color - Formula JE-304C to match the color of Research standard (Natural)

H. Odor - Characteristic

Note - These tests to be performed Per Bulletin 61-2-22.

END

IPO09 1731

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED ALL PURPOSE JOINT COMPOUND BCF FORMULA JE 1204	No. 61-2-24-SS Date 1-11-74 Page 1 Cancels NEW Dated

This bulletin to expire 3-1-74.

DESCRIPTION

A softer USG Ready Mixed All Purpose Joint Compound which has bond performance level of a topping compound and is deaerated by processing through a Cornell Versator in vacuo.

MANUFACTURING PLANT

New Brighton

IDENTIFICATION

Production code numbers to be followed by the letters BCF (Baltimore Crater Free).

PACKAGING

62 lbs. bulk to be shipped in five-gallon pails per PMS 8-29-3 or 8-15-15-3.

SHIPMENTS

Only to the Baltimore-Washington market and only to accounts approved by N.Y. Dept. #991 during the period of December 1, 1973 through February 28, 1974.

FINISHED PRODUCT SPECIFICATIONS

Viscosity: Regular 530-570 B.U.
Ames 430-470 B.U.

Bond: Oven dried at 110° - 120° F, 3 minimum

FORMULA JE1204	%	500 Gallon Batch Amount
WMC P80F Mica	16.0	640 lbs.
*New Brighton Terra Alba	76.5	3060 lbs.
JMTRF02 Asbestos	3.0	120 lbs.
Methocel 65HG 4,000 cps	0.8	32 lbs.
Composition T-Merck 98900	0.2	8 lbs.
**UCAR 131 Acetate	3.5	34.85 gals.
**Cosan 158A	.05	2 lbs.
**Troysan 174	.05	2 lbs.
Water	Approximately 260 gallons for regular consistency.	

*This formula can only be made with Terra Alba.

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** READY-MIXED JOINT COMPOUND-ALL PURPOSE JE-1128C - DALLAS	No. 61-2-24-2-2 Date 1-25-74 Page 1 Cancels Page 1 Dated 12-12-73

DESCRIPTION

An emulsion based product containing two-thirds the normal amount of mica in conjunction with DXW Mineralite to alleviate current mica shortage.

MANUFACTURING PLANT

Dallas

IDENTIFICATION AND PACKAGING

Per Bulletin 61-2-24-2-1.

FINISHED PRODUCT SPECIFICATIONS

Viscosity - 600 ± 30 Brabender units with pin paddle at 77°F.
Color - Natural unless pigmented specified.
Bond-to-Tape - 5 minimum at 77°F. - 50% RH.
Weight per gallon - 12.8 to 13.0 lbs. per gallon.

	RAW MATERIAL NO.	FORMULA	% N.V.	LBS. PER 250 GAL.
	61747	P-80F	2/3 formula V	approx. 200
	61762	DXW Mineralite	15.0%	300
	61741	TRF02 Asbestos	3.5 to 4.0%	70 to 80
	66481	Methocel 65HG	0.8%	16
	61466	Microfill #4	To make 94.5%	To make 1,890 lbs.
	65272	PM-4386 (60%)	5.5	183
	66685	Troysan 174	—	1
	66659	Cosan 158A	—	1
A	66167	Composition T	0.2	4.0

RAW MATERIALS

	61762	DXW Mineralite	Per PMS 6-146-2
A	66167	Composition T (Merck 98900)	Merck Chemical Divn., Merck, Inc.

Other raw materials per Bulletin 61-2-24-2-1.

END

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE - CHAMBLEE	No. G1-2-24-1 Date 3-5-74 Page 3 Cancels Page 3 Dated 12-12-73

FORMULA: Je-217

		% Non-Volatile	Lbs. (for 100 gal. batch approx.)
C	Mica JC	(2/3 Formula V)	70 approx.
	DXW Mineralite (Note 1)	30.0	240
C	Asbestos Floats	(as required)	20 approx.
	Huber CWF Clay	10.0	80
	Methyl Cellulose	0.8	6 - 6 oz.
	Ferrite Yellow	(to match manila color of SHEETROCK face paper)	
	#9 Marble	(to make 100%)	(to make 800 lbs. total non-volatile)
	PVAc Resin Emulsion, Plasticized	5.5	73
	Water	-	53 gals. approx.
	Troysan 174	-	6-1/2 oz.
	Cosan 158A	-	6-1/2 oz.

