PLAINTIFF'S EXHIBIT
tabbies
USG-423

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	PERF-A-TAPE JOINT CEMENT	No. 61-2-22Q Date 12-7-45 Page 1 of 1 Cancels Dated NEW

Cancels S-211-B, Page 3 of 15, Bulletin 61-2-22, dated 11-20-44 and
S-212-E, Bulletin 61-2-22G, dated 5-17-45.

MANUFACTURING PLANT: Gypsum

FORMULA - S-232-B Perfatape Finishing Cement

#2 Glue	3.2
KB Paste	1.2
Sodium Pentachlorphenate	0.15
Chromic Fluoride	0.15
Aluminum Sulfate	0.2
Asbestos 793-7TF	3.1
Silversheen Mica	5.0
Pyrex B	20.0
Southard #1 Moulding Plaster	10.0
Micropulverized Gypsum #1 Tubemilled Stucco	60.0

Pigments - As required to match current top coater color.

RAW MATERIALS

Chromic Fluoride- As per 61-2-22L.

Other materials - As per 61-2-22.

PROCESSING - As per 61-2-22.

FINISHED PRODUCT SPECIFICATIONS - As per 61-2-22.

PACKAGING AND IDENTIFICATION - As per 61-2-22.

RECEIVED JAN 5 1946

DP001 0810

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	JOINT CEMENT FOR USE WITH PERF-A-TAPE REINFORCEMENT SWEETWATER AREA	No. 61-2-22L Date 5-16-47 Page 1 of 2 Cancels 1 of 2 Dated 10-18-46

DESCRIPTION:
A single cement system using low alkalinity casein base cement for distribution to Dallas, Houston, and Sweetwater areas and part of Oklahoma area.

MANUFACTURING PLANTS: Sweetwater, Gypsum

FORMULA:

	Sweetwater J440	Gypsum J377B
Casein	6.0	7.0
Sodium pentachlorphenate	.4	.4
Ammonium oxalate	1.4	1.6
Chromic fluoride (dried)	.4	.4
Hydrated lime	.5 (range .4 to .7%)	.6
P80 or P80J Mica	13.0	10.0
A-200 talc, pyrax A, or mixture	25.0	-
Peerless clay	12.5	15.0
7H asbestos	4.6	-
Carbotex	36.0	-
Tributylphosphate	.2	-
AMD (1:2)	-	10.0
CCO whiting	-	5.0
Pyrax A		20.0
AA dolomite	-	30.0
Pigments	As required to match standard color.	

RAW MATERIALS:
See bulletins 61-2-22 and 61-2-41, and as follows:

Chromic fluoride - If moist as received, dry on trays at a temperature not over 140°F.

A-200 talc - A tan colored talc from Southwestern Talc Company, Llano, Texas which should approximate the approved standard in color and meet the following screen test:

Passing 40 mesh - 100%
" 100 " - 97.5 minimum
" 200 " - 85 "
" 325 " - 65 "

NOTE: Because of its fibrous character this talc does not dry screen satisfactorily. Run screen test by stirring the weighed talc sample to a smooth slurry with water, washing this on the 325 mesh screen to remove the bulk of the - 325 mesh fraction, drying the residue on the screen and dry screening it through the specified screens, calculating the percent passing 325 mesh by difference.

CANCELLED JAN 5 1948

Carbotex - A cream colored chalk whiting obtained from the Texas Carbonate Company at Florence, Texas
Color - to approximately match standard sample.

DP007 0806

Fineness - Passing 100 mesh - 99.9% minimum
" 325 " - 95.0

7H Asbestos - As used in grinding A.M.D.

Ammonium oxalate - Granular, technical grade. Grind in a micropulverizer equipped with 1/32" slot width screen before mixing with other materials. Preferred grind 90-100% passing 100 mesh.

PROCESSING: For J440 - (A. processing is preferred)

A. Weigh all ingredients and mix in a Broughton mixer 15 minutes. Then pass the batch through a micropulverizer equipped with a fine (1/32" slot width) screen. It is then ready to pack.

B. Alternate processing in case processing A. proves too slow with the present small size micropulverizers used.
Mix 7H asbestos and Carbotex in the proportions required, preferably in a Broughton mixer for 5 to 10 minutes. Then grind through a micropulverizer equipped with a coarse (3/32" slot width) screen. Use 41.1% of this mix to replace the 7H asbestos and Carbotex in the cement batch.

* Weigh, and mix the cement batch in a Broughton mixer for 15 minutes. Then pass the batch through a micropulverizer equipped with a course (3/32" slot width) screen. It is then ready to pack.
* For processing J377B cement, follow this paragraph only.

FINISHED PRODUCT TESTS:

Color - To match standard sample

Moisture in dry powder cement - Not over 1.0% loss on drying 5 hrs. at 95°C. in an oven drying test, or by use of the Dietert rapid moisture tester. The use of the latter is recommended so that each batch can be checked as it is made. Any batches showing over 1.0% moisture should be reworked by mixing with drier batches.

Consistency - 60-66 cc

Odor of wet mixed cement - No stronger than that of standard sample

Application Properties - To match those of standard sample

Dry Hardness and Bond to Tape - To match that of a standard sample of this cement, applied and dried at the same time as a control. "Good" to "Excellent" bond is to be expected under normally good drying conditions with most rolls of Perfatape. Occasional rolls of Perfatape may be found which give relatively poor bond. Very humid weather during the drying of the cement likewise reduces bond (and hardness). Cracking of the cement along the tape edge should be zero on the bond test application - check for cracks with 4X to 6X hand lens.

Rewet test - Apply 70°F water to the applied, dried cement, let stand 5 minutes, and note hardness by scratching with the finger nail. Results will normally be "moderately good" or "good" i.e. can only be scratched very slightly with the finger nail.

pH, 30 min. after mixing with water - 8.0 to 8.5. Adjust lime if necessary to maintain this pH range.

PACKAGING

Package size, andweights of contents as specified for single cement Perfatape system - bulletin 61-2-22. Insert direction sheet for Southwest Perfatape System in package. Stamp package labels with 1" letters "LA".

0P007 0807

REQUEST FOR NEW OR REVISION OF OPERATING BULLETIN

File RD 1900.2

SEND TO:
OPERATING DEPT. (170-61)
CHICAGO OFFICE

3-1-49

DATE 61-2-22

Perf-A- Tape Cement

BULLETIN NO.

SUBJECT:

Gypsum, New Brighton, Sweetwater, Hagersville

PLANTS CONCERNED

DETAILS OF PROPOSED PRACTICE (USE BACK OF SHEET IF NECESSARY). (IF YOU ARE PROPOSING A NUMBER OF UNCONNECTED CHANGES, STATE EXPLANATION SEPARATELY FOR EACH REQUEST)

During present strike emergency at the asbestos plants the following substitutions for asbestos floats are to be made:

In High alkaline cements use

5% AMD (1:2)

+ 5 to 7% floats as required

until the supply of floats is exhausted. Then use 10% AMD (1:2) if the strike continues.

In low alkaline cements continue using present formula until stock of floats is exhausted. Then use 13% AMD (1:2) if the strike continues.

OBJECT (WHY IS THIS PROPOSED PRACTICE DESIRABLE?)

To permit continued production of joint cement when supplies of asbestos floats are exhausted.

To be canceled when asbestos floats are again obtainable.

ECONOMICS (FOR A REVISION, GIVE ONLY THE EFFECT OF THE CHANGE IN PRACTICE).

WHAT IS MILL COST?

WHAT IS SELLING PRICE?

WHAT IS SALES VOLUME? None

WHAT EQUIPMENT CHANGES REQUIRED? No

WILL ANY RAW MATERIALS OR CONTAINERS BE MADE OBSOLETE? WHAT DISPOSITION?

QUALITY (WHAT LABORATORY AND FIELD TESTS MADE, AND WHAT RESULTS?)

Substitution of AMD gives slightly grainier texture to the cement - more noticeable in the LA than in the HA types.

Quality otherwise is unimpaired

Research

REQUESTED BY DEPT. OR PLANT

J. W. Gill

SIGNED

M-5084 12/43 (U.S.A.)

Opac 1134A

REQUEST FOR NEW OR REVISION OF OPERATING BULLETIN

RD1 4002

SEND TO:
OPERATING DEPT. (170-S)
CHICAGO OFFICE

DATE

BULLETIN NO. April 21, 1949
61 - 2 - 22 Red

SUBJECT:

Low Alkaline Type Perf-A-Tape Cement.

PLANTS CONCERNED

Sweetwater

DETAILS OF PROPOSED PRACTICE (USE BACK OF SHEET IF NECESSARY). (IF YOU ARE PROPOSING A NUMBER OF UNCONNECTED CHANGES, LIST AND EXPLAIN ON SEPARATE REQUESTS).

A new LA joint cement, J570, is given which calls for no asbestos and which possesses all the quality merits of present LA cements and is improved in application properties and in coverage.

OBJECT (WHY IS THIS PROPOSED PRACTICE DESIRABLE?)

To enable continued production of LA joint cement at Sweetwater when available supplies of asbestos floats are exhausted.

ECONOMICS (FOR A REVISION, GIVE ONLY THE EFFECT OF THE CHANGE IN PRACTICE).

WHAT IS MILL COST?

WHAT IS SELLING PRICE? Increased approximately 28¢ per cwt.

WHAT IS SALES VOLUME?

WHAT EQUIPMENT CHANGES REQUIRED?

WILL ANY RAW MATERIALS OF CONTAINERS BE MADE OBSOLETE? WHAT DISPOSITION? None

QUALITY (WHAT LABORATORY AND FIELD TESTS MADE, AND WHAT RESULTS?)

Lab tests indicate improved application and coverage, with no evident disadvantages compared with the present J440P cement.

REQUESTED BY Research DEPT. OR PLANT

J.W. Gill
SIGNED

M-5084 12/43 (U.S.A.)

CP007 1222A

Formula -

J570

Casein	8.0 %
Sodium pentachlorphenate	.2 (.4 in areas now requiring this %).
Ammonium Oxalate	1.8
Chrome fluoride	.5
Hydrated Lime	.5 ± .2 (as required to give normal pH and casein solution rate).
Dicyandiamide	.7
A 200 talc	15.0
Pumice O	15.0
Dunlap clay AF	7.0
Mica C	Per mica formula IV.
Carbotex	To make up 100%.
Pigments	As required to give standard color - approximately 0.125% Ferrite yellow.

Mica Formula IV -

$\%\ \text{mica} = 8 + .0336D^2 - .155D + .0005\,S^2 + .035$

Where D = Density in lb./cu. ft.
S = % passing 325 mesh.

Raw Materials -

All per current specifications together with the following new ones:
Dicyandiamide - Technical grade, from American Cyanamide Company supplied in fine, soft crystal form.

Pumice O -

From Pumice Corporation of America. A light colored powdered pumice of approximately the following specifications:

Fineness -	+ 100 mesh	.1%
	- 100 + 200 mesh	18
	- 325 mesh	65
Pouring Consistency -		80 to 85 cc

Dunlap Clay AF -

From United Clay Mines Corporation. A powdered clay, pinkish white color, of exceptionally plastic character.

Pouring Consistency - 180 - 210 cc. Determine by mixing 50 grams to a smooth paste using a drink mixer to stir out lumps. Should pour to a pat diameter 3 3/4" to 4".

cpoo7 12228

Reaction with Ammonium Oxalate - Addition of 50 cc 3% ammonium oxalate solution to a mix of this clay at pouring consistency should stiffen it rather than thin it out.

Finished Product Properties -

Mixing Properties - Like typical LA cements - 15 to 20 minutes required to reach normal stable consistency.

Consistency - Approximately 70 cc.
pH - ~~[illegible]~~. 7 3/4 to 8 (1:1 suspension in dist. water, 30 min. after mixing)
Application - To match standard sample from Research.
Bond to tape - 6 or 7, except in extremely humid weather.
Check and edge cracking on bond test - None, even in 90°F. room dry test.
Rewet test - 5 to 6.
Chrome fluoride spots - Not over 1 per sq. ft. on standard test.

Processing -

Same as for present LA type cements, including pregrinding of ammonium oxalate and chromic fluoride.

ek

OP007 1222 C

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved: McCK	PERF-A-TAPE	No. 61-2-22MM Date 12-9-49 Page 1 of 1 Cancels Page 1 Dated 11-29-49

Special low alkaling Perf-A-Tape joint cement for shipment as required by Detroit Sales. To be shipped on orders marked "Low alkaline cement."

Manufacturing Plant Gypsum
Formula

	J-642
Casein	7.0%
Soy flour	1.0
Sod. Pentacholrphenate	.2
Ammonium oxalate	1.4
Hyde. lime	As required to give normal pH-usually .4 to .5%
Chromic Fluoride	.4
Dicyandiacide	.5
Peerless clay	15.0
JM7TF2 asb. floats	15.0
AMD (1:2)	As required to give normal consistancy - 5.0% in the laboratory trials.
Mica C	Per formula (chart) V.
Mineralite	15.0
Stonelite filler to make up	100%.
Antifoam LFX	.4

Raw Materials

All Per bulletin 61-2-22 except as follows:

Mineralite - Per bulletin 6-30-3.

Stonelite filler - A ground dolomite filler obtainable from Ohio Hydrate and Supply Company (Woodville, Ohio), having properties in the cement between those of a dolomite and those of CCO Whiting. The same we have tested.
99% + through 325 mesh.
41cc. pouring consistency.
color - about like CCO Whiting.

Anti-foam LFX - This is a light amber colored liquid with an aromatic, camphor like odor made by DuPont. It helps minimize lumping on mixing the cement with water. It is to be sprayed into the other materials in this Broughton Mixer or in the absence of spray equipment may be poured in a slow stream while they are mixing.

Processing Same as for J587 cement with addition of Anti-foam LFX liquid as noted above.

Finished product tests - Consistency - 70cc. + 2cc.
Other tests per bulletin 61-2-22 - to match a standard sample of J-642 from Research Department where a standard for comparison is required.

Packaging - Same as for other LA cements.

Indicates Change

NP007 1145

M-6189 Rev. 11/43 (U.S.A.) NS

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved: JJC	PERF-A-TAPE	No. 61-2-22LL Date 12-16-49 Page 1 of 2 Cancels Dated New

DESCRIPTION: New low alkaline Perf-A-Tape cement formula (J639B) for use at South Gate on a trial basis until 3-1-50. If considered acceptable, it should then be transferred to bulletin 61-2-22 and this special bulletin cancelled.

Formula -	J639-B
Casein (Uncoiled)	7.0%
Sodium pentachlorphenate (Dowicide "G")	.2
Ammonium oxalate	1.4
Hydrated lime	As required to give normal pH -usually .4 to .5%
Chromic fluoride	.4
Dicyandiamide	.5
Peerless #4 clay	15.0
Asbestos floats	As required to give normal consistency and application properties (from 6 to 22%)
Mica C	Per mica formula II.
M350 Sericite Mica	20.0
Carbonate Filler	To make up 100%
Anti-foam LFX	.4 (2 qts. per M. lbs.)
Pigments	As required to match standard.

Raw materials - All to be as given in bulletin 61-2-22 with exceptions and additions as follows:

Asbestos Floats: The order of preference for asbestos floats is:

1st choice	- Philip Carey 7RF
2nd "	- Asbestos Corporation EX293-7TF or 793-7TF
3rd "	- Johns Manville 7TF2

The test procedure for determining the amount of asbestos should of course be based on the J-639-B cement. The equation for percent asbestos will be slightly changed because of the higher normal consistency of this J-639-B cement. For this cement use:

$$\% \text{ asbestos} = \frac{20\,(71 - \text{consistency cement b.})}{\text{consistency cement a.} - \text{consistency cement b.}}$$

Anti-foam LFX - This is a light yellow liquid with an aromatic camphor like odor. It should be sprayed (or in the absence of pressure spray equipment, poured in a slow stream) into the other ingredients as they are being mixed in the Broughton mixer. It aids in minimizing lumping on mixing.