Notes: (1) DXW Mineralite, Ser-X, or CE-F-1 Sericite may be used in pigmented Ready Mix.

RAW MATERIALS

PVAc Resin Emulsion, Plasticized	Per Bulletin 6-104-55
D Methyl Cellulose	Per Bulletin 6-25-5, 6-25-6
Mica	Per Bulletin 6-143-1
DXW Mineralite	Per Bulletin 6-146-2
Asbestos TRF9	Per Bulletin 6-7-1
Huber CWF Clay	Per Bulletin 6-36-5
#9 Georgia Marble	Per Bulletin 6-24-9
Ferrite Yellow	
Troysan 174	Per Bulletin 6-100-14
Cosan 158A	Cosan Chemical Company

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG ALL-PURPOSE READY MIXED JOINT COMPOUND (JL-1210B)	No. 61-2-24-2-1-C Date 3-21-74 Page 1 Cancels NEW Dated

This bulletin to expire 4-1-75.

Plant to manufacture a revised lower shrinkage formulation. Shipments to be approved by Product Manager, Joint Treatment, of C.C.P.D.

DESCRIPTION

An emulsion based product containing Composition T as a dispersant, which according to laboratory tests, results in lower drying shrinkage.

MANUFACTURING PLANT

Midway

IDENTIFICATION AND PACKAGING

Normal code to be followed by the suffix T
Packaging per Bulletin 61-2-24-2-1.

FINISHED PRODUCT SPECIFICATIONS

Viscosity - 600 ± 30 Brabender units with pin paddle at 77°F.
Color - Natural unless pigmented specified
Bond-to-Tape - 5 minimum at 77°F.-50% R.H.
Weight per Gal. - 12.8 to 13.0 lbs. per gal.

FORMULA

Raw Mat'l. No.	Formula	% N.V.	Lbs. per 250 Gal. Batch
61747	P-80F Mica	1/2 formula V	160
61763	Harvon CE-F-1 Sericite	30.0%	600
61682	TRF66 Asbestos	3.0	60
66481	Methocel 65HG	0.8	16
61463	Quincy #3	to make 94.5%	to make 1,890 lbs.
66167	Composition T	0.2	4
65272	PM-4386 (60%)	5.5	183
66659	Cosan 158A	---	1
66685	Troysan 174	---	1

RAW MATERIALS

Composition T - Merck 98900 - Merck Chemical Company.
Other raw materials per Bulletin 61-2-24-2-1
All other specifications per 61-2-24-2-1.

END.

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND - ALL PURPOSE	No. 61-2-24-1 Date 3-27-74 Page 3 Cancels Page 3 Dated 3-5-74

C

FORMULA: Je-217

	% Non-Volatile	Lbs. (for 100 gal. batch approx.)
Mica JC	(2/3 Formula V)	70 approx.
DXW Mineralite (Note 1)	30.0	240
Asbestos Floats	(as required)	20 approx.
Huber CWF Clay	10.0	80
Methyl Cellulose	0.8	6 - 6 oz.
Ferrite Yellow	(to match manila color of SHEETROCK face paper)	
#9 Marble	(to make 100%)	(to make 800 lbs. total non-volatile)
PVAc Resin Emulsion, Plasticized	5.5	73
Water	-	53 gals. approx.
Troysan 174	-	6-1/2 oz.
C Cosan 158 (Note 2)	-	6-1/2 oz.

Notes: (1) DXW Mineralite, Ser-X, or CE-F-1 Sericite may be used in pigmented Ready Mix.

A (2) Jacksonville to use CMP Acetate or Cosan 158.

RAW MATERIALS

PVAc Resin Emulsion, Plasticized	Per Bulletin 6-104-55
Methyl Cellulose	Per Bulletin 6-25-5, 6-25-6
Mica	Per Bulletin 6-143-1
DXW Mineralite	Per Bulletin 6-146-2
Asbestos 7RF9	Per Bulletin 6-7-1
Huber CWF Clay	Per Bulletin 6-36-5
#9 Georgia Marble	Per Bulletin 6-24-9
Ferrite Yellow	
Troysan 174	Per Bulletin 6-100-14
Cosan 158	Cosan Chemical Company
A CMP Acetate	Per Bulletin 6-100-2

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG CF READY-TO-USE JOINT COMPOUND - ALL PURPOSE - JE-598-D	No. 61-2-24-2-1 Date ~~4-4-74~~ Page 3 Cancels Page 3 Dated 12-~~12~~-73

FORMULA - JE-598-D

	% Non Volatile	Lbs. for 250 gal. batch (2000 lbs. N.V.)
Mica P80F	Formula V	300 approximately
~~Asbestos (Note 2)~~ TRP66 #40034	As req'd for correct BB and water content	70 approximately
~~Carbonate Filler (Note 1)~~ Quincy #3	To make 100% N.V.	To make up 1890 lbs. N.V.
PM-4386 emulsion	5.5%	183.3 lbs.
Methocel 65HG	0.8%	16 lbs.
Cosan 158A	-	1 lb.
Troysan 174	-	1 lb.
Water	- - - - -	approx. 130 gal.

~~NOTE: 1. Dallas to use Microfil #4.~~
~~Midway to use Quincy #3.~~
~~Dallas to use Southard's #1 Terra Alba when directed by Product Managers in CCPD or SCPD.~~

~~NOTE: 2. Midway to use TRP66 Asbestos, Dallas to use SHORT02.~~

RAW MATERIALS

Mica	Per Bulletin 6-143-1
ASBESTOS	Per Bulletin 6-14-10 ~~and 6-14-5~~
Carbonate Filler Quincy #3	~~Per Bulletin 6-24-9, 6-24-10 and~~ 6-24-22
Methocel	Per Bulletin 6-25-6
PM-4386	Per Bulletin 6-104-55
#1 Terra Alba	Per Bulletin 52-227-2B
Troysan - 174	Per Bulletin 6-100-14
Cosan 158A	Cosan Chemical Company

GP009 1513

Originally issued 1-11-74. SPECIAL BULLETIN 1st Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED ALL PURPOSE JOINT COMPOUND BCF FORMULA JE 1204	No. 61-2-24-SS Date 3-21-74 Page 1 Cancels Page 1 Dated 1-11-74

C This bulletin to expire 6-1-74.

DESCRIPTION

A softer USG Ready Mixed All Purpose Joint Compound which has bond performance level of a topping compound and is deaerated by processing through a Cornell Versator in vacuo.

MANUFACTURING PLANT

New Brighton

IDENTIFICATION

Production code numbers to be followed by the letters BCF (Baltimore Crater Free).

PACKAGING

62 lbs. bulk to be shipped in five-gallon pails per PMS 8-29-3 or 8-15-15-3.

SHIPMENTS

Only to the Baltimore-Washington market and only to accounts approved by N.Y.
C Dept. #991 during the period of March 1, 1974 through May 31, 1974.

FINISHED PRODUCT SPECIFICATIONS

Viscosity: Regular 530-570 B.U.
Ames 430-470 B.U.

Bond: Oven dried at 110° - 120° F, 3 minimum

FORMULA JE1204	%	500 Gallon Batch Amount
WMC P80F Mica	16.0	640 lbs.
*New Brighton Terra Alba	76.5	3060 lbs.
JM7RF02 Asbestos	3.0	120 lbs.
Methocel 65HG 4,000 cps	0.8	32 lbs.
Composition T-Merck 98900	0.2	8 lbs.
**UCAR 131 Acetate	3.5	34.85 gals.
**Cosan 158A	.05	2 lbs.
**Troysan 174	.05	2 lbs.
Water	Approximately 260 gallons for regular consistency.	

*This formula can only be made with Terra Alba.