M350 Sericite - This is a micaceous mineral filler (resembling Mineralite) available from Huntley Minerals Company, shipped from Bishop, California. Our tests on the two shipments received at the Research Laboratory averaged as follows:

Color - Cream white
Pouring consistency - 60cc..
Density - 37.8 lb./cu.ft
Fineness - + 100 mesh - Trace
-100+325 mesh - 1.8%
-325 mesh - 98.2

OP007 1116

Carbonate Filler - This a ground limestone whiting which should meet the following specifications:

Color - white
Pouring consistency - 43 - 45cc.
Fineness +40 mesh - None
-40 +100 mesh - 9.1% maximum
-325 mesh - 90% minimum

Two of three samples of CL Duncan Company (Kennedy Mineral) #200 Whiting met the above specifications. The third contained a few coarse (down to 10 mesh) particles. Hence, this whiting is approved as the carbonate filler only if they can give assurance that such grit will not be found in future shipments. Other approved carbonate fillers include:

Albacar 45 - 3 - C.K. Williams Company
Carbowhite 400 - J.K. Rice Company

Processing - Grind ammonium oxalate (if necessary) in a mikropulverizer using a fine (1/32" slot width) screen. Prepare chromic fluoride-mica mix, or dry and grind the chromic fluoride. Weigh all dry ingredients into Broughton mixer, and spray (or pour in a slow stream) in the Anti-foam LFX after mixing has started. Mix 15 minutes, then pass the cement through a mikropulverizer equipped with a coarse (3/32" slot width) screen. The cement is then ready to pack.

Finished Product Tests - Per bulletin 61-2-22 for low alkaline cements, except:
Consistency - J639-B - 68 to 73cc. normal 71cc.

Packaging and Directions - Per bulletin 61-2-22. Spark perforated, printed tape to be used in all Perf-A-Tape system packages. Direction sheets to be omitted from 25 lb. bags of cement.

QP007 1111

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved: MCK	PERF-A-TAPE	No. 61-2-22MM Date NOV 29 1948 Page 1 of 1 Cancels Dated New

This temporary bulletin authorizes Gypsum to make a 1,000 lb. trial batch of special low alkaline Perf-A-Tape cement. Thirty 25 lb. bags to be shipped to Detroit plant, attention I. T. Lestor.

Formula

	J-642
Casein	7.0%
Soy flour	1.0
Sod. penta-chlorphenate	.2
Ammonium ocalate	1.4
Hyde. lime	As required to give normal pH - usually .4 to .5%
Chromic fluoride	.4
Dicyandiamide	.5
Peerless clay	15.0
JM7TF2 asb. floats	15.0
AMD (1:2)	As required to give normal consistency - 5.0% in the laboratory trials.
Mica C	Per formula (chart) B.
Mineralite	15.0
Stonelite filler to make up 100%	
Antifoam LFX	.4

Raw Materials

All per bulletin 61-2-22 except as follows:

Mineralite - per bull. 6-30-3

Stonelite filler - A ground dolomite filler obtainable from Ohio Hydrate and Supply Company (Woodville, Ohio,) having properties in the cement between those of A dolomite and those of CCO Whiting. The sample we have tested:

99% + through 325 mesh.
41cc. pouring consistency.
color - about like CCO Whiting

Anti-foam LFX - This is a light amber colored liquid with an aromatic, camphor like odor made by DuPont. It helps minimize lumping on mixing the cement with water. It is to be sprayed into the other materials in this Broughton mixer or in the absence of spray equipment may be poured in a slow stream while they are mixing.

Processing- Same as for J587 cement with addition of Anti-foam LFX liquid as noted above.

Finished product tests - Consistency - 70cc. + 2cc.
Other tests per bulletin 61-2-22 - to match a standard sample of J-642 from Research Department where a standard for comparison is required.

Packaging Same as for other LA coments.

M-6189 Rev. 11/43 (U.S.A.) NS

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	PERF-A-TAPE CEMENT	No. 61-2-22MM Date 5-8-50 Page 1 of 2 Cancels Page 1 Dated 12-9-49

Special low alkaline Perf-A-Tape joint cement for shipment as required by Detroit Sales. To be shipped on orders marked "Low alkaline cement,"

MANUFACTURING PLANT - Gypsum

FORMULA

	J-642
Casein	7.0%
Soy flour	1.0
Sod. Pentachlorphenate	.2
Ammonium oxalate	1.4
Hyde.Lime	As required to give normal pH - usually .4 to .5%
Chromic Fluoride	.4
Dicyandiamide	.5
Peerless clay	15.0
JM/TF2 asb. floats	15.0
AMD (1:2)	As required to give normal consistency - 5.0% in the laboratory trails.
Mica C	Per formula (chart) V.
Mineralite	15.0
Stonelite filler to make up 100%.	
Merpol C	.20%
Camphor (technical, synthetic)	.04%

Raw Materials

All per bulletin 61-2-22 except as follows:

Mineralite - Per bulletin 6-30-3

Stonelite filler - A ground dolomite filler obtainable from Ohio Hydrate and Supply Company (Woodville, Ohio), having properties in the cement between those of a dolomite and those of CCO Whiting. The sample we have tested:
99% + through 325 mesh.
41cc. pouring consistency.
color - about like CCO Whiting

Merpol C and Camphor (technical, synthetic) both are available from DuPont. Dissolve the camphor in the Merpol, and add the mixture to the cement. It helps minimize lumping on mixing the cement with water. It is to be sprayed into the other materials in the Broughton mixer or, in the absence of spray equipment, may be poured in a slow stream while they are mixing.

(In cold weather Merpol C and Camphor may be thinned with alcohol if necessary to keep it fluid when added to the cement.)

USG 0007 1131

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	PERF-A-TAPE CEMENT	No. 61-2-22LL Date 5-8-50 Page 1 of 2 Cancels Page 1 Dated 1-6-50

DESCRIPTION: New low alkaline Perf-A-Tape cement formula (J639B) for use at South Gate, Sweetwater.

FORMULA - J639-B

Casein (Unoiled)	7.0%
Sodium pentachlorphenate (Dovicide "G")	.2
Ammonium oxalate	1.4
Hydrated lime	As required to give normal pH - usually .4 to .5%
Chromic fluoride	.4
Dicyandiamide	.5
Peerless #4 clay	15.0
Asbestos floats	As required to give normal consistency and application properties (from 6 to 22%)
Mica C	Per mica formula V. (Chart)
M350 Sericite Mica	20.0
Carbonate Filler	To make up 100%
Merpol C	.20%
Camphor (technical, synthetic)	.04%
Pigments	As required to match standard.

Rav Materials - All to be as given in bulletin 61-2-22 with exceptions and additions as follows:

Asbestos Floats: The order of preference for asbestos floats is:

1st choice	- Philip Carey 7RF
2nd "	- Asbestos Corporation EX293-7TF or 793-7TF
3rd "	- Johns Manville 7TF2

The test procedure for determining the amount of asbestos should of course be based on the J-639-B cement. The equation for percent asbestos will be slightly changed because of the higher normal consistency of this J-639-B cement. For this cement use:

$$\% \text{ asbestos} = \frac{20\ (70 - \text{consistency cement b.})}{\text{consistency cement a.} - \text{consistency cement b.}}$$

Merpol C and Camphor (technical, synthetic) both are available from DuPont Dissolve the camphor in the Merpol, and add the mixture to the cement.

(In cold weather this mixture may be thinned with alcohol if necessary to keep it fluid when added to the cement.)

M350 Sericite - This is a micaceous mineral filler (resembling Mineralite) available from Huntley Minerals Company, shipped from Bishop, California. Our tests on the two shipments received at the Research Laboratory averaged as follows:

DP007 1111

M350 Sericite (Cont'd.)

Color - Cream white
Pouring consistency - 60cc..
Density - 37.8 lb./cu.ft.
Fineness - +100 mesh - Trace
-100+325 mesh - 1.8%
-325 mesh -98.2

Carbonate Filler - This a ground limestone whiting which should meet the following specifications:

Color - white
Pouring consistency - 43 - 45cc.
Fineness +40 mesh - None
-40 + 100 mesh - 0.1% maximum
-325 mesh - 90% minimum

Two of three samples of CL Duncan Company (Kennedy Mineral) #200 Whiting met the above specifications. The third contained a few coarse (down to 10 mesh) particles. Hence, this whiting is approved as the carbonate filler only if they can give assurance that such grit will not be found in future shipments. Other approved carbonate fillers include:

Albacar 45 - 3 - C.K. Williams Company
Carbowhite 400 - J.K. Bice Company

Processing - Grind ammonium oxalate (if necessary) in a mikropulverizer using a fine (1/32" slot width) screen. Prepare chromic fluoride-mica mix, or dry and grind the chromic fluoride. Weight all dry ingredients into Broughton mixer, and spray (or pour in a slow stream) in the Merpol - Camphor solution after mixing has started. Mix 15 minutes, then pass the cement through a mikropulverizer equipped with a coarse (3/32" slot width) screen. The cement is then ready to pack. If a coarse screen does not give a cement sufficiently grit free, the fine screen (1/32" slot width) should be used in the Mikropulverizer.

Finished Product Tests - Per bulletin 61-2-22 for low alkaline cements, except:
consistency - J639-B - 68 to 73cc. normal 71cc.

Packaging and Directions - Per bulletin 61-2-22. Spark perforated, printed tape to be used in all Perf-A-Tape system packages. Direction sheets to be omitted from 25 lb. bags of cement.

NP007 1134

TP009 0431

This temporary bulletin authorizes Gypsum to manufacture and ship the following formulated Perf-A-Tape Cement to the Milwaukee Market when "Special Milwaukee Formula" is noted on the 379 order form:

PERF-A-TAPE CEMENT - FORMULA J601V - For all 25# bags of Perf-A-Tape Cement and 250' bags Perf-A-Tape Joint System:

Casein	7.0
Sodium Pentachlorophenate	0.25
Ammonium Oxalate	1.25 - 1.4
Hydrated Lime to give normal pH & solution rate	1 .15 - .3
Dicyandiamide	0.5
Asbestos Float	As required to give normal consistency approx. range 3 - 5
000 Whiting, Stonelite & DI White #1 Grade	15.0 (2/3 DI White & 1/3 mixture 000 Whiting and Stonelite)
USG Mineralite or Sur-Z	15.0
Mica C Formula Number	V = 1.1
Carbonate Filler	To make up 100%
Defoamalizer #5050 (1)	.003
Kelzan Alginate	0.3
Sterox CD	.15
Tributylphosphate (1)	.05

(1) The liquid wetting agents - Sterox CD, Tributylphosphate and Defoamalizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton Mixer. In cold weather, the solution may be diluted with isopropyl alcohol if necessary to facilitate spraying.

[illegible] COLOR SHRINKAGE [illegible]

This bulletin expires 7-1-59.

1000 0001

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved: McC	PERF-A-TAPE South Gate	No. 61-2-22VV Date 7-5-51 Page 1 of 1 Cancels Dated None

DESCRIPTION
Formula for use at South Gate when asbestos supply does not permit making the present formual J6398.

FORMULA	J736
Casein	6.6%
GS-112 (alginate)	.4
Dowicide G	.2
Ammonium oxalate	1.2
Hydrated lime	.1 to .3 (as req'd. to give normal pH and and casein solution times)
Dicyandiamide	.5
Asbestos	As req'd. to give normal consistency and working properties - about 8 to 10% for Philip Carey and 16 to 22% for Johns-Manville
Mica C	Per formula V
M350 Sericite	20.0
Carbonate filler	to make up 100%
Sterox CD	.1
Tributyl phosphate	.1

NOTE: Mix the Sterox CD and Tributylphosphate together and spray (or dribble) into the other ingredients while mixing.

RAW MATERIALS:
All are current paint plant raw materials as used in other Perf-A-Tape Cement or Texture Paint formulas.

PROCESSING
Same as for J6398 cement

FINISHED PRODUCT TESTS
All the same as for J6398 except consistency - 66 to 70cc.

NP007 1237

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 10-16-52 Page 1 of 10
Approved: TNC		Cancels Page 3 of 13 Dated 8-11-52

MANUFACTURING PLANTS

Gypsum, New Brighton, South Gate, Sweetwater and Hagersville.

JOINT CEMENTS: (High Alkaline Formulas)

	Hagersville	Gypsum and New Brighton
	J318	J766
Lauxein	4.0%	-
Soy Flour	-	2.5%
Casein	7.0	7.3
Hydrated Lime	3.0	1.0
Kemikal Oxide	-	2.0
Trisodium phosphate	1.7	-
Sodium Oxalate	-	1.2
Sodium Pentachlorphenate	.3	.4
Talc (Broughton M4)	10.0	-
Mineralite DXW	-	15.0
Asbestos *	As required to give normal consistency and application properties. See note.	
Mica C	Per formula V	Per formula V
CCO Whiting **	15.0	10 to 25%
Carbonate Fillers	15.0 FF Lime stone / Adolomite to make up 100%	Stonelite or Adolomite to make up 100%
Pigments	As required to give standard Manila color.	None - to be left natural color
Coarse Pyrophyllite **	-	5 to 15%

* The following asbestoses are approved. The approximate amounts needed of each are indicated:

For J318 - Nicolet 7TG or Johns Manville AX-2390M 8 to 12%.
For J766 - Nicolet 7TG 10 to 14% or Johns Manville 7TF2 14 to 20%

** The sum of the CCO whiting and coarse pyrophyllite is to be 25%. The amounts of each to be used may be varied within the indicated limits to control application properties (gumminess, smoothness and plasticity).

General: All cements, except topping cement, to be made in natural color. All topping cements, both medium and low alkaline, to be colored to an approximate match of wallboard manila paper. This color standard to be shipped to each producing plant by the Research Department. Exception: Hagersville to color all joint cement to approximate match of manila paper.

Gypsum Wallboard Sales will advise the plants of the divisions or districts into which medium alkaline and low alkaline cements will be shipped.

/ Indicates change

USG 0P010 0481

PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 10-16-52 Page 2 of 10 Cancels Page 4 or13 Dated 8-27-51

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate J639B	Sweetwater J440P	Sweetwater J735
Casein	7.0	7.0	6.6
Sodium Pentachlorphenate*	0.2	0.2	0.2
Ammonium Oxalate	1.25	1.25	1.25
Hydrated Lime, to give normal pH & solution rate -	.15 - .4	.15 - .4	.15 - .3
Dicyandiamide (note 1)	0.5	0.5	0.5
Asbestos Floats **	As required to give normal consistency		
	8-25	8-25	Appr.20 JM7TF2 or 8-10 P.Carey
A200 Talc	-	25.0	-
M350 Sericite Mica (note 2)	20.0	-	20.0
3X Mineralite	-	-	-
Mica C, Formula number	V	II	V
Peerless Clay	15.0	15.0	-
Carbonate Filler ***	To make up 100%	-	-
Carbotex	-	To make up 100%	To make up 100%
Merpol C	0.2	-	-
Camphor	0.04	-	-
CS-112	-	-	0.4
Sterox CD .1% plus .1% tributylphosphate (note 3)	-	-	0.2

Cements to be natural color (i.e. unpigmented)

NOTES:

(1) Sweetwater to delete dicyndiamide in J440P cement for Texas when dicyndiamide is not available in sufficient quantity, and into all markets from February to June, inclusive.

(2) When Philip Carey asbestos is used in J735 cement, one half the M350 sericite may be replaced with A200 talc.

(3) In cool weather, Sterox CD may be thinned slightly with I.P. alcohol to thin it sufficiently to permit spraying it into the batch.

GENERAL REVISION

OP010 0482

Operating Division PRODUCT PROCEDURE Approved:	PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 12-9-52 Page 1 of 10 Cancels Page 3 of 13 Dated 10-16-52

MANUFACTURING PLANTS

Gypsum, New Brighton, South Gate, Sweetwater and Hagersville.