TPA09 12'76

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No. 61-2-24-4 Date 5-8-74 Page 2 Cancels Page 2 Dated 12-19-73

FORMULA - JE-304C

R/M #		% N.V.	LBS./4000 LBS. N.V.
61747	Mica P-80 F	7.5	300
61772	Chromocal	17.5	700
61740	SG 210 ASB.	2.0	80
66481	Methocel 65HG	0.8	32
66167	Composition T	0.1	4
61583	Landplaster - bulk	to make 100%	2,680 (approx.)
65273	AMSCO 3001P	5.0	333 (approx. 36.6 gal.)
66685	Troysan 174	0.05	2
66664	Troysan EX364 (Note 1)	0.05	2
67799	Water	—	232 gal. (approx.)

Note 1: Alternate 66660 Troysan CMP Acetate.

RAW MATERIALS

R/M #		Per
61747	Mica P-80 F	Bulletin 58-61-1
61772	Chromocal	PMS 6-146-2
61740	Asbestos SG210	PMS 6-14-11
66481	Methocel 65HG	PMS 6-25-6
66167	Composition T	Merck Chemical Co.
61583	Landplaster Bulk	Bulletin 52-301-2B
65273	AMSCO 3001P	PMS 6-104-55
66685	Troysan 174	PMS 6-100-14
66664	Troysan EX364	Troy Chemical Co.
66660	Troysan CMP Acetate	PMS 6-100-5

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY-MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No. 61-2-24-A Date 5-8-74 Page 3 Cancels Page 3 Dated 12-19-73

MANUFACTURING PROCEDURE

Mixing Procedure on Hockmeyer Mixer:
Approximately 90% of the total amount of water that will be required is put into the Hockmeyer mixer. (The quantity of water used initially should be the smallest amount which can be used without overloading the motor when the dry materials are added). The Preservative is added and the mixer is run for a few turns to disperse this material. The dry materials and plasticized emulsion are then added and the batch is mixed until all lumps are broken down and all materials thoroughly mixed. The mixer is then turned off and the viscosity of a sample is determined on a Brabender viscosimeter. Additional water, as required, is then added and the batch mixed until a smooth, homogeneous mixture is obtained. The mixer is then stopped and another sample is checked on the viscosimeter. If the viscosity is still too high, this procedure is repeated
C until the proper viscosity is reached. Batch is then "CF" Processed.

Filling
All containers are to be filled by weight.

QUALITY CONTROL

A. Viscosity

1. Compound to be at 77°F. ± 5°F in a standard 1/2 pint paint can with
C pin paddle immersed to mark on paddle stem.
2. Can spindle to rotate 75 RPM on VC-3, 250 gm. cm. head, Brabender
D Viscometer.

B. Application Properties - To match standard sample from Research.

C. Grit - None

D. Bond to PERF-A-TAPE - Applied and dried at 70 - 80°F, 40 - 60% R.H. - 4 min.

E. Rewet Test - 2 normal.

F. Tape Edge Cracking or Check-Cracking - (in bond test application) None

G. Color - Formula JE-304C to match the color of Research standard (Natural)

H. Odor - Characteristic

Note - These tests to be performed Per Bulletin 61-2-22.

END.

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** READY-MIXED ALL-PURPOSE JOINT COMPOUND REGULAR AND CF - SOUTH GATE	No. 61-2-24-5 Date 5-8-74 Page 1 Cancels Reinstatement Dated

DESCRIPTION

South Gate to manufacture READY-MIXED Joint Compound, formula JE-684-F, and JE-684-F for Ames Taping Tool (Bazooka) using regular production method or the CF process. Shipments to be directed by L.A. #961.

IDENTIFICATION AND PACKAGING

Letter "S" to precede code on all production. Packaging per Bulletin 61-2-24-4.

Circular Plastic Sheet per PMS 8-5-11, to be laid over the surface of compound in 62 lb. pails.

AMES TAPING TOOL

55 lb. Plastic Pail. (Note: Plant to use 55# Label over 62# net on Pail).

FINISHED PRODUCT SPECIFICATIONS

A.	Viscosity - Regular Ames	- 620 - 670 BB - 180 ± 30 BB
	All viscosities run using VC-3 Brabender pin paddle @75 RPM, 250 cm gm torque head.	
B.	Bond	- 4 minimum. Tested as per Bulletin 61-2-24-4.
C.	Color	- White or pigmented. To match standards.
D.	Application and dry appearance	- To match plant standards. No grit or lumps in application. No cracking on bond test panel. Testing as per Bulletin 61-2-24-4.
E.	Weight per Gal.	- 12.5 to 12.8 lbs. per gal. for regular viscosity material.
F.	pH	- 8.5 - 9.0

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** READY-MIXED ALL-PURPOSE JOINT COMPOUND REGULAR AND CF - SOUTH GATE	No. 61-2-24-5 Date 5-8-74 Page 2 Cancels Reinstatement Dated

FORMULA (JE-684F)

R/M #	FORMULA	% N.V.	2000 LBS. N.V.
61747	Mica P-80 F	1/2 Formula V	140 to 160 approx.
61759	Mica S (at same level as P-80 F)	7 to 8%	140 to 160 approx.
61740	SG 210 Asbestos	As Req. for VISC. 3% Normal	60 approx.
66481	Methocel 65HG	0.8%	16
61568	Terra Alba	to 100% N.V.	1500 approx.
65683	Hamaco 267	2.0%	40
65273	VA 3001P	2.5	83.3
66298	Tamol 850 (Note)	—	3
66664	Troysan EX364	—	1
66685	Troysan 174	—	1
	Water	—	160 to 162 gal. approx. for regular viscosity.

NOTE: Add Tamol 850 to water and emulsion and mix before adding dry ingredients. Tamol 850 is not required when "CF" Process is employed.

RAW MATERIALS

Per bulletin 61-2-24-4. Plus:

R/M #	RAW MATERIAL	PER
66298	Tamol 850	PMS 6-177-9
65683	Hamaco 267	PMS 6-124-11

MANUFACTURING PROCEDURE

General Procedure per bulletin 61-2-24-4.

END.

Originally issued 1-11-74. SPECIAL BULLETIN 2nd Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED ALL PURPOSE JOINT COMPOUND BCF FORMULA JE 1204	No. 61-2-24-SS Date 6-12-74 Page 1 Cancels Page 1 Dated 3-21-74

C This bulletin to expire 1-1-75.

DESCRIPTION

A softer USG Ready Mixed All Purpose Joint Compound which has bond performance level of a topping compound and is deaerated by processing through a Cornell Versator in vacuo.

MANUFACTURING PLANT

New Brighton

IDENTIFICATION

Production code numbers to be followed by the letters BCF (Baltimore Crater Free).

PACKAGING

62 lbs. bulk to be shipped in five-gallon pails per PMS 8-29-3 or 8-15-15-3.

SHIPMENTS

Only to the Baltimore-Washington market and only to accounts approved by N.Y.
C Dept. #991 during the period of March 1, 1974 through December 31, 1974.

FINISHED PRODUCT SPECIFICATIONS

Viscosity: Regular 530-570 B.U.
Ames 430-470 B.U.

Bond: Oven dried at 110° - 120° F, 3 minimum

FORMULA JE1204	%	500 Gallon Batch Amount
WMC P80F Mica	16.0	640 lbs.
*New Brighton Terra Alba	76.5	3060 lbs.
J47RF02 Asbestos	3.0	120 lbs.
Methocel 65HG 4,000 cps	0.8	32 lbs.
Composition T-Merck 98900	0.2	8 lbs.
**UCAR 131 Acetate	3.5	34.85 gals.
**Cosan 158A	.05	2 lbs.
**Troysan 174	.05	2 lbs.
Water	Approximately 260 gallons for regular consistency.	

*This formula can only be made with Terra Alba.

TP009 1744

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY-MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No. 61-2-24-4 Date 7-22-74 Page 1 Cancels Page 1 Dated 12-19-73

DESCRIPTION

A resin-emulsion base, ready-mixed joint compound. Manufactured using Regular Production Method or the CF Process. All shipments as directed by L. A. #961 Product Manager.