JOINT CEMENTS: (High Alkaline Formulas)

	Hagersville	Gypsum and New Brighton
	J318	J766L
Lauxein	4.0%	-
Soy Flour	-	2.5%
Casein	7.0	7.3
Hydrated Lime	3.0	1.0
Kemikal Oxide	-	2.0
Trisodium phosphate	1.7	-
Sodium Oxalate	-	1.1
Sodium Pentachlorphenate	.3	.3
Talc (Broughton M4)	10.0	-
Mineralite DXW	-	15.0
Asbestos *	As required to give application properties.	normal consistency and application. See Note.
Mica C	Per Formula V	Per Formula V
CCO Whiting **	15.0	10 to 25%
Carbonate Fillers	15.0 FF Lime stone / Adolomite to make up 100%	Stonelite or Adolomite to make up 100%
Pigments	As required to give standard Manila color.	None - to be left natural color
Coarse Phyrophyllite**	-	5 to 15%

* The following asbestoses are approved. The Approximate amounts needed of each are indicated:

For J318 - Nicolet 7TG, Johns Manville AX-239OM, or Asbestos Corp. 797-7TG-6-12%
For J766L - Nicolet 7TG or Johns Manville AX-239OM, or Asbestos Corp. 797-7TF-8-14%.

** The sum of the CCO whiting and coarse pyrophyllite is to be 25%. The amounts of each to be used may be varied within the indicated limits to control application properties (gumminess, smoothness and plasticity).

General: All cements, except topping cement, to be made in natural color. All topping cements, both medium and low alkaline, to be colored to an approximate match of wallboard manila paper. This color standard to be shipped to each producing plant by the Research Department. Exception: Hagersville to color all joint cement to approximate match of manila paper.

Gypsum Wallboard Sales will advise the plants of the divisions or districts into which medium alkaline and low alkaline cements will be shipped.

/ Indicates change

OP010 0479

[illegible]	PERF-A-TAPE CEMENT	NO. [illegible]
		DATE [illegible]53
	GYPSUM	PAGE 1 of 1
APPROVED: [illegible]		CANCELS DATED NEW

This temporary bulletin authorizes Gypsum to manufacture and ship the following formulated Perf-A-Tape Cement to the Milwaukee Market when "Special Milwaukee Formula" is noted on the 379 order form:

PERF-A-TAPE CEMENT - FORMULA J801V - For all 25# bags of Perf-A-Tape Cement and 250 bags Perf-A-Tape Joint System:

Casein	7.0
Sodium Pentachlorophenate	0.25
Ammonium Oxalate	1.25 - 1.4
Hydrated Lime to give normal pH & solution rate	.15 - .3
Dicyandiamide	0.5
Asbestos Fiber	As required to give normal consistency approx. range 8 - 15
CCO Whiting, Stonelite & BI White #1 Grade	15.0 (2/3 BI White & 1/3 mixture CCO Whiting and Stonelite)
DEW Mineralite or Ser-X	15.0
Mica C Formula Number	V x 1.1
Carbonate Filler	To make up 100%
Neutralizer #5050 (1)	.003
Marex Alginate	0.3
Sterox CD	.1%
Tributylphosphate (1)	.05

(1) The liquid wetting agents - Sterox CD, Tributylphosphate and Neutralizer #5050 are [illegible] in proper proportions and sprayed into the batch [illegible]. In cold weather, the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying.

[illegible] SLIGHTLY DEEPER THAN PRESENT TOPPING CEMENT.

[illegible]

GP007 0903

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE CEMENT	No. 61-2-22E Date 4-22-53 Page 1 of 1
Approved: JWTK	SWEETWATER	Cancels Dated NEW

This temporary bulletin authorizes shipments totalling 10,000 lb. of the following low alkaline cement on direct order from, or orders approved by, Wallboard Sales, Department 141, Chicago.

FORMULA J-639B

Casein	7.0
Sodium Pentachlorphenate	0.2
Ammonium Oxalate	1.25
Hydrated Lime (to give normal pH and solution rate)	.15 - .4
Dicyandiamide	0.5
JM AX-2390 M Asbestos*	8- 15% approximate range
M350 Sericite	20.0
Mica C	Formula V value
Peerless Clay	15.0
Carbotex	To make up 100%
Sterox CD (.1%) plus .1%	
Tributyl Phosphate	0.2

* The stated percentage range for asbestos are guides only, not absolute maximum or minimum values. If it is necessary to regularly go above or below the suggested range to control consistency the Research Department is to be advised, and a 5 pound sample of the asbestos in question submitted for tests. Do not use Nicolet or Asbestos Corporation Asbestoses in this cement.

Raw Materials As shown in Bulletin 61-2-22

Processing As shown in Bulletin 61-2-22

Finished Product

Tests As shown in Bulletin 61-2-22

Note: Close control of the consistency of this cement to within the prescribed limits is important to insure optimum pumping properties in an Ames Machine.

Packaging In 25 lb. bags only

Labels and Stencils Bags to carry the "Ames Machine Cement" label

OP007 0733

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 5-5-53 Page 1 of 10
Approved:		Cancels Page 1 Dated 12-9-52

MANUFACTURING PLANTS

Gypsum, New Brighton, South Gate, Sweetwater and Hagersville.

JOINT CEMENTS: (High Alkaline Formulas)

	Hagersville	Gypsum and New Brighton
	J318	J766L
Lauxein	4.0%	-
Soy Flour	-	2.5%
Casein	7.0	7.3
Hydrated Lime	3.0	1.0
Kemikal Oxide	-	2.0
Trisodium phosphate	1.7	-
Sodium Oxalate	-	1.1
Sodium Pentachlorphenate	.3	.3
Talc (Broughton M4)	10.0	-
Mineralite DXW	-	15.0
Asbestos *	As required to give normal consistency and application properties.	See Note.
Mica C	Per Formula V	Per Formula V
CCO Whiting **	15.0	10 to 25%
Carbonate Fillers	15.0 FF Lime stone / Adolomite to make up 100%	Stonelite or Adolomite to make up 100%
Pigments	As required to give standard Manila color.	None - to be left natural color
Coarse Pyrophyllite**	-	5 to 15%

* The following asbestoses are approved. The approximate amounts needed of each are indicated:

For J318 - Nicolet 7TG, Johns Manville AX-239OM,or Asbestos Corp. 797-7TG-6-12%
For J766L - Nicolet 7TG or Johns Manville AX-239OM, or Asbestos Corp. 797-7TF 8-14%.

** The sum of the CCO whiting and coarse pyrophyllite is to be 25%. The amounts of each to be used may be varied within the indicated limits to control application properties (gumminess, smoothness and plasticity).

General: All cements, except topping cement, to be made in natural color. All topping cements, both medium and low alkaline, to be colored to an approximate match of wallboard manila paper. This color standard to be shipped to each producing plant by the Research Department. Exception: Hagersville to color all joint cement to approximate match of manila paper.

Refer to Bulletin 61-1-12 covering shipping instructions.

/ Indicates change

OP010 0470

PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 5-5-53 Page 2 of 10 Cancels Page 2 Dated 10-16-52

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate J639B	Sweetwater J735	New Brighton Gypsum J801V
Casein	7.0	6.6	7.0
Sodium Pentachlorphenate*	0.2	0.2	0.25
Ammonium Oxalate	1.25	1.25	1.25
Hydrated Lime, to give normal pH & solution rate -	.15 - .4	.15 - .3	.15 - .3
Dicyandiamide	0.5	0.5	0.5
Asbestos Floats**	As reqd. to give normal consistency 8 - 15	8 - 15	Approximate Range 8 - 15
CCO Whiting	-	-	15.0
M350 Sericite Mica	20.0	20.0	-
DWX Mineralite	-	-	15.0
Mica C Formula number	V	V	V x 1.1
Peerless Clay	15.0	-	-
Carbonate Filler ***	To make up 100%	-	To make up 100%
Carbotex	-	To make up 100%	-
Merpol C	0.2	-	-
Camphor	0.04	-	-
CS-112	-	0.4	0.3
Sterox CD .1% plus .1% tributylphosphate (note 1)	-	0.2	0.2

Cements to be natural color (i. e. Unpigmented)

Notes:

(1) In cool weather, Sterox CD may be thinned slightly with I.P. alcohol to thin it sufficiently to permit spraying it into the batch.

GENERAL REVISION

DP010 0471

PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 6-8-53 Page 2 of 10 Cancels Page 2 Dated 5-5-53

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate J639B	Sweetwater J735	New Brighton Gypsum J801V
Casein	7.0	6.6	7.0
Sodium Pentachlorphenate*	0.2	0.2	0.25
Ammonium Oxalate	1.25	1.25	1.25
Hydrated Lime, to give normal pH & solution rate -	.15 - .4	.15 - .3	.15 - .3
Dicyandiamide	0.5	0.5	0.5
Asbestos Floats**	As reqd. to give normal consistency 8 - 15	8 - 15	Approximate Range 8 - 15
CCQ Whiting	-	-	15.0
M350 Sericite Mica	20.0	20.0	-
DWX Mineralite	-	-	15.0
Mica C Formula number	V	V	V x 1.1
Peerless Clay	15.0	-	-
Carbonate Filler ***	To make up 100%	-	To make up 100%
Carbotex	-	To make up 100%	-
Merpol C	0.2	-	.15%
Camphor	0.04	-	-
CS-112	-	0.4	0.3
Sterox CD .1% plus .1% tributylphosphate (note 1)	-	0.2	0.2

Cements to be natural color (i. e. Unpigmented)

Notes:

(1) In cool weather, Sterox CD may be thinned slightly with I.P. alcohol to thin it sufficiently to permit spraying it into the batch.

(2) Sweetwater may substitute DXU Mineralite for M-350 Sericite Mica at the option of the plant.

GENERAL REVISION

OP010 0469

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE CEMENT	No. 61-2-22D Date 6-8-53 Page 1 of 1
Approved: JWTK	SWEETWATER	Cancels Page 1 Dated 4-22-53

This temporary bulletin authorizes shipments totalling 10,000 lb. of the following low alkaline cement on direct order from, or orders approved by, Wallboard Sales, Department 141, Chicago.

FORMULA J-639B

Casein	7.0
Sodium Pentachlorphenate	0.2
Ammonium Oxalate	1.25
Hydrated Lime (to give normal pH and solution rate)	.15 - .4
Dicyandiamide	0.5
JM AX-2390 M Asbestos*	8- 15% approximate range
M350 Sericite or DXW Mineralite	20.0
Mica C	Formula V value
Peerless Clay	15.0
Carbotex	To make up 100%
Sterox CD (.1%) plus .1%	
Tributyl Phosphate	0.2

* The stated percentage range for asbestos are guides only, not absolute maximum or minimum values. If it is necessary to regularly go above or below the suggested range to control consistency the Research Department is to be advised, and a 5 pound sample of the asbestos in question submitted for tests. Do not use Nicolet or Asbestos Corporation Asbestoses in this cement.

Raw Materials As shown in Bulletin 61-2-22

Processing As shown in Bulletin 61-2-22

Finished Product

Tests As shown in Bulletin 61-2-22

Note: Close control of the consistency of this cement to within the prescribed limits is important to insure optimum pumping properties in an Ames Machine.

Packaging In 25 lb. bags only

Labels and Stencils Bags to carry the "Ames Machine Cement" label

Cancelled 2-25-54

OP007 0737

Operating Division PRODUCT PROCEDURE Approved: JWTK	RUF-A-TAPE CEMENT	No. 61-2-22J. Date 3-10-54 Page 1 of 1 Cancels Dated (New)

This temporary bulletin authorizes Gypsum and New Brighton to make up to 5000 lbs. each of Formula J-815C.

FORMULA J-815C

Casein	3.5%
TL22A1 protein	4.0
Marvel Ammonium Alginate	.3
Ammonium oxalate	1.2
Pow'd Ammonium pentaborate	1.2
Dicyandiamide	.5
Hydrated lime	.1
Asbestos	11.0 to 14.0
CCO whiting	15.0
DKW Mineralite	15.0
Mica C	2/3 V If fineness of Mica C is below
S.S. Mica	1/3 V 55% passing 325 mesh. If finer Mica C is available use full amount formula V quantity and omit S.S. Mica.
A dolomite or Stonelite	To make up 100%
Sterox CD	0.1
Tributylphosphate	.1
Neutralizer #5050	.007 (Magna, Mabee and Reynard)
Consistency	- 67-70 cc, ideal 68 cc
Rewet Test	- 0-1

Other specification as per bulletin 61-2-22.
Other product tests per bulletin 61-2-22.

This temporary bulletin expires 6-15-54.

DP007 0793

Operating Division PRODUCT PROCEDURE Approved: JWTC	PERF-A-TAPE CEMENT GYPSUM & NEW BRIGHTON	No. 61-2-22K Date 4-2-54 Page 1 of 1 Cancels Dated (New)

This temporary bulletin authorizes Gypsum and New Brighton to manufacture Formula J801V Perf-A-Tape Cement until sufficient raw materials can be obtained to manufacture Formula J815C Perf-A-Tape A-Tape Cement.

FORMULA

Casein	- 7.0
Sodium Pentachlorphenate	- 0.25
Ammonium Oxalate (See note 1)	- 1.25% - 1.4%
Hydrated Lime, to give normal pH & solution rate	- .15 - .3
Dicyandiamide	- 0.5
Asbestos Floats	- Approximate Range 8 - 15
CCO Whiting	- 15.0
IMX Mineralite	- 15.0
Mica C Formula Number	- Vx 1.1
Carbonate Filler	- To make up 100%
Marpol C	- .15%
CS-112	- 0.3
Sterox CD ,1% plus .1% Tributylphosphate (See Note 2)	- 0.2

Note:

1. The lower amount of ammonium oxalate should be used except when mixing test with 25 lb. cement in enough water to give normal consistancy show excess tendency to give lumps, which do not soak out after one hour standing. Increase the ammonium up to 1.4% only when necessary to help control lumping during mixing.

2. In cool weather, Sterox CD may be thinned slightly with I.P. alcohol to thin it sufficiently to permit spraying into the batch.

NP007 0799

PERF-A-TAPE JOINT CEMENTS			No. 61-2-22 Date 4-5-54 Page 2 of 10 Cancels Page 2 Dated 8-10-53
JOINT CEMENTS - Low Alkaline Formulae:			
	South Gate J639 B	Sweetwater J735	Gypsum & New Brighton J815 C
Casein	7.0	6.6	3.5
Refined soy protein	-	-	4.0
Sodium pentachlorphenate (See Note 4)	.2	.2	-
Ammonium pentaborate	-	-	1.2
Ammonium oxalate	1.2 to 1.4 (See Note 3)	1.2 to 1.4	1.2
Marex alginate	.1 to .2	.4	.3
Hydrated lime	.1 to .3	.1 to .3	.0 to .15
Dicyandiamide	.5	.5	.5
Asbestos Floats (See Note 5)	As req'd to give normal consistency and application properties-normal range 10 to 15%.		
CCO Whiting	-	-	15.0
M350 Sericite or DXW Mineralite	20.0	20.0	15.0
Mica C	Per Formula V	Per Formula V	See Note 2
Peerless Clay	15.0	-	-
Carbonate Filler	To make up 100%	-	See Note 6
Sterox CD (Note 1)	.1	.1	.1
Tributylphosphate (Note 1)	.1	.1	.1
Neutralizer #5050 " "	.007	.007	.007

Formula Notes:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying."

"Merpol C (and Camphor) are now obsolete items and their use will be discontinued as soon as supplies are exhausted."

(2) "The mica used may be all mica C, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica C with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $FS_1 + (1-F)S_2 = 55$. Both micas should, of course, be within the permissable limits for fineness and density for joint cements as given in the graph, p.4, of Bul. 6-30-3."

Mica Formula V - % Mica = $4.5 + .0396D^2 - .155D + .0005S^2 + .038$.
D is the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

OP010 0455

Oct

Operating Division PRODUCT PROCEDURE Approved: JWT	PERF-A-TAPE TEMPORARY	No. 61-2-22J Date 3-25-54 Page 1 of 1 Cancels Page 1 Dated 3-19-54

This temporary bulletin authorizes Gypsum to make up to 5000 lbs. and New Brighton to make up to 50,000 lb. of Formula J-815C.