MANUFACTURING PLANT

South Gate

IDENTIFICATION AND PACKAGING

A. Packaging

1. 12 Lb. Pail
   Use 1 gallon plastic pail per PMS 8-15-16. Master carton per PMS 8-10-36.

2. 62 Lb. Pail
   Per PMS 8-15-15-3.

3. 50 Lb. Carton
   Per PMS 8-10-29. Liner per PMS 8-5-4.

B. Identification

1. Containers to be labeled as directed by Dept. #147-2.

FINISHED PRODUCT SPECIFICATIONS

C Viscosity - 580 ± 30 BB
A pH - 8.6 ± .3

OPC09 1691

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No. 61-2-24-4 Date 7-22-74 Page 2 Cancels Page 2 Dated 5-8-74

FORMULA - JE-304C

R/M #		% N.V.	LBS./4000 LBS. N.V.
61747	Mica P-80 F	7.5	300
61772	Chromocal	17.5	700
61740	SG 210 ASB.	2.0	80
66481	Methocel 65HG	0.8	32
66167	Composition T	0.1	4
61583	Landplaster - bulk	to make 100%	2,680 (approx.)
65273	AMSCO 3001P	5.0	333 (approx. 36.6 gal.)
66685	Troysan 174	0.05	2
66664	Troysan EX364 (Note 1)	0.05	2
67799	Water	—	232 gal. (approx.)
61581	Lime Hydrate (Note 2)	0.05	

Note 1: Alternate 66660 Troysan CMP Acetate.
Note 2: Lime Hydrate content to range from 0.025 to 0.05% to obtain pH range of 8.6 ± .3.

RAW MATERIALS

	Per
Mica P-80 F	Bulletin 58-61-1
Chromocal	PMS 6-146-2
Asbestos SG210	PMS 6-14-11
Methocel 65HG	PMS 6-25-6
Composition T	Merck Chemical Co.
Landplaster Bulk	Bulletin 52-301-2B
AMSCO 3001P	PMS 6-104-55
Troysan 174	PMS 6-100-14
Troysan EX364	Troy Chemical Co.
Troysan CMP Acetate	PMS 6-100-5

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY-MIXED JOINT COMPOUND ALL PURPOSE - SOUTH GATE	No. 61-2-24-4 Date 7-22-74 Page 3 Cancels Page 3 Dated 5-8-74

MANUFACTURING PROCEDURE

Mixing Procedure on Hockmeyer Mixer:
Approximately 90% of the total amount of water that will be required is put into the Hockmeyer mixer. (The quantity of water used initially should be the smallest amount which can be used without overloading the motor when the dry materials are added). The Preservative is added and the mixer is run for a few turns to disperse this material. The dry materials and plasticized emulsion are then added and the batch is mixed until all lumps are broken down and all materials thoroughly mixed. The mixer is then turned off and the viscosity of a sample is determined on a Brabender viscosimeter. Additional water, as required, is then added and the batch mixed until a smooth, homogeneous mixture is obtained. The mixer is then stopped and another sample is checked on the viscosimeter. If the viscosity is still too high, this procedure is repeated until the proper viscosity is reached. Batch is then "CF" Processed.

Filling
All containers are to be filled by weight.

QUALITY CONTROL

A. Viscosity

1. Compound to be at 77°F. ± 5°F in a standard 1/2 pint paint can with pin paddle immersed to mark on paddle stem.
2. Can spindle to rotate 75 RPM on VC-3, 250 gm. cm. head, Brabender Viscometer.

B. Application Properties - To match standard sample from Research.

C. Grit - None

D. Bond to PERF-A-TAPE - Applied and dried at 70 - 80°F, 40 - 60% R.H. - 5 min.

E. Rovet Test - 2 normal.

F. Tape Edge Cracking or Check-Cracking - (in bond test application) None

G. Color - Formula JE-304C to match the color of Research standard (Natural)

H. Odor - Characteristic

Note - These tests to be performed Per Bulletin 61-2-22.

END.

Originally issued 1-11-74. SPECIAL BULLETIN 2nd Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED ALL PURPOSE JOINT COMPOUND BCF FORMULA JE 1204	No. 61-2-24-GS Date 7-26-74 Page 1 Cancels Page 1 Dated 6-12-74

This bulletin to expire 1-1-75.

DESCRIPTION

A softer USG Ready Mixed All Purpose Joint Compound which has bond performance level of a topping compound and is deaerated by processing through a Cornell Versator in vacuo.

MANUFACTURING PLANT

New Brighton

IDENTIFICATION

Production code numbers to be followed by the letters BCF (Baltimore Crater Free).

PACKAGING

62 lbs. bulk to be shipped in five-gallon pails per PMS 8-29-3 or 8-15-15-3.

SHIPMENTS

Only to the Baltimore-Washington market and only to accounts approved by N.Y. Dept. #991 during the period of June 1, 1974 through December 31, 1974.

FINISHED PRODUCT SPECIFICATIONS

Viscosity: Regular 450-500 B.U.
Ames 300-350 B.U.

Bond: Oven dried at 110° - 120° F, 3 minimum

FORMULA JE1204

R/M #		%	500 Gallon Batch Amount
61747	WNC P80F Mica	16.0	640 lbs.
60265	*New Brighton Terra Alba	76.0	3060 lbs.
61741	JMTRF02 Asbestos	3.0	120 lbs.
66481	Methocel 65HG 4,000 cps	0.8	32 lbs.
61167	Composition T-Merck 98900	0.2	8 lbs.
65272	**UCAR 131 Acetate	3.5	34.85 gals.
66659	**Cosan 158A	.05	2 lbs.
66685	**Troysan 174	.05	2 lbs.
	Water	Approximately 260 gallons for regular consistency.	

*This formula can only be made with Terra Alba.

JP009 1242

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED ALL PURPOSE JOINT COMPOUND BCF FORMULA JE 1204	No. 61-2-24-SS Date 7-26-74 Page 2 Cancels Page 2 Dated 1-11-74

FINISHED PRODUCT SPECIFICATIONS (Cont'd.)

The use of Pfizer Limestone will result in gelation and frothing of the batch.

**To prepare emulsion for this formula, at 45% solids containing correct proportions of Cosan 158A and Troysan 174 use the following procedure. To each 100 gallons of UCAR 131 as received (60% N.V.) stir in 37 gallons of H_2O. To this add 7.9 lb. of Cosan 158A and 7.9 lb. of Troysan 174. Do not intermix Cosan 158 and Troysan 174 prior to adding individually into diluted UCAR 131.

RAW MATERIALS

	PMS
WHC P80F Mica	6-143-1
NB Terra Alba	52-632-2A
JMTRF02 Asbestos	6-14-10
Methocel 65HG4,000 cps	6-25-6
Composition T-Merck 98900	Merck Chemical Div. Merck, Inc.
UCAR 131	6-104-55
Cosan 158A	Cosan Chemical
Troysan 174	6-100-14

MANUFACTURING PROCEDURE

Mixing Procedure on Hockmeyer Mixer

Approximately 90% of the total water that will be required is put into the Hockmeyer mixer. Simultaneously the latex and preservative are added with the mixer running. Start vibrating dry ingredients into the batch while the batch water is being added. Time the addition of the dry ingredients so as to be completed simultaneously with completion of the water addition. Batch is then to be mixed at heavy viscosity until all lumps are broken down and all materials thoroughly mixed. Additional water is then added until mix is smooth and homogeneous and watt meter indicates the desired viscosity has been reached.

Deaeration

Batch is then to be processed through the Cornell Versator. Vacuum pressure and processing speed are to be determined by operating personnel based on what is needed to give the most "air void free" product.