FORMULA J-815C

Casein	3.5%	
Th2241 protein	4.0	
Marez Ammonium Alginate	.3	
Ammonium oxalate	1.2	
Powd Ammonium pentaborate	1.2	
Dicyandiamide	.5	
Hydrated lime	.1	
Asbestos	11.0 to 14.0	
CCO whiting	15.0	
DDV Mineralite	15.0	
Mica C	2/3 V	If fineness of Mica C is below 55% passing 325 mesh. If finer Mica C is available use full amount formula V quantity and omit S.S. Mica.
S.S. Mica	1/3 V	
A dolomite or Stonelite	To make up 100%	
Sterox CD	0.1	
Tributylphosphate	.1	
Neutralizer #5050	.007	(Magna, Mabee and Reynard)
Consistency	- 67-70 cc, ideal 68 cc	
Smut Test	- 0-1	

Other specifications as per bulletin 61-2522
Other product tests per bulletin 61-2-22.

This temporary bulletin expires 6-15-54.

UP007 0791

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE	No. 61-2-24 Date 9-9-54 Page 1 of 4
Approved: JWTe	READY MIXED JOINT CEMENT	Cancels Page 1 Dated 7-9-54

Description:

A resin - emulsion base, ready - mixed Perf-A-Tape cement, with a package life of one year.

Manufacturing Mills: New Brighton, Gypsum, Sweetwater

Formula

Filler Mix	% Non-volatile (Based on Finished Cement)	Lbs.* (for 1052 lb.) (filler charge)
P-80 Mica	(1/3 of Formula V)	59 (approximately)
Silversheen Mica	5.0	59
DXW Mineralite	30.0	356
Asbestos Floats	(as required to give proper consistency to the filler mix)	119 (approximately)
CCO Whiting **	20.0	237
Methocel HG	0.7	8 lbs. 4 oz.
A Dolomite (or Stonelite)	(To make up 90.1% filler mix) **	230 (approximately)
	90.1	1,068

*The 1068 lb. filler charge is made to allow for 1% loss in handling. This will then meet a 1058 lb. charge, the exact quantity required for 150 gallon batch of cement.

**At Sweetwater these ingredients are replaced with Carbotex.

JE-75 Paste Cement	% Non-Volatile	Lbs. for 150 Gal. Batch
Fillers	90.1	1058
Elvacet 81-900	9.0	192
Santicizer - 160	0.9	11
Diacetone Alcohol	—	19
Water	—	78 gallons (approx.)

Formula Breakdown: To be used for calculating lbs. of ingredients needed for a 150 gal. batch of cement

	% Non-Volatile	Lbs.*	Gals./lb.	Gals.*	Lbs. For 150 Gal. Batch
P-80 Mica (1/3 of For. V)	5.0	50	.043	2.15	58.7
Silversheen Mica	5.0	50	.043	2.15	58.7
DXW Mineralite	30.0	300	.043	12.90	352.2
JM AX 2390 M	10.0	100	.052	5.20	117.4
CCO Whiting **	20.0	200	.044	8.80	234.8
A Dolomite (or Stonelite)**	19.4	194	.044	8.54	227.8
Methocel HG	0.7	7	.120	0.84	8.22
Elvacet 81-900(55% solids)	9.0	164	.110	18.04	192.5
Santicizer - 160	0.9	9	.108	.97	10.57
Diacetone Alcohol	(volatile)	16	.130	2.13	18.8
Water	(volatile)	550	.120	66.00	645.7
Totals	100.0%	1640		127.72	1,925.39

*For 1000 lbs. total non-volatile

**At Sweetwater these ingredients are replaced with Carbotex (bulking value .044 Gal./Lb.)

/ Indicates Change

DPCC9 0679

PERF-A-TAPE
READY MIXED JOINT CEMENT

$\frac{127.71}{1640}$ = .0779 gals./lb.

$\frac{150 \text{ gals.}}{.0779 \text{ gals./lb.}}$ = 1926 lbs. for a 150 gal. batch

To calculate the lbs. of each ingredient needed for 150 gals. of cement, see the following examples:

Example P-80 Mica: $\frac{1926}{1640} = \frac{x}{50}$

$1.174 = \frac{x}{50}$

$x = 58.7$ lbs.

Example DXW Mineralite: $1.174 = \frac{x}{300}$

$x = 352.2$ lbs.

Raw Materials

Methocel HG - Per Bulletin 6-16-5

Diacetone Alcohol - Acetone - free grade. Source - Carbide and Carbon Co.

Elvacet 81 - 900 - A polyvinyl acetate emulsion, 55% non-volatile, supplied as a milky-white, creamy liquid. To be free from dried skins or settled out solids. From DuPont.

Note: Protect from temp. below 40°F. Rotate emulsion stocks so that none will be kept more than two months before use.

Santicizer - 160 - A phthalate type plasticizer supplied as a clear, oily liquid. Has a slight aromatic odor. Source: Monsanto Co.

Mica C (P-80) - Per bulletin 6-30-3.

Silversheen Mica - Per bulletin 6-30-3.

DXW Mineralite - Per bulletin 6-30-3.

Asbestos - To use present joint cement grades.

CCO Whiting - Per bulletin 6-30-7.

A Dolomite - Per bulletin 58-2-2.

Stonelite - Per bulletin 6-30-7.

Carbotex - Per bulletin 6-30-7.

Processing

A. Filler Mix - The dry ingredients are first mixed in a Broughton mixer, and then mikropulverized using a coarse screen as is done in manufacturing dry powder products.

Note: The mixer-pulverizer-packer unit is to be thoroughly cleaned of other products before making this filler mix.

Consistency Control Test on Filler Mix - A 300 gram representative sample of the filler mix should be taken after the fillers are blended and mikropulverized. The sample is mixed thoroughly with water at a consistency of 74 cc per 100 gms. (Mixing the powder into the water eliminates lumping to a large degree; any small lumps will disappear with vigorous stirring.) About 2 minutes is allowed for mixing; then the mixture is allowed to stand undisturbed for 10 minutes. After standing, the mixture is stirred vigorously again for about 30 seconds. A Brabender reading is then taken. The reading is recorded after the Brabender has run 3 minutes (or sooner if the reading has become constant). The temperature of the mixture is taken last. The Brabender reading of the sample should match the Research standard sample reading of (350/30) units at 75°F / 5°F. The asbestos content of the filler mix must be increased if the Brabender reading is too low, and vice versa.

/ Indicates Change

PPCO 0677

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved: JWTK	PERF-A-TAPE CEMENT SWEETWATER	No. 61-2-22-F Date 3-31-55 Page 1 of 1 Cancels NEW Dated

This temporary bulletin authorizes Sweetwater to manufacture the following Perf-A-Tape Cement, J838 formula, for use in the Denver District.

FORMULA:

Casein	7.0%
Marex Alginate	0.3%
Ammonium Oxalate	1.25%
Hydrated Lime	As required (Normal .15%)
Dowicide G (or equivalent)	0.2%
Dicyandiamide	0.5%
Asbestos Floats	As required for st'd. consistency
* Mica AMC (P80F)	1.1 x formula V
DXW Mineralite	15.0%
Carbotex	To make 100%
Sterox CD	0.1%
Tributylphosphate	0.1%
Neutralizer 5050	0.003%

* Note greater than usual Mica c[illegible]nt.

Finished Products Tests

Consistency	68cc standard-range 67-70 cc
Application	To match J838 sample from Research
Other Tests	Per Bulletin 61-2-22 for J735 cements.

Package Standard Perf-A-Tape Joint Cement - 25 lb. bags.
Mark with the letter "D" following the batch code number.

This bulletin expires 1-1-56.

NP001 0974

PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 5-2-55 Page 2 of 10 Cancels Page 2 Dated 4-5-54

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate J639 B	Sweetwater J735	Gypsum & New Brighton J815 C
Casein	7.0	6.6	3.5
Refined soy protein	-	-	4.0
Sodium pentachlorphenate (See Note 4)	.2	.2	-
Ammonium pentaborate	-	-	1.2
Ammonium oxalate	1.2 to 1.4 (See Note 3)	1.2 to 1.4	1.2
Marex alginate	.1 to .2	.4	.3
Hydrated lime	.1 to .3	.1 to .3	.0 to .15
Dicyandiamide	.5	.5	.5
Asbestos Floats (See Note 5)	As req'd to give normal consistency and application properties-normal range 10 to 15%.		
CCO Whiting	-	-	15.0
M350 Sericite or DXW Mineralite *	20.0	20.0	15.0
Mica C	Per Formula V	Per Formula V	See Note 2
Peerless Clay	15.0	-	-
Carbonate Filler	To make up 100%	-	See Note 6
Sterox CD (Note 1)	.1	.1	.1
Tributylphosphate (Note 1)	.1	.05	.05
Neutralizer #5050 " "	.003	.003	.003

* New Brighton and Gypsum may use Ser-X in place DXW Mineralite in J815C Formula.

Formula Notes:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying."

"Merpol C (and Camphor) are now obsolete items and their use will be discontinued as soon as supplies are exhausted."

(2) "The mica used may be all mica C, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica C with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $FS_1 + (1-F)S_2 = 55$. Both micas should, of course, be within the permissable limits for fineness and density for joint cements as given in the graph, p.4, of Bul. 6-30-3."

Mica Formula V - % Mica = $4.5 + .0396D^2 - .155D + .0005S^2 + .03S$.
D is the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

+ Indicates Change

OP010 0451

PERF-A-TAPE JOINT CEMENTS	No. 01-2-22 Date 12-8-55 Page 2 of 10 Cancels page 2 Dated 5-2-55

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate J639 B	Sweetwater J735	Gypsum & New Brighton J815 C
Casein	7.0	6.6	3.5
Refined soy protein	-	-	4.0
Sodium pentachlorphenate (See Note 4)	.2	.2	-
Ammonium pentaborate	-	-	1.2
Ammonium oxalate	1.2 to 1.4 (See Note 3)	1.2 to 1.4	1.2
Merex alginate	.1 to .2	.4	.3
Hydrated lime	.1 to .3	.1 to .3	.0 to .15
Dicyandiamide	.5	.5	.5
Asbestos Floats (See Note 5)	As req'd to give normal consistency and application properties-normal range 10 to 15%.		
CCO Whiting	-	-	15.0
M350 Sericite or DXW Mineralite *	20.0	20.0	15.0
Mica C	Per Formula V	Per Formula V	See Note 2
Peerless Clay	15.0	-	-
Carbonate Filler	To make up 100% - See note 6		
Sterox CD (Note 1)	.1	.1	.1
Tributylphosphate (Note 1)	.1	.05	.05
Neutralizer #5050 " "	.003	.003	.003

* New Brighton and Gypsum may use Ser-X in place DXW Mineralite in J815C Formula.

Formula Notes:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying."

"Merpol C (and Camphor) are now obsolete items and their use will be discontinued as soon as supplies are exhausted."

(2) "The mica used may be all mica C, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica C with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $F S_1 + (1-F) S_2 = 55$.

Both micas should, of course, be within the permissable limits for fineness and density for joint cements as given in the graph, p.4, of Bul. 6-30-3."

Mica Formula V - % Mica = $4.5 + .0396D^2 - .155D + .0005S^2 + .03S$.
D is the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

+ Indicates Change

DP010 0442

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE CEMENT	No. 61-2-22-A
		Date 12-2-55
		Page 1 of 1
Approved:	SOUTH GATE	Cancels Page 1
		Dated 10-25-55

This temporary bulletin authorizes South Gate to supply Northern California, Southern California, Los Angeles and Arizona Districts with J873B formula Perf-A-Tape described below. All other districts to continue to receive J639B formula:

FORMULA:

	J873B
Casein	3.5
T422A1 Protein	3.5
Marex Alginate	.4
Ammonium Oxalate	1.0
Ammonium Pentaborate	1.2
Hydrated Lime	.1 to .3
Dicyandiamide	.5
P80 Mica (JC(T))	1/2 Formula V
325 Mesh Water Ground Mica	1/2 Formula V
7RF1 Asbestos	As needed (about 9%)
M-350 Sericite Mica	20.0
#400 Whiting (or equivalent)	To make 100%
Tributyl Phosphate	.1
Sterox CD	.1
Neutralizer 5050	.003

PRODUCT TESTS:

Mixing and application - to match Research sample
Consistency - 70-73 cc (at 500 Brabender)
Color - Natural Gray White
Other Tests - as for J639B Cement, Bulletin 61-2-22
pH 8.1 - 8.5

PACKAGING, IDENTIFICATION, ETC.:

Per Bulletin 61-2-22

This bulletin expires 3-1-56.

/ Indicates Change

TP007 0674

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE CEMENT	No. 61-2-22-W
		Date 12-30-55
		Page 1 of 1
Approved: JWTK	SWEETWATER	Cancels Page 1 Dated 3-31-55

This temporary bulletin authorizes Sweetwater to manufacture the following Perf-A-Tape Cement, J838 formula, for use in the Denver District.

FORMULA:

Casein	7.0%
Marex Alginate	0.3%
Ammonium Oxalate	1.25%
Hydrated Lime	As required (Normal .15%)
Dowicide G (or equivalent)	0.2%
Dicyandiamide	0.5%
Asbestos Floats	As required for st'd. consistency
*Mica AMC (P60F)	1.1 x Formula V
DXW Mineralite	15.0%
Carbotex	To make 100%
Sterox CD	0.1%
Tributylphosphate	0.1%
Neutralizer 5050	0.003%

* Note greater than usual Mica content.

Finished Products Tests

Consistency	68 cc standard-range 67-70 cc
Application	To match J838 sample from Research
Other Tests	Per Bulletin 61-2-22 for J735 cements.
Package	Standard Perf-A-Tape Joint Cement - 25 lb. bags. Mark with the letter "D" following the batch code number.

/ This bulletin expires 7-1-56.

/ Indicates Change

DP001 091

OPERATING DIVISION		NO.
PRODUCT PROCEDURE	PERF-A-TAPE TOPPING CEMENT FOR DENVER DISTRICT	DATE
		PAGE
APPROVED	SWEETWATER	CANCELLED DATE

This temporary bulletin authorizes Sweetwater to ship up to 10,000 lb. of formula JP1110 topping cement as directed by Sales for field trials in the Denver District.

Formula	JP 1110
Casein	2.5%
T402A1 protein	[illegible]
Marex alginate	0.3
Hydrated lime	as req'd - approx. 0.05
Ammonium oxalate	1.0
Ammonium pentaborate	1.2
Dicyandiamide	0.1
Mica GC (PSGF)	Per formula V
DXW Mineralite	15.0
Nicolet asbestos TTC (25)	2/3 total asbestos (approx. [illegible]%)
Quebec asbestos TRF	1/3 " ([illegible]%)
CCO Whiting	15.0
Stonelite	to make 100%
Sterox CD	0.1
Tributylphosphate	0.05
Neutralizer 5050	0.003
Pigments	as req'd.

Processing, Raw Materials Specifications, Finished Product Tests per Bull 61-2-23. Pack in 25 lbs. Perf-A-Tape Topping Cement Bags.

This bulletin expires 2-1-57.

OP007 1645

SPECIAL BULLETIN — Also cancels 61-2-22-J

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE CEMENT	No. 61-2-22-A
		Date 1-23-56
		Page 1 of 1
Approved: JWT14	SOUTH GATE	Cancels Page 1 Dated 12-2-55

This temporary bulletin authorizes South Gate to supply Northern California, Southern California, Los Angeles, and Arizona Districts with J877C formula, Perf-A-Tape described below. All other districts to continue to receive J639B formula:

FORMULA:	J877C
Casein	3.5
T422A1 Protein	3.5
Marex Alginate	.3
Ammonium Oxalate	1.0
Ammonium Pentaborate	1.2
Hydrated Lime	.1 to .3
Dicyandiamide	.5
P80 Mica (JC(T))	1/2 Formula V
325 Mesh Water Ground Mica	1/2 Formula V
7RF1 Asbestos	As needed (about 9%)
M-350 Sericite Mica	15.0
#400 Whiting (or equivalent)	to make 100%
Tributyl Phosphate	.1
Sterox CD	.1
Neutralizer 5050	.003

PRODUCT TESTS:

Mixing and application - to match Research Sample.
Consistency - 70-73 cc (at 500 Brabender)
Color - Natural Gray White
Other Tests - as for J639B Cement, Bulletin 61-2-22
pH 8.1 - 8.5

PACKAGING, IDENTIFICATION, ETC.:

Per Bulletin 61-2-22.

This bulletin expires 3-1-56.

/ Indicates Change

TP007 0671

[illegible]	PERF-A-TAPE JOINT CEMENT FORMULA J1007B HAGERSVILLE	[illegible] [illegible] [illegible] CANCELS DATED NEW

This temporary bulletin authorizes Hagersville to manufacture and ship Perf-A-Tape Joint Cement using modified formula J1007B Specifications as follows:

Formula: J1007B

Casein (Montreal fine grind)	[illegible]
Marox Alginate	[illegible]
Ammonium Oxalate	[illegible]
Ammonium Pentaborate	[illegible]
Hydrated Lime	[illegible]
Dicyandiamide	
CM-7BP1 Asbestos	[illegible]
Mica 4C	[illegible]
M-4 Talc	[illegible]
White Limestone [illegible]	[illegible]
FF Limestone	[illegible]
Liquid Mix [illegible]	[illegible]

Consistency: [illegible]

Other specifications per [illegible]

This bulletin [illegible]

OP007 1057

PERF-A-TAPE JOINT CEMENTS			No. 61-2-22 Date 2-16-56 Page 2 of 10 Cancels page 2 Dated 12-28-55
JOINT CEMENTS - Low Alkaline Formulae:			
	South Gate J639 B	Sweetwater J735	Gypsum & New Brighton J815 C
Casein	7.0	6.6	3.5
Refined soy protein	-	-	4.0
Sodium pentachlorphenate (See Note 4)	.2	.2	-
Ammonium pentaborate	-	-	1.2
Ammonium oxalate	1.2 to 1.4 (See Note 3)	1.2 to 1.4	1.2
Marex alginate	.1 to .2	.4	.3
Hydrated lime	.1 to .3	.1 to .3	.0 to .15
Dicyandiamide	.5	.5	.5
Asbestos Floats (See Note 5)	As req'd to give normal consistency and application properties-normal range 10 to 15%.		
CCO Whiting	-	-	15.0 (Note 6)
M350 Sericite or DXW Mineralite *	20.0	20.0	15.0
Mica C	Per Formula V	Per Formula V	See Note 2
Peerless Clay	15.0	-	-
Carbonate Filler	To make up 100% - See note 6		
Sterox CD (Note 1)	.1	.1	.1
Tributylphosphate (Note 1)	.1	.05	.05
Neutralizer #5050 " "	.003	.003	.003

* New Brighton and Gypsum may use Ser-X in place DXW Mineralite in J815C Formula.

Formula Notes:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying."

"Merpol C (and Camphor) are now obsolete items and their use will be discontinued as soon as supplies are exhausted."

(2) "The mica used may be all mica C, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica C with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $F S_1 + (1-F) S_2 = 55$. Both micas should, of course, be within the permissable limits for fineness and density for joint cements as given in the graph, p.4, of Bul. 6-30-3."

Mica Formula V - % Mica = $4.5 + .0396D^2 - .155D + .0005S^2 + .03S$.
D is the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

+ Indicates Change

OP010 0432

[illegible]

Operating Division PRODUCT PROCEDURE Approved: JWTK	PERF-A-TAPE CEMENT SOUTH GATE	No. 61-2-22-A Date 2-16-56 Page 1 of 1 Cancels Page 1 Dated 1-23-56

This temporary bulletin authorizes South Gate to supply Northern California, Southern California, Los Angeles, and Arizona Districts with J877C Formula, Perf-A-Tape described below. All other districts to continue to receive J6393 Formula:

FORMULA:

	J877C
Casein	3.5
TERRAL Protein	3.5
Marox Alginate	.3
Ammonium Oxalate	1.0
Ammonium Pentaborate	1.2
Hydrated Lime	.1 to .3
Diethylamide	.5
[illegible] Mica (JC(T))	1/2 Formula V
[illegible] Mesh Water Ground Mica	1/2 Formula V
[illegible] Asbestos	As needed (about 9%)
[illegible] Serecite Mica	15.0
[illegible] Whiting (or equivalent)	To make 100%
Tributyl Phosphate	.1
Steron CD	.1
Neutraliser 5050	.003

PRODUCT TESTS:

Mixing and application - to match Research sample
Consistency - 70-73 cc (at 500 Drabender)
Color - Natural Gray White
[illegible] Tests - as for J6393 Cement, Bulletin 61-2-22.
[illegible] 8.2 - 8.5

[illegible]:

[illegible] Bulletin 61-2-22.

[illegible] Bulletin expires [illegible]

[illegible] Indicates Change

OPO07 0672

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 3-21-56 Page 1 of 10
Approved: JWTK		Cancels Page 1 Dated 5-5-53

MANUFACTURING PLANTS

Gypsum, New Brighton, South Gate, Sweetwater and Hagersville.

JOINT CEMENTS: (High Alkaline Formulas)

D

	Hagersville
	J318
Lauxcin	4.0%
Cascin	7.0
Hydrated Lime	3.0
Trisodium phosphate	1.7
Sodium Pentachlorphenate	.3
Talc (Broughton M4)	10.0
Asbestos *	As required to give normal consistency and application properties.
Mica C	Per Formula V
CCO Whiting **	15.0
Carbonate Fillers	15.0 FF Lime stone / Adolomite to make up 100%
Pigments	As required to give standard Manila color.
Coarse Pyrophyllite**	-

* The following asbestoses are approved. The approximate amounts needed of each are indicated:

For J318 - Nicolet 7TG, Johns Manville AX-239OM, or Asbestos Corp. 797-7TG-6-12%

** The sum of the CCO whiting and coarse pyrophyllite is to be 25%. The amounts of each to be used may be varied within the indicated limits to control application properties (gumminess, smoothness and plasticity).

General: All cements, except topping cement, to be made in natural color. All topping cements, both medium and low alkaline, to be colored to an approximate match of wallboard manila paper. This color standard to be shipped to each producing plant by the Research Department. Exception: Hagersville to color all joint cement to approximate match of manila paper.

Refer to Bulletin 61-1-12 covering shipping instructions.

OP010 0423

D Indicates Deletion

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE	No. 61-2-24
		Date 4-2-56
		Page 1 of 4
Approved: JWTK	READY MIXED JOINT CEMENT	Cancels Page 1
		Dated 9-9-54

Description:
A resin - emulsion base, ready-mixed Perf-A-Tape, with a Package life of one year.

Manufacturing Mills: New Brighton, Gypsum, Sweetwater

Formula:

Filler Mix	% Non-Volatile (Based On Finished Cement)	(For 1052 lb.) Lbs.* (Filler Charge)
P-80 Mica	(1/3 of Formula V)	59 (approximately)
Silversheen Mica	5.0	59
DXW Mineralite or Ser-X***	30.0	356
Asbestos Floats	(as required to give proper consistency to the filler mix)	119 (approximately)
CCO Whiting **	20.0	237
Methocel HG	0.7	8 lbs. 4 oz.
A Dolomite (or Stonelite)	(to make up 90.1% filler mix) **	230 (approximately)
	90.1	1068

*The 1068 lb. filler charge is made to allow for 1% loss in handling. This will then meet a 1058 lb. charge, the exact quantity required for 150 gallon batch of cement.
**At Sweetwater these ingredients are replaced with Carbotex.

JE-75 Paste Cement	% Non-Volatils	Lbs. For 150 Gal. Batch
Fillers	90.1	1058
Elvacet 81-900	9.0	192
Santicizer - 160	0.9	11
Diacetone Alcohol	-	19
Water	-	78 gallons(approx.)

***Sweetwater to use DXW Mineralite only.

Formula Breakdown: To be used for calculating lbs. of ingredients needed for a 150 gal. batch of cement.

	% Non-Volatile	Lbs.*	Gals./lb.	Gals.*	Lbs.For 150 Gal. Batch
P-80 Mica (1/3 of For.V)	5.0	50	.043	2.15	58.7
Silversheen Mica or Ser-X***	5.0	50	.043	2.15	58.7
DXW Mineralite	30.0	300	.043	12.90	352.2
JM AX 2390 M	10.0	100	.052	5.20	117.4
CCO Whiting **	20.0	200	.044	8.80	234.8
A Dolomite (or Stonelite)**	19.4	194	.044	8.54	227.8
Methocel HG	0.7	7	.120	0.84	8.22
Elvacet 81-900 (55% solids)	9.0	164	.110	18.04	192.5
Sancticizer - 160	0.9	9	.108	.97	10.57
Diacetone Alcohol	(Volatile)	16	.130	2.13	18.8
Water	(Volatile)	550	.120	66.00	645.7
Totals	100.0%	1640		127.72	1925.39

* For 1000 lbs. total non-volatile
**At Sweetwater, these ingredients are replaced with Carbotex (bulking value .044 Gal./Lb.)
***Sweetwater to use DXW Mineralite only.

USG 0676

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE	No. 61-2-24
		Date 4-13-56
		Page 1 of 4
Approved: JWT/K	READY MIXED JOINT CEMENT	Cancels Page 1
		Dated 4-2-56

Description:
A resin - emulsion base, ready-mixed Perf-A-Tape, with a Package life of one year.

Manufacturing Mills: New Brighton, Gypsum, Sweetwater

Formula:

Filler Mix	% Non-Volatile (Based On Finished Cement)	Lbs.* (For 1052 lb.) (Filler Charge)
P-80 Mica	(1/3 of Formula V)	59 (approximately)
Silversheen Mica	5.0	59
DXW Mineralite or Ser-X***	30.0	356
Asbestos Floats	(as required to give proper consistency to the filler mix)	119 (approximately)
CCO Whiting **	20.0	237
Methocel HG	0.7	8 lbs. 4 oz.
A Dolomite (or Stonelite)	(to make up 90.1% filler mix) **	230 (approximately)
	90.1	1068

*The 1068 lb. filler charge is made to allow for 1% loss in handling. This will then meet a 1058 lb. charge, the exact quantity required for 150 gallon batch of cement.
**At Sweetwater these ingredients are replaced with Carbotex.

JE-75 Paste Cement	% Non-Volatile	Lbs. For 150 Gal. Batch
Fillers	90.1	1058
Elvacet 81-900	9.0	192
Santicizer - 160	0.9	11
Diacetone Alcohol	-	19
Water	-	78 gallons(approx.)

***Sweetwater to use DXW Mineralite only.

Formula Breakdown: To be used for calculating lbs. of ingredients needed for a 150 gal. batch of cement.

	% Non-Volatile	Lbs.*	Gals./lb.	Gals.*	Lbs.For 150 Gal. Batch
P-80 Mica (1/3 of For.V)	5.0	50	.043	2.15	58.7
Silversheen Mica	5.0	50	.043	2.15	58.7
≠ DXW Mineralite or Ser-X***	30.0	300	.043	12.90	352.2
JM AX 2390 M	10.0	100	.052	5.20	117.4
CCO Whiting **	20.0	200	.044	8.80	234.8
A Dolomite (or Stonelite)**	19.4	194	.044	8.54	227.8
Methocel HG	0.7	7	.120	0.84	8.22
Elvacet 81-900 (55% solids)	9.0	164	.110	18.04	192.5
Sancticizer - 160	0.9	9	.108	.97	10.57
Diacetone Alcohol	(Volatile)	16	.130	2.13	18.8
Water	(Volatile)	550	.120	66.00	645.7
Totals	100.0%	1640		127.72	1925.39

* For 1000 lbs. total non-volatile
**At Sweetwater, these ingredients are replaced with Carbotex (bulking value .044 Gal./Lb.)
***Sweetwater to use DXW Mineralite only.

M-5791 6/55 (Printed in U.S.A.)

≠ Indicates Change

UPOC9 0674

PERF-A-TAPE
READY MIXED JOINT CEMENT

$\frac{127.71}{1640}$ = .0779 gals./lb.

$\frac{150 \text{ gals.}}{.0779 \text{ gals./lb.}}$ = 1926 lbs. for a 150 gal. batch

To calculate the lbs. of each ingredient needed for 150 gals. of cement, see the following examples:

Example P-80 Mica $\frac{1926}{1640} = \frac{x}{50}$

$1.174 = \frac{x}{50}$

$x = 58.7$ lbs.

Example DXW Mineralite $1.174 = \frac{x}{300}$

$x = 352.2$ lbs.

Raw Materials

Methocel HG - Per Bulletin 6-16-5
Diacetone Alcohol - Acetone - free grade. Source - Carbide and Carbon Co.
Elvacet 81 - 900 - A polyvinyl acetate emulsion, 55% non-volatile, supplied as a milky-white, creamy liquid. To be free from dried skins or settled out solids. From DuPont.
Note: Protect from temp. below 40°F. Rotate emulsion stocks so that none will be kept more than two months before use.

Santicizer - 160 - A phthalate type plasticizer supplied as a clear, oily liquid. Has a slight aromatic odor. Source: Monsanto Co.
Mica C (P-80) - Per bulletin 6-30-3.
Silversheen Mica - Per bulletin 6-30-3.
DXW Mineralite or Ser-X - Per Bulletin 6-146-2
Asbestos - To use present joint cement grades.
CCO Whiting - Per bulletin 6-30-7.
A Dolomite - Per bulletin 58-2-2.
Stonelite - Per bulletin 6-30-7.
Carbotex - Per bulletin 6-30-7.

Processing

A. Filler Mix - The dry ingredients are first mixed in a Broughton mixer, and then micropulverized using a coarse screen as is done in manufacturing dry powder products.

Note: The mixer-pulverizer-packer unit is to be thoroughly cleaned of other products before making this filler mix.

Consistency Control Test on Filler Mix - A 300 gram representative sample of the filler mix should be taken after the fillers are blended and mikropulverized. The sample is mixed thoroughly with water at a consistency of 74 cc per 100 gms. (Mixing the powder into the water eliminates lumping to a large degree; any small lumps will disappear with vigorous stirring.) About 2 minutes is allowed for mixing; then the mixture is allowed to stand undisturbed for 10 minutes. After standing, the mixture is stirred vigorously again for about 30 seconds. A Brabender reading is then taken. The reading is recorded after the Brabender has run 3 minutes (or sooner if the reading has become constant). The temperature of the mixture is taken last. The Brabender reading of the sample should match the Research standard sample reading of (350/30) units at 75°F / 5°F. The asbestos content of the filler mix must be increased if the Brabender reading is too low, and vice versa.

/ Indicates Change

DP0009 0675

PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 4-26-56 Page 2 of 10 Cancels Page 2 Dated 2-16-56

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate J890D	Sweetwater J735	Gypsum & New Brighton J815 C
Casein	3.0	6.6	3.5
Refined Soy Protein	3.0	-	4.0
Sodium Pentachlorphenate (See Note 4)	0.4	.2	-
Ammonium pentaborate	-	-	1.2
Ammonium oxalate	1.1	1.2 to 1.4 (See Note 3)	1.2
Amijel B121	1.1	-	-
CMC 70 High	.25	-	-
Marex Alginate	-	.4	.3
Hydrated Lime	.1 to .2	.1 to .3	.0 to .15
Dicyandiamide	.5	.5	.5
Asbestos Floats (See Note 5)	As req'd to give normal consistency and application properties-normal range 10-15%(9-14% for J890D).		
CCO Whiting	20.00	-	15.0 (Note 6)
M350 Sericite or DXW Mineralite *	20.0	20.0	15.0
Mica C	See Note 2	Per Formula V	Per Formula V
Carbonate Filler	To make up 100% - See Note 6		
Sterox CD (Note 1)	.1	.1	.1
Tributylphosphate (Note 1)	.1	.05	.05
Neutralizer #5050	.003	.003	.003

*New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula.

FORMULA NOTES:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton Mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying."

"Merpol C (and Camphor) are now obsolete items and their use will be discontinued as soon as supplies are exhausted."

(2) "The mica used may be all mica C, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica C with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $FFS_1 + (1-F) S_2 = 55$.

Both micas should, of course, be within the permissible limits for fineness and density for joint cements as given in the graph, p.4 of Bul. 6-30-3.

Mica Formula V - % Mica = $4.5 + .0396D^2 - .155D + .0005S^2 + .03S$.

D is the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

+ Indicates Change
D Indicates Deletion

OP010 0416

PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 5-8-56 Page 2 of 10 Cancels page 2 Dated 4-26-56

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate J890D	Sweetwater J735	Gypsum & New Brighton J815 C
Casein	3.0	6.6	3.5
Refined Soy Protein	3.0	-	4.0
Sodium Pentachlorphenate (See Note 4)	0.4	.2	-
Ammonium pentaborate	-	-	1.2
Ammonium oxalate	1.1	1.2 to 1.4 (See Note 3)	1.2
≠ Amijel B121	1.25	-	-
CMC 70 High	.25	-	-
Marex Alginate	-	.4	.3
Hydrated Lime	.1 to .2	.1 to .3	.0 to .1
Dicyandiamide	.5	.5	.5
Asbestos Floats (See Note 5)	As req'd to give normal consistency and application properties-normal range 10-15%(9-14% for J890D).		
CCO Whiting	20.00	-	15.0 (Note 6)
M350 Sericite or DXW Mineralite *	20.0	20.0	15.0
≠ Mica JC - Sec. note (2)	Per Formula V	Per Formula V	Per Formula V
Carbonate Filler	To make up 100% - See Note 6		
Sterox CD (Note 1)	.1	.1	.1
Tributylphosphate (Note 1)	.1	.05	.05
Neutralizer #5050	.003	.003	.003

*New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula.

FORMULA NOTES:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton Mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying."

"Merpol C (and Camphor) are now obsolete items and their use will be discontinued as soon as supplies are exhausted."

(2) "The mica used may be all mica C, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica C with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $FS_1 + (1-F)S_2 = 55$.

Both micas should, of course, be within the permissible limits for fineness and density for joint cements as given in the graph, p.4 of Bul. 6-30-3.

Mica Formula V - % Mica = $4.5 + .0396D^2 - .155D + .0005S^2 + .03S$.

D is the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

≠ Indicates Change

OP010 0414

PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 6-28-56 Page 2 of 10 Cancels page 2 Dated 5-8-56

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate J890D	Sweetwater J735	Gypsum & New Brighton J815 C
Casein	3.0	6.6	3.5
Refined Soy Protein	3.0	-	4.0
Sodium Pentachlorphenate (See Note 4)	0.4	.2	-
Ammonium pentaborate	-	-	1.2
Ammonium oxalate	1.1	1.2 to 1.4 (See Note 3)	1.2
Attagel 3-LII	1.25	-	-
CMC 70 High	.25	-	-
Marex Alginate	-	.4	.3
Hydrated Lime	.1 to .2	.1 to .3	.0 to .2
Dicyandiamide	.5	.5	.5
Asbestos Fibers (See Note 5)	As req'd to give normal consistency and application properties-normal range 10-15%(9-14% for J890D).		
CCC Whiting	20.00	-	15.0 (Note 6)
M350 Sericite or DXW Mineralite *	20.0	20.0	15.0
Mica JC - Sec. note (2)	Per Formula V	Per Formula V	Per Formula V
Carbonate Filler	To make up 100% - See Note 6		
Sterox CD (Note 1)	.1	.1	.1
Tributylphosphate (Note 1)	.1	.05	.05
Neutralizer #5050	.003	.003	.003

*New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula.

FORMULA NOTES:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton Mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying."

"Merpol C (and Camphor) are now obsolete items and their use will be discontinued as soon as supplies are exhausted."

(2) "The mica used may be all mica C, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica C with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $FFS_1 / (1-F) S_2 = 55$.

Both micas should, of course, be within the permissible limits for fineness and density for joint cements as given in the graph, p.4 of Bul. 6-30-3.

Mica Formula V - % Mica = $4.5 / .0396D^2 - .155D / .0005S^2 / .03S$.

D is the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

/ Indicates Change

OP010 0412

OPERATING DIVISION PRODUCT PROCEDURE APPROVED: JWTK	PERF-A-TAPE CEMENT SWEETWATER	NO. 61-2-22-W DATE 8-16-55 PAGE 1 of 1 CANCELS Page 1 DATED 12-30-55

This temporary bulletin authorizes Sweetwater to manufacture the following Perf-A-Tape Cement, J838 formula, for use in the Denver District.

FORMULA:

Casein	7.0%
Marex Alginate	0.3%
Ammonium Oxalate	1.25%
Hydrated Lime	As required (normal .15%)
Dowicide G (or equivalent)	0.2%
Dicyandiamide	0.5%
Asbestos Floats	As required for std. consistency
*Mica ARC (P&F)	1.1 x Formula 7
DTW Mineralite	15.0%
Carbotex	To make 100%
Sterox CD	0.1%
Tributylphosphate	0.1%
Neutraliser 5050	0.003%

* Note greater than usual Mica content.

Finished Products Tests

Consistency	68 cc standard-range 67-70 cc
Application	To match J838 sample from Research
Other Tests	Per Bulletin 61-2-22 for J735 Cements.
Package	Standard Perf-A-Tape Joint Cement - 25 lb. bags. Mark with the letter "D" following the batch code number.

This bulletin expires 10-15-56.

Cancel

OP007 0972

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE JOINT CEMENTS	No. 61-2-22
Approved: JWTK		Date 8-20-56
		Page 1 of 10
		Cancels Page 1
		Dated 3-21-56

MANUFACTURING PLANTS

Gypsum, New Brighton, South Gate, Sweetwater and Hagersville.

JOINT CEMENTS: (High Alkaline Formulas)

	Hagersville
	J318
Lauxein	4.0%
Casein	7.0
Hydrated Lime	3.0
Trisodium phosphate	1.7
Sodium Pentachlorphenate	.3
Talc (Broughton M4)	10.0
Asbestos *	As required to give normal consistency and application properties.
Mica C	Per Formula V
D CCO Whiting	15.0
Carbonate Fillers	15.0 FF Lime stone / Adolomite to make up 100%
Pigments	As required to give standard Manila color.
Coarse Pyrophyllite**	

* The following asbestoses are approved. The approximate amounts needed of each are indicated:

/ For J318 - Nicolet 7TG-25, Johns Manville 7RF-1, or Asbestos Corp. 797-7TG-(Formula 6-12%)

D

General: All cements, except topping cement, to be made in natural color. All topping cements, both medium and low alkaline, to be colored to an approximate match of wallboard manila paper. This color standard to be shipped to each producing plant by the Research Department. Exception: Hagersville to color all joint cement to approximate match of manila paper.

Refer to Bulletin 61-1-12 covering shipping instructions.

USG 0010 0401

D Indicates Deletion
/ Indicates Change

PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 8-20-56 Page 2 of 10
	Cancels page 2 Dated 6-28-56

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate J890D	Sweetwater J885G	Sweetwater for Denver J838	Gypsum & New Brighto J815C
Casein	3.0	3.5	7.0	3.5
Refined Soy Protein	3.0	4.0	-	4.0
Sodium Pentachlorphenate See note 4	0.4	.2-.4	0.2	-
Ammonium pentaborate	-	-	-	1.2
Ammonium Oxolate See Note 3	1.1	1.2-1.4	1.25	1.2
Amijel B111	1.25	-	-	-
CMC 70 High	0.25	-	-	-
Marex Alginate	-	0.3	0.3	0.3
Hydrated Lime	0.1-0.2	0.1-0.3	0.1-0.2	0-0.15
Dicyandiamide	0.5	0.5	0.5	0.5
Asbestos Floats See Note 5	As required for normal consistency and application, normal range: 9-14% for J890D, 10-15% for others.			
CCO Whiting	20.0	-	-	15.0 note 6
M350 Sericite or DXW Mineralite*	20.0	15.0	15.0	15.0
Mica JC See note 2	Formula V	Formula V	1.1 X Formula V	Formula V
Carbonate Filler	To make up 100%, see note 6			
Sterox CD See note 1	0.1	0.1	0.1	0.1
Tributyphosphate note 1	0.1	0.05	0.1	0.05
Neutralizer #5050 note 1	0.003	0.003	0.003	0.003

*New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula.

FORMULA NOTES:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton Mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying."

(2) "The mica used may be all mica JC, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica JC with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $FFS_1 + (1-F) S_2 = 55$.

Both micas should, of course, be within the permissible limits for fineness and density for joint cements as given in the graph, p.4 of Bul. 6-30-3.

Mica Formula V - % Mica = $4.5 + .0396D^2 - .155D + .0005S^2 + .03S$.

D in the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

+ Indicates Change

OP010 0402

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate / J815D	Sweetwater J835G	Sweetwater for Denver J838	Gypsum & New Brighton J815C
Casein	3.5	3.5	7.0	3.5
Refined Soy Protein	4.0	4.0	-	4.0
Sodium Pentachlorphenate See note 4	-	.2-.4	0.2	-
Ammonium Pentaborate	1.2	-	-	1.2
Ammonium Oxolate	1.2	1.2-1.4	1.25	1.2
Marex Alginate	0.3	0.3	0.3	0.3
Hydrated Lime	0-0.5 (0.10 Ave.)	.1-.3	.1-.2	0-0.15
Dicyandiamide	0.5	0.5	0.5	0.5
Asbestos Floats See note 5	As required for normal consistency and application. Normal range: 6-10% for J815D, 10-15% for others.			
CCO Whiting	15.0	-	-	15.0 note 6
M350 Sericite or DXW Mineralite*	15.0	15.0	15.0	15.0
Mica JC See note 2	Formula V	Formula V	1.1X Formula V	Formula V
Carbonate Filler	To make up 100%, see note 6			
Sterox CD, see note 1	0.1	0.1	0.1	0.1
Tributylphosphate note 1	0.1	0.05	0.1	0.05
Neutralizer #5050 note 1	0.003	0.003	0.003	0.003

*New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula.

FORMULA NOTES:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton Mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying."

(2) "The mica used may be all mica JC, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica JC with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $FFS_1 / (1-F) S_2 = 55$.

Both micas should, of course, be within the permissible limits for fineness and density for joint cements as given in the graph, p.4 of Bul. 6-30-3.

Mica Formula V - % Mica = $4.5 / .0396D^2 - .135D / .0005S^2 / .03S$.

D in the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

/ Indicates Change

DP010 0396

Operating Division PRODUCT PROCEDURE Approved: JWTZ	PERF-A-TAPE READY-MIXED JOINT CEMENT	No. 61-2-24 Date 10-17-56 Page 1 of 3 Cancels Page 1 Dated 4-13-56

DESCRIPTION:
A resin - emulsion base, ready-mixed Perf-A-Tape, with a Package life of one year.

MANUFACTURING MILLS: New Brighton, Gypsum, Sweetwater

FORMULA: JE-143-A

Filler Mix	% Non-Volatile	Lbs. (For 901 Lb. Filler Chg.)
P-80F Mica	(1/3 of For. V)	40-50 lbs. normal
325 Mesh WG Mica	5.0	50
DXW Mineralite or Ser-X	30.0	300
Asbestos Floats	(as required)	as required (8-10% normal)
CCO Whiting	20.0	200
Methocel EG	0.7	7
A Dolomite or Stonelite	(to make 90.1%)	to make up 901 lbs.

Paste Mix	% Non-Volatile	Lbs. (For Approx. 120 Gal. Batch)
Fillers	90.1	857
Elvacet 81-900	9.0	156
Dibutyl Phthalate	0.9	8 lbs. 14 oz.
Carbitol	-	15 lbs. 9 oz.
Water	-	63 gals. approximately

RAW MATERIALS

Elvacet 81-900	Per Bulletin 6-49-2
Methocel EG	Per Bulletin 6-16-5
Dibutyl Phthalate	(Bulletin In Preparation)
Carbitol	(Bulletin In Preparation)
P80F Mica	Per Bulletin 6-30-3
325 Mesh WG Mica	Per Bulletin 6-30-3
DXW Mineralite	Per Bulletin 6-30-3
Ser-X	Per Bulletin 6-30-3
Asbestos	Per Bulletin 6-7-1, JM-7RF1
CCO Whiting	Per Bulletin 6-30-7
A Dolomite	Per Bulletin 58-2-2
Stonelite	Per Bulletin 6-30-7

PROCESSING:

A. Filler Mix: The dry ingredients are first mixed in a Broughton mixer, and then mikropulverized using a coarse screen as is done in manufacturing dry powder products.

NOTE: The mixer-pulverizer-packer unit is to be thoroughly cleaned of other products before making this filler mix.

UPCC9 0671

Consistency Control Test On Filler Mix
A 300 gram sample of the filler mix should be taken after the fillers are blended and mikropulverized. The sample is mixed with water at a consistency of 74cc per 100 gms. (Mixing the powder into the water eliminates lumping to a large degree; any small lumps will disappear with vigorous stirring). About 2 minutes is allowed for mixing; then the mixture is allowed to stand undisturbed for 10 minutes. After standing the mixture is stirred vigorously again for 30 seconds. A Brabender reading is then taken. The reading is recorded after the Brabender has run 3 minutes (or sooner if the reading has become constant). The temperature of the mixture is taken last. The Brabender reading of the sample should match the Research standard sample reading of 350 ± 30 units at 75°F ± 5°F. The asbestos content of the filler mix must be increased if the Brabender reading is too low, and vice versa.

B. Emulsion Plasticization: The Dibutyl Phthalate is poured slowly into the Elvacet 81-900 while the latter is being stirred with a suitable high speed mixer, i.e., a "Lightnin Mixer". The stirring should continue for minimum of 20 minutes after all the Dibutyl Phthalate has been added. The temperature of the DBP and Elvacet must be above 65°F for this operation.

C. Complete Cement: The various ingredients are to be mixed in a heavy duty paste mixer using the following procedure: The required water (except for 1 - 2 gallons withheld to permit final consistency adjustment) is put into the mixer tub, and the carbitol is added. The mixer is then started. Most of the filler mix is poured into the mixer over a period of 3-6 minutes until the paste has the approximate consistency of the finished product. The plasticized emulsion is then run in gradually, followed by the balance of the fillers. Finally, small amounts of water are added to bring the cement to standard consistency.

FINISHED PRODUCT TEST:

Viscosity: To be 380 ± 20 units immediately after mixing is finished and after the cement has stood for 24 hours, using the following set-up:

(a) Cement to be at 77°F ± 5°F in a standard 1/2 pint paint can with paddle immersed to mark on paddle stem.
(b) Can spindle to rotate 72 R.P.M.
(c) Pin Bladed paddle, and heavy spring suspension in the Brabender are to be used.

Application Properties: To match standard sample from Research
Grit: None
Bond to Perf-A-Tape: Applied and dried at 70 - 80°F, 40-60% R.H. - 4 min.
Rewet Test: 2 normal
Tape Edge Cracking or Check-Cracking: (in bond test application) - None
Color: Natural grey-white
Odor: Characteristic
NOTE: These tests to be performed in the same manner as used for dry powder Perf-A-Tape cement - See Bulletin 61-2-22.

DP0C9 0672

PACKAGING:

5 gallon fiber pail
Outer package may be either:

(a) Collapsible corrugated fiber drums equivalent to the octagonal 400 lb. test container from Gaylord Container Company, St. Louis - or

(b) Metal and fiber drums as used for paste paints, per Bulletin 6-74-1.

The liner is a bag made from .004 Polyethylene sheet, as was used for packaging the trial batches of the paste joint cement.

Net weight for 5 gallons of this cement is 60 lbs.

Labeled or stencilled as directed by Merchandising Department. To be applied to each container.

1 gallon cans - 2 per case. Same master case as paint.

Master case labeled or stencilled - "READY-MIXED PERF-A-TAPE JOINT CEMENT"

1 gallon cans - 2 per case with 100' roll or Perf-A-Tape on top of each can, chip board dividers between tape and top of can.

Case to be labeled or stencilled "100' READY-MIXED PERF-A-TAPE JOINT SYSTEM" Master case dimension 2-1/8" higher than paint case.

One WB-34 folder to be included inside each 5 gallon drum on top of the polyethylene liner.

Two WB-34 folders to be included in each master carton of 2-1 gal. cans per carton (1 folder per gallon can).

Perf-A-Patch Units - New Brighton, for New Brighton shipping area only.

5 lb. cement in bag made with 8-1/2" x 11" x .004" polyethylene seamless tube, both ends flat (no gusset), sealed one end. Other end closed by heat sealing.

Plastic knife, same as packed with 60' joint system, Bulletin 61-2-22.
50 ft. roll of Perf-A-Tape, Bulletin 61-2-21.

All-packed in Sefton can type B-OB-11 S.T. string with No. 17 oblong base. Can overall height 8-3/16", made of 4 ply .015 Alton Chip Base, inside paraffined at mandrel, ends plain tin with raised center and string placed 2-7/8" from top. Top end is crimped on after carton is filled. Labels per Sales.

UP009 0673

OPERATING DIVISION: PRODUCT PROCEDURE	READY-MIXED PERF-A-TAPE CEMENT JM-160S FORMULA SOUTH GATE	NO. 61-4-84-0 DATE 8-1-57 PAGE 1 OF 3
APPROVED:		SUPERSEDES DATED NEW

South Gate to manufacture and ship, as directed by Paint and Joint System Sales, up to 500 gallons of Ready-Mixed Perf-A-Tape Cement as indicated below:

DESCRIPTION: A resin - emulsion based, Ready-Mixed Perf-A-Tape Cement with a package life not to exceed one year.

FORMULA: JM-160B

Filler Mix	% Non-Volatile	Lbs. (For 901 lb. Filler Charge)
P-80F Mica	1/3 of Formula ▼	Near 50 lbs. normal
325 Mesh WG Mica	5.0	50
M350 Sericite	30.0	300
Asbestos Floats	(as required)	(as required) 8-10% normal
000 Whiting	20.0	200
Methocel HB	0.7	7
#400 Whiting	(to make 90.1%)	To make up 901 lbs.

Paste Mix	% Non-Volatile	Lbs. (For 120 gallon batch)
Fillers	90.1	622
Elvacet 81-900	9.0	149
Dibutyl Phthalate	0.9	8 lbs. 3 oz.
Carbitol	-	15 lbs. 15 oz.
Water	-	67 gallons approximately

RAW MATERIALS:

Elvacet 81-900	-	per Bulletin 6-49-2
Methocel HB (4000 CPS)	-	per Bulletin 6-26-5
Dibutyl Phthalate	-	(bulletin in preparation)
Carbitol	-	(bulletin in preparation)
P-80F Mica	-	per Bulletin 6-30-3
325 Mesh WG Mica	-	per Bulletin 6-30-3
M350 Sericite	-	per Bulletin 6-30-3
Asbestos	-	per Bulletin 6-[illegible], JM Tech
000 Whiting	-	per Bulletin 6-30-7
#400 Whiting	-	per Bulletin 6-30-7

PROCESSING:

A. Filler Mix: The dry ingredients are first mixed in a Dryshaker mixer, and then pre-pulverized using a charge of [illegible] as is done in manufacturing dry powder products.

Note: The mixer-pulverizer must be [illegible] cleaned of water products before adding this filler mix. Especially of any which contain [illegible].

JM009 0274

OPERATING DIVISION PRODUCT PROCEDURE APPROVED: JWTK	PERF-A-TAPE TOPPING CEMENT SWEETWATER	NO. [illegible] DATE [illegible]-57 PAGE [illegible] CANCELS Page [illegible] DATED 7-23-56

This temporary bulletin authorizes Sweetwater to manufacture and ship Topping Cement with the following formulation on all orders from the Denver District:

FORMULA:

Casein	2.5%
T422A1 Soy Protein	3.0
Marex Alginate	.8
Ammonium Oxalate	1.0
Ammonium Pentaborate	1.2
Dicyandiamide	.5
Hydrated Lime	.0 to .15 (.10 considered normal)
P80F (or equivalent) Mica	Per Formula V
Asbestos (Nicolet 7TG)	As Required for normal consistency and application - about 12% considered average.
DXW Mineralite	25.0
Carbotex	To make up 100%
Sterox CD	.1
Tributylphosphate	.05
Neutralizer #5050	.003
Pigments	To match standard color

RAW MATERIALS SPECS.: - Per Bulletin 61-2-23.

PROCESSING: - Per Bulletin 61-2-23.

FINISHED PRODUCT TESTS: - Per Bulletin 61-2-23 for [illegible] Formula Cement.

This bulletin expires 8-1-57.

OP007 1614

OPERATING DIVISION: PRODUCT PROCEDURE	PERF-A-TAPE JOINT CEMENT	NO. 61-2-22 J
APPROVED: JWT	SOUTH GATE	DATE 2-12-57
		PAGE 1 OF 1
		SUPERSEDS DATED NEW

South Gate to manufacture and ship J639-B formula Perf-A-Tape Joint Cement to the Southern Pacific Sales Division.

J639-B FORMULA

Casein	-	7.0
Sodium Pentachlorphenate	-	.2
Ammonium Oxalate	-	1.2 - 1.4
Marex Alginate	-	.1 - .2
Hydrated Lime	-	.1 - .3
Dicyandiamide	-	.5
Asbestos Fibers	-	As required to give normal consistency & application properties - Normal range 10 - 15%
M-350 Sericite or DWK Mineralite	-	20.0
Mica C	-	Per Formula V
Peerless Clay	-	15.0
Carbonate Filler	-	To make up 100%
Sterox CD	-	.1
Tributylphosphate	-	.1
Neutralizer #5050	-	.003

Other specifications per Bulletin 61-2-22.

This bulletin expires 9-1-57.

NP007 0789

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate	Sweetwater		Gypsum & New Brighton
	J815D	J885G	for Denver J838	J815C **
Casein	3.5	3.5	7.0	3.5
Refined Soy Protein	4.0	4.0	-	4.0
Sodium Pentachlorphenate See note 4	-	.2-.4	0.2	-
Ammonium Pentaborate	1.2	-	-	1.2
Ammonium Oxolate	1.2	1.2-1.4	1.25	1.2
Marex Alginate	0.3	0.3	0.3	0.3
Hydrated Lime	0-0.5 (0.10 Ave.)	.1-.3	.1-.2	0-0.15
Dicyandiamide	0.5	0.5	0.5	0.5
Asbestos Floats See note 5	As required for normal consistency and application. Normal range: 6-10% for J815D, 10-15% for others.			
CCO Whiting	15.0	-	-	15.0 note 6
M350 Sericite or DXW Mineralite*	15.0	15.0	15.0	15.0
Mica JC See note 2	Formula V	Formula V	1.1X Formula V	Formula V
Carbonate Filler	To make up 100%, see note 6			
Sterox CD, see note 1	0.1	0.1	0.1	0.1
Tributylphosphate note 1	0.1	0.05	0.1	0.05
Neutralizer #5050 note 1	0.003	0.003	0.003	0.003

*New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula.

**Gypsum only for Detroit and other markets designated by Sales to make J815C-LC formula Joint Cement. This is the same as J815C with less asbestos used to give a finished product consistency of 62 - 66 cc (63 - 64 preferred). Bags to be stamped "LC" in addition to regular coding.

FORMULA NOTES:

(1) "The liquid wetting agents - Sterox CD, Tributylphosphate, and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton Mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying".

(2) "The mica used may be all mica JC, having a minimum of 55% passing 325 mesh, or a blend of coarser shipments of mica JC with fine waterground mica. If a blend is used calculate the proportions as follows:

"Let F be the fraction of the Formula V quantity of mica C whose % passing 325 mesh is S_1, and (1-F) be the fraction of the Formula V quantity of fine waterground mica whose % passing 325 mesh is S_2. Then $FFS_1 + (1-F) S_2 = 55$.

Both micas should, of course, be within the permissible limits for fineness and density for joint cements as given in the graph, p.4 of Bul. 6-30-3.

Mica Formula V - % Mica = $4.5 + .0396D^2 - .155D + .0005S^2 + .03S$.

D in the average mica density and S is the average percent of mica passing 325 mesh. When the amount of mica is varied, a compensating change is to be made in the amount of Carbotex or A-Dolomite used.

+ Indicates Change

DP010 0391

[illegible] DIVISION PRODUCT PROCEDURE	PERF-A-TAPE JOINT CEMENT	NO [illegible] DATE 3-11-57 PAGE 1 of 1
APPROVED [signature]	HAGERSVILLE	CANCELS DATED (NEW)

Hagersville to manufacture up to 10,000 lbs. of Perf-A-Tape Joint Cement using specifications as indicated below:

FORMULA - J-920E

Casein (fine ground)	7 5%
Marex Alginate	.3
Hydrated Lime	As req'd for std. pH (.05 to .2%)
Ammonium Oxalate	1.2
Ammonium Pentaborate	1.2
Dicyandiamide	.5
Mica JC	Per Formula V
Asbestos	As needed to give std. consistency and working properties (12% JM-7RF1 asbestos used in lab. batches)
M& Talc	15.0
FF Limestone	To make up 100%
Liquid Mix	.153
Sterox CD - .1%)	(If spray equipment is not available
Tributyl phosphate - .05% ; Note:	(increase TBP to 1% and total liquid
Neutralizer 5050 - .003%)	(mix to .203%

RAW MATERIALS - Per Bulletin 61-2-22

PROCESSING - Per Bulletin 61-2-22 (for LA type cement)

FINISHED PRODUCT TESTS - Per Bulletin 61-2-22 (for LA type cements)
consistency at 500 BB 66 to 69 cc - 6/cc normal

PACKAGING - In standard 25 lbs. Perf-A-Tape Cement bags Add any special marking for identification as directed by Merchandising (or Canadian Sales).

This Bulletin expires 6-1-57

[illegible] (PRINTED IN U.S.A.)

DP001 0197

Operating Division PRODUCT PROCEDURE Approved: JWTK	PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 4-24-57 Page 1 of 10 Cancels Page 1 Dated 8-20-56

MANUFACTURING PLANTS

Gypsum, New Brighton, South Gate, Sweetwater and Hagersville.

JOINT CEMENTS: (High Alkaline Formulas)

	Hagersville J318
Lauxein	4.0%
Casein	7.0
Hydrated Lime	3.0
Trisodium phosphate	1.7
Sodium Pentachlorphenate	.3
Talc (Broughton M4)	10.0
Asbestos *	As required to give normal consistency and application properties.
Mica C	Per Formula V
CCO Whiting	15.0
Carbonate Fillers	15.0 FF Lime stone / Adolomite to make up 100%
Pigments	As required to give standard Manila color.

* The following asbestoses are approved. The approximate amounts needed of each are indicated:

For J318 - Nicolet 7TG-25, Johns Manville 7RF-1, or Asbestos Corp. 797-7TG-(Formula 6-12%)

General: All cements, except topping cement, to be made in natural color. All topping cements, both medium and low alkaline, to be colored to an approximate match of wallboard manila paper. This color standard to be shipped to each producing plant by the Research Department. Exception: Hagersville to color J318 high alkaline joint cement to approximate match of manila paper.

Refer to Bulletin 61-1-12 covering shipping instructions.

OP010 0382

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate	Sweetwater		Gypsum & New Brighton	/ Hagersville
	J815D	J885G	for Denver J838	J815C**	J920E
Casein	3.5	3.5	7.0	3.5	7.5
Refined Soy Protein	4.0	4.0	-	4.0	-
Sodium Pentachlorphenate See note 4	-	.2-.4	0.2	-	-
Ammonium Pentaborate	1.2	-	-	1.2	1.2
Ammonium Oxolate	1.2	1.2-1.4	1.25	1.2	1.2
/ Marex Alginate *	0.3	0.3	0.3	0.3	0.3
Hydrated Lime	0-0.5 (0.10 Ave.)	.1-.3	.1-.2	0-0.15	.05-0.2
Dicyandiamide	0.5	0.5	0.5	0.5	0.5
Asbestos Floats See note 5	As Required for normal consistency and application. Normal range: 6 - 10% for J815D & J920E, 10 - 15% for others				
CCO Whiting	15.0	-	-	15.0 Note 6	-
M350 Sericite or DXW Mineralite *	15.0	15.0	15.0	15.0	-
M-4 Talc	-	-	-	-	15.0
Mica JC See Note 2	Formula V	Formula V	1.1x Formula V	Formula V	Formula V
Carbonate Filler *	To make 100%, See note 6				
Sterox CD, See Note 1	0.1	0.1	0.1	0.1	0.1
Di-butylphosphate Note 1	0.1	0.05	0.1	0.05	0.05
Neutralizer #5050 Note 1	0.003	0.003	0.003	0.003	0.003

* New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula. Also, .225% Protamon "S" Alginate may be used in place of .3% Marex Alginate.

** Gypsum only for Detroit and other markets designated by Sales to make J815C-LC formula Joint Cement. This is the same as J815C with less asbestos used to give a finished product consistency of 62 - 66 cc (63 - 64 perferred). Bags to be stamped "LC" in addition to regular coding.

/ Indicates Change

DP010 0383

PERF-A-TAPE JOINT CEMENTS

No. 61-2-22
Date 4-24-57
Page 2 of 10
Cancels Page 2
Dated 3-7-57

Cancels Temp. Bul. 61-2-22-C

Operating Division PRODUCT PROCEDURE Approved: JWTK	PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 4-24-57 Page 1 of 10 Cancels Page 1 Dated 8-20-56

MANUFACTURING PLANTS

Gypsum, New Brighton, South Gate, Sweetwater and Hagersville.

JOINT CEMENTS: (High Alkaline Formulas)

	Hagersville J318
Lauxein	4.0%
Casein	7.0
Hydrated Lime	3.0
Trisodium phosphate	1.7
Sodium Pentachlorphenate	.3
Talc (Broughton M4)	10.0
Asbestos *	As required to give normal consistency and application properties.
Mica C	Per Formula V
CCO Whiting	15.0
Carbonate Fillers	15.0 FF Lime stone / Adolomite to make up 100%
Pigments	As required to give standard Manila color.

* The following asbestoses are approved. The approximate amounts needed of each are indicated:

For J318 - Nicolet 7TG-25, Johns Manville 7RF-1, or Asbestos Corp.. 797-7TG-(Formula 6-12%)

General: All cements, except topping cement, to be made in natural color. All topping cements, both medium and low alkaline, to be colored to an approximate match of wallboard manila paper. This color standard to be shipped to each producing plant by the Research Department. Exception: Hagersville to color J318 high alkaline joint cement to approximate match of manila paper.

Refer to Bulletin 61-1-12 covering shipping instructions.

DP010 0376

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate	Sweetwater		Gypsum & New Brighton	Hagersville
	J815D	J885G	for Denver J838	J815C**	J920E
Casein	3.5	3.5	7.0	3.5	7.5
Refined Soy Protein	4.0	4.0	-	4.0	-
Sodium Pentachlorphenate See note 4	-	.2-.4	0.2	-	-
Ammonium Pentaborate	1.2	-	-	1.2	1.2
Ammonium Oxolate	1.2	1.2-1.4	1.25	1.2	1.2
Ammonium Alginate *	0.3	0.3	0.3	0.3	0.3
Hydrated Lime	0-0.5 (0.10 Ave.)	.1-.3	.1-.2	0-0.15	.05-0.2
Dicyandiamide	0.5	0.5	0.5	0.5	0.5
Asbestos Floats See note 5	As Required for normal consistency and application. Normal range: 6 - 10% for J815D & J920E, 10 - 15% for others				
325 Whiting	15.0	-	-	15.0 Note 6	-
M350 Sericite or DXW Mineralite *	15.0	15.0	15.0	15.0	-
M-4 Talc	-	-	-	-	15.0
Mica JC See Note 2	Formula V	Formula V	1.1x Formula V	Formula V	Formula V
Carbonate Filler	To make 100%, See note 6				
Sterox CD, See Note 1	0.1	0.1	0.1	0.1	0.1
Tributylphosphate Note 1	0.1	0.05	0.1	0.05	0.05
Neutralizer #5050 Note 1	0.003	0.003	0.003	0.003	0.003

* New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula. Also, .225% Protamon "S" Alginate may be used in place of .3% Ammonium Alginate.

** Gypsum only for Detroit and other markets designated by Sales to make J815C-LC formula Joint Cement. This is the same as J815C with less asbestos used to give a finished product consistency of 62 - 66 cc (63 - 64 perferred). Bags to be stamped "LC" in addition to regular coding.

/ Indicates Change

PERF-A-TAPE JOINT CEMENTS

No. 61-2-22
Date 5-8-57
Page 2 of 10
Cancels Page 2
Dated 4-24-57

0379 OP010

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate	Sweetwater		Gypsum & New Brighton	Hagersville
	J815D	J885G	for Denver J838	J815C**	J920E
Casein	3.5	3.5	7.0	3.5	7.5
Refined Soy Protein	4.0	4.0	-	4.0	-
Sodium Pentachlorphenate See note 4	-	.2-.4	0.2	-	-
Ammonium Pentaborate	1.2	-	-	1.2	1.2
Ammonium Oxolate	1.2	1.2-1.4	1.25	1.2	1.2
Ammonium Alginate *	0.3	0.3	0.3	0.3	0.3
Hydrated Lime	0-0.5 (0.10 Ave.)	.05-.3	.1-.2	0-0.15	.05-0.2
Dicyandiamide	0.5	0.5	0.5	0.5	0.5
Asbestos Floats See note 5	As Required for normal consistency and application. Normal range: 6 - 10% for J815D & J920E, 10 - 15% for others				
CCO Whiting	15.0	-	-	15.0 Note 6	-
M350 Sericite or DXW Mineralite *	15.0	15.0	15.0	15.0	-
M-4 Talc	-	-	-	-	15.0
Mica JC See Note 2	Formula V	Formula V	1.1x Formula V	Formula V	Formula V
Carbonate Filler	To make 100%, See note 6				
Sterox CD, See Note 1	0.1	0.1	0.1	0.1	0.1
Tributylphosphate Note 1	0.1	0.05	0.1	0.05	0.05
Neutralizer #5050 Note 1	0.003	0.003	0.003	0.003	0.003

* New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula. Also, .225% Protamon "S" Alginate may be used in place of .3% Ammonium Alginate.

** Gypsum only for Detroit and other markets designated by Sales to make J815C-LC formula Joint Cement. This is the same as J815C with less asbestos used to give a finished product consistency of 62 - 66 cc (63 - 64 perferred). Bags to be stamped "LC" in addition to regular coding.

/ Indicates Change

OP010 0377

SPECIAL BULLETIN

OPERATING DIVISION		
PRODUCT PROCEDURE	READY-MIXED JOINT CEMENT	NO. 61-2-24-J DATE 8-27-57 PAGE 1 of 1
APPROVED: JWTK	GYPSUM	CANCELS DATED NEW

This temporary bulletin authorizes Gypsum to make trial batches of the following:

Product: Ready-Mixed Perf-A-Tape Cement

Formula: JE-162

Filler Mix	% Non-Volatile	Lbs. (For 901 lb. filler charge)
P-80F Mica	(1/3 Formula V)	50 (Approx.)
325 Mesh WG Mica	5.0	50
Ser-X	30.0	300
JM-7RF1 Asbestos	As required	As required (7-9% normal)
CCO Whiting	20.0	200
Stonelite	To make up 90.1%	To make up 901 lbs.
Methocel HG (4000 cps)	0.7	7

Paste Mix	% Non-Volatile	Lbs. (For 125 gal. batch approx.)
Fillers	90.1	901
Bakelite WC-130 (58.5% Solids)	9.0	153, 13 oz.
Dibutyl Phthalate	0.9	9
Carbitol	-	15, 6 oz.
Water	-	67 gals. approx.

Brabender Viscosity: 400 ± 20 at 77°F

Packaging: Cement to be packed in the container consisting of a corrugated cardboard carton with polyethylene bag insert. Each unit shall weigh 67 lbs. net.

Distribution: Per Paint and Joint Systems Sales

This bulletin expires 12-1-57.

Mailed to: Gypsum (3), 174-P, 151, 151-L (Scholz), 151-L, 159 (Dutler, Thorman).

(DISTRIBUTED AS REQUIRED IN WEEK)

UP009 0951

JOINT CEMENTS - Low Alkaline Formulae:

	South Gate	Sweetwater		Gypsum & New Brighton	Hagersville
	J815D	J885G		J815C**	J920E
Casein	3.5	3.5		3.5	7.5
Refined Soy Protein	4.0	4.0		4.0	-
Sodium Pentachlorphenate See Note 4	-	.2-.4		-	-
Ammonium Pentaborate	1.2	-		1.2	1.2
Ammonium Chelate	1.2	1.2-1.4		1.2	1.2
Ammonium Alginate *	0.3	0.3		0.3	0.3
Hydrated Lime	0-0.5 (0.10 Ave.)	.05-.3		0-0.15	.05-0.2
Dicyandiamide	0.5	0.5		0.5	0.5
Asbestos Flats See Note 5	As Required for normal consistency and application. Normal range: 6 - 10% for J815D & J920E, 10 - 15% for others.				
CCO Whiting	15.0	-		15.0 Note 6	-
M350 Sericite or DXW Mineralite *	15.0	15.0		15.0	-
M-4 Talc	-	-		-	15.0
Mica JC See Note 2	Formula V	Formula V		Formula V	Formula V
Carbonate Filler		To make 100%, See Note 6			
Sterox CD, See Note 1	0.1	0.1		0.1	0.1
Tributylphosphate Note 1	0.1	0.05		0.05	0.05
Neutralizer #5050 Note 1	0.003	0.003		0.003	0.003

*New Brighton and Gypsum may use Ser-X in place of DXW Mineralite in J815C formula. Also, .225% Protamon "S" Alginate may be used in place of .3% Ammonium Alginate.

**Gypsum only for Detroit and other markets designated by Sales to make J815C-LC formula Joint Cement. This is the same as J815C with less asbestos used to give a finished product consistency of 62-66 cc (63-64 perferred). Bags to be stamped "LC" in addition to regular coding.

D - Indicates Deletion

OP010 0360

Operating Division PRODUCT PROCEDURE Approved:	ALL PURPOSE READY-MIXED PERF-A-TAPE JOINT CEMENT	No. 61-2-24 Date 10-6-58 Page 1 of 3 Cancels Page 1 Dated 8-11-58

DESCRIPTION:
A resin-emulsion base, ready-mixed Perf-A-Tape, with a package life of one year.

MANUFACTURING MILLS: New Brighton, Gypsum

FORMULA: JE-186A

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
Methocel HG	0.8	8
Ferrite Yellow	(to match the manila color of Sheetrock face paper)	
A 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
Plasticized WC-130*	5.5	96
Carbitol	-	9
Nuodex PMA-18	-	4 oz.
Water	-	66 gal. approx.

*contains 5.0 WC-130 solids and 0.5 Dibutyl Phthalate.

RAW MATERIALS

Resin	Per Bulletin 6-104-17
Methocel HG	Per Bulletin 6-16-5
Dibutyl Phthalate	6-98-1
Solvent	6-149-3
P80F	Per Bulletin 6-143-1
DXW Mineralite	Per Bulletin 6-146-2
Ser-X	Per Bulletin 6-146-2
Asbestos	Per Bulletin 6-7-1, JM-7RF1
CCO Whiting	Per Bulletin 6-30-7
A Dolomite	Per Bulletin 58-2-2
Stonelite	Per Bulletin 6-30-7
Nuodex PMA-18	6-100-2.
Huber CWF Clay	Per Bulletin 6-36-5

PROCESSING:

A. Filler Mix: The dry ingredients are first mixed in a Broughton mixer, and then mikropulverized using a coarse screen as is done in manufacturing dry powder products.

NOTE: The mixer-pulverizer-packer unit is to be thoroughly cleaned of other products before making this filler mix.

UPC09 0651

/ Indicates Change

Consistency Control Test On Filler Mix

A 300 gram sample of the filler mix should be taken after the fillers are blended and mikropulverized. The sample is mixed with water at a consistency of 65cc per 100 gms. (Mixing the powder into the water eliminates lumping to a large degree; any small lumps will disappear with vigorous stirring). About 2 minutes is allowed for mixing; then the mixture is allowed to stand undisturbed for 10 minutes. After standing the mixture is stirred vigorously again for 30 seconds. A Brabender reading is then taken. The reading is recorded after the Brabender has run 3 minutes (or sooner if the reading has become constant). The temperature of the mixture is taken last. The Brabender reading of the sample should match the Research standard sample reading of 420 ± 30 units at 75°F ± 5°F. The asbestos content of the filler mix must be increased if the Brabender reading is too low, and vice versa.

B. Emulsion Plasticization: The Bakelite WC-130 emulsion as supplied has an average of 58% solid, dispersed, p.v.ac. resin. Stir into the emulsion 5½ lbs. of water (exactly 5 pints, 4½ oz.) per 100 lbs. of WC-130 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 percent 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 WC-130 emulsion. The dibutyl phthalate is then poured slowly into the Bakelite WC-130 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 WC-130 must be above 65°F for this operation.

C. Complete Cement: The various ingredients are to be mixed in a heavy duty paste mixer using the following procedure: The required water (except for 1 - 2 gallons withheld to permit final consistency adjustment) is put into the mixer tub, and the carbitol and PMA-15 are added. The mixer is then started. Most of the filler mix is poured into the mixer over a period of 3-6 minutes until the paste has the approximate consistency of the finished product. The plasticized emulsion is then run in gradually, followed by the balance of the fillers. Finally, small amounts of water are added to bring the cement to standard consistency.

FINISHED PRODUCT TEST:

Viscosity: To be 420 ± 20 units immediately after mixing is finished and after the cement has stood for 24 hours, using the following set-up:

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

(b) Can spindle to rotate 72 R.P.M.

(c) Pin Bladed paddle, and heavy spring suspension in the Brabender are to be used.

OP009 0664

+ Indicates Change

Operating Division PRODUCT PROCEDURE Approved:	PERF-A-TAPE CEMENT FORMULA DE76 SOUTH GATE	No. 61-2-27 Date 11-14-58 Page 1 of 1 Cancels Page 1 Dated 3-21-58

MANUFACTURING PLANT - South Gate

FORMULA - DE76

Vinac RP 250	4.0
Amijel B 111	3.3
Methocel HG-4000 cps.	.5
Vancide 51-Z	.1
Mica JC	.5 Formula V quantity
M350 Sericite	40.0
JM-7RF1 Asbestos	As required to control consistency, about 8%
Carbonate Filler	To make up 100%

RAW MATERIALS

Vinac RP-250	Per Bulletin 6-104-18
Amijel B 111	" " 6-124-1
Methocel HG-4000 cps.	" " 6-16-5
Vancide 51-Z	" " 6-100-1
Mica JC	" " 6-143-1
M350 Sericite	" " 6-146-2
Asbestos	" " 6-14-2
Carbonate Filler	" " 6-24-1

PROCESSING

Weighing, Mixing, and Mikropulverizing to be done the same as for other Perf-A-Tape Cements - see Bulletin 61-2-22.

FINISHED PRODUCE TESTS

Mixing and application - To be the same as for a standard sample of this product, supplied originally by Research and maintained by the mfg. plant from batches which closely match the original sample.

Consistency - 70 cc normal, range 68-71 cc
@ 500 Brabender, 77°F wet mix temperature
Bond to Perf-A-Tape - 6 or 7, dried at temperatures above 65°F and relative humidities below 75%.
Color - Natural White (sl. gray or cream tint)

PACKAGING - In 25 lb. Perf-A-Tape Cement bags with "76" stencilled under batch code. Label T-197 to be attached to front of bags.

SHIPMENT - As directed by Western Region Merchandising.

JP009 0428

SPECIAL BULLETIN

OPERATING DIVISION PRODUCT PROCEDURE APPROVED: JWTK	PERF-A-TAPE CEMENT J1008C SOUTH GATE	NO. 61-2-22-EE DATE 12-18-58 PAGE 1 of 1 CANCELS Page 1 DATED 10-23-58

This temporary bulletin authorizes South Gate, as directed by Western Region Merchandising, to ship formula J1008C below instead of J885G in 25 lb. cement only and 25 lb. joint system packages to South Pacific and Central Pacific Divisions and Salt Lake City District.

Formula	J1008C
CMC-70H	.3%
Casein (fine, uncoiled)	4.0%
Soy Protein	4.C (Ad PRO 444 or Procote U. Do not use the old T422A1 Protein in this cement)
Ammonium oxalate	.8
Sodium oxalate	.3
Dowicide G	.3
Hydrated Lime	as required (.1 to .2)
Dicyandiamide	.5
Asbestos (7RF1)	as required (7.5% in lab batches or about 3/4 as much as in J885G)
M350 Sericite	15.0
Mica JC	per formula V
#400 Whiting	to make 100%
Liquid Mix (sprayed In)	.153
Sterox .1	
TEP .05	
5050 .003	

Raw Materials
All are current joint cement and texture grade with addition of sodium oxalate. This is a 99% (dry) and technical grade, which should screen 100% - 60 mesh and at least 90% - 100 mesh.

Processing
Same as for J885G and J815D cements.

Color
Natural white

Finished Product Tests
Consistency - 68 to 72 cc
pH - 8.1 to 8.5
Mixing and application - to match sample from Research
Bend - 6 minimum (under standard test conditions and with normal bonding tape)

This bulletin expires 7-1-59.

OR007 10734

USG-6791 1/57 (PRINTED IN U.S.A.)

/ Indicates Change

TOPPING CEMENT - FORMULA [illegible]

GYPSUM & NEW BRIGHTON

[illegible] Page [illegible]
[illegible] 3-10-59

This temporary bulletin authorizes Gypsum and New Brighton to manufacture Topping Cement for field trials and initial sale as directed by Dept. [illegible] per Formula [illegible]

Formula	[illegible]
Casein (fine ground, unoiled)	2.5
Refined soy protein	2.25
Marex alginate	0.8
Hydrated lime	As req'd - approx. [illegible]
Ammonium oxalate	1.0
Ammonium pentaborate	1.2
Dicyandiamide	.3
Special Fine Ground Mica	Use 0.6 Formula [illegible]
Asbestos (Use a blend of approximately 1/3 [illegible], 2/3 [illegible])	As req'd to give [illegible] consistency approx. [illegible] total
Ser-X	15.0
#9 Marble	To make 100%
Liquid Mix:	0.153
Sterox CD 0.1)	
Tributyl phosphate 0.05)	
Naturalizer 5050 0.003)	

Raw Materials

All as used in present joint cements except:

a. Mica - per Bulletin 6-143-3 (Western or Asheville)

b. #9 Marble (Dry Ground $CaCO_3$) - Georgia Marble Co.
Pouring Consistency 45-49 cc
[illegible] passing 40 mesh
[illegible] passing 100 mesh
[illegible] passing 325 mesh

Processing - Same as present topping cement.

Finished Product Data

[illegible] - [illegible] paper except on order [illegible]
Consistency [illegible] - [illegible] cc; Range 65-68 cc.
Application Properties - To match standard [illegible]
[illegible]
Bond-[illegible] [illegible] dried at relative [illegible]

Packaging [illegible] standard 25 lb. Topping Cement [illegible] number for easy identification [illegible] (rubber stamp will do) [illegible] directions: CORRECTION: [illegible] PINTS OF WATER PER 25 LB. [illegible]
[illegible] by Paint and Joint [illegible]

DP007 1727

PRODUCT [illegible]	[illegible]-TAPE CEMENT [illegible]	[illegible]
APPROVED	SOUTH GATE	[illegible]

This [illegible] authorizes South Gate to make [illegible] DE 153 E [illegible] field trials per the following [illegible]

Formula DE 153 E

Vinac [illegible]	2.8%
Vinol [illegible]	0.7
Krause Corn [illegible]	4.5
Methocel 4000 cps - [illegible]	0.4
Mica JC	.5 Formula V quantity
M350 Sericite	40.0
Vanside [illegible]	0.1
JM 7[illegible]	As required to control consistency - [illegible] in lab trials or about [illegible] less than in DE76 cement.
Carbonate [illegible]	To make 100%

Raw [illegible] per bulletin 61-2-27 except

Vinac