UP009 1243

Originally issued 6-2-72. SPECIAL BULLETIN 3rd Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JC-1030)	No. 61-2-24-3 Date 12-12-74 Page 1 Cancels Page 1 Dated 12-12-73

C This Bulletin expires 12-1-75.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANTS

Gypsum and Midway

IDENTIFICATION AND PACKAGING

62 lb. pails per PMS 8-29-3 or PMS 8-15-15-3. 50 lb. cartons per PMS 8-10-29. Normal code to be followed by following suffixes: Gypsum SC; Midway C

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 5 minimum at 75°F., 50% R.H. Hot room at 90°F and 10% R.H. 6 minimum.
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

FORMULA	% NON-VOLATILE	LBS/2000 LBS. N.V.
P-80F Mica	Formula V	About 300 lbs.
Asbestos	3.0	60
Cellosize QP-100M	0.8	16
Carbonate Filler	To make 95.0%	About 1524 lbs.
PM-4386 (60%)	5.0	167
Cosan 158A	-	1
Troysan 174	-	1

RAW MATERIALS - Per Bulletin 61-2-24-2-1 except:

Cellosize QP-100M	Union Carbide
Asbestos	
Gypsum uses 7RF02	PMS 6-14-10
Midway uses 7RF66	PMS 6-14-10
Carbonate Filler	
Gypsum uses Stonelite	PMS 6-24-2
Midway uses Quincy #3	PMS 6-24-22
Cosan 158A	Cosan Chemical Co.
Troysan 174	PMS 6-100-14

MANUFACTURING PROCEDURE

Per Bulletin 61-2-24-2-1.

END.

Original date issued 6-2-72. SPECIAL BULLETIN 3rd Extension

Operating Division PRODUCT PROCEDURE	**CONFIDENTIAL** USG READY MIXED JOINT COMPOUND (JE-1030)	No. 61-2-24-JJ Date 12-31-74 Page 1 Cancels Page 1 Dated 12-12-74

This bulletin expires 12-1-75.

DESCRIPTION

A ready mixed compound with improved resistance to cratering.

Plant to make trial batches for field tests and subsequent shipments per direction of Dept. #971-C.

MANUFACTURING PLANTS

Gypsum and Midway

IDENTIFICATION AND PACKAGING

62 lb. pails per PMS 8-29-3 or PMS 8-15-15-3. 50 lb. cartons per PMS 8-10-29. Normal code to be followed by following suffixes: Gypsum SC; Midway C

FINISHED PRODUCT SPECIFICATIONS

A. Color - Natural White.
B. Viscosity - 600 ± 30BB units with pin at 75°F.
C. Bond - 5 minimum at 75°F., 50% R.H. Hot room at 90°F and 10% R.H. 6 minimum.
D. Wt/Gal. - 12.8 to 13.0 lbs. per gal. for regular consistency.

FORMULA

*R/M #		% N.V.	LBS/2000 LBS. N.V.
61747	P-80F Mica	Formula V	About 300 lbs.
61682	TRF66 Asbestos (Note 1)	3.0	60
66460	Cellosize QP-100M-H	0.8	16
61463)	Carbonate Filler (Note 2)	To make 95.0%	About 1524 lbs.
61571)			
65272	UCAR 131	5.0	167
66659	Cosan 158 (Note 3)	—	1
66685	Troysan 174	—	1

NOTES:
1. Gypsum may use 61741 TRF02 as an alternate.
2. Gypsum to use Stonelite
   Midway to use Quincy #3
3. Gypsum may use 66660 CMP Acetate.

* USG Unified Raw Material Code Number.

JP009 1142

Contains portions of material formerly on page 1 dated 12-12-74.

Operating Division PRODUCT PROCEDURE	CONFIDENTIAL USG READY MIXED JOINT COMPOUND (JR-1030)	No. 61-2-24-JJ Date 12-31-74 Page 2 Cancels NEW Dated

RAW MATERIALS

	PER
P-80F Mica	PMS 6-143-1
Cellosize QP-100M-H	Union Carbide
Asbestos	PMS 6-14-10
Carbonate Filler	PMS 6-24-2 or 6-24-22
Cosan 158	PMS 6-100-20
Troysan 174	PMS 6-100-14
CMP Acetate	PMS 6-100-5
UCAR 131	PMS 6-104-55

MANUFACTURING PROCEDURE

Bulletin 61-2-24-2-1.

END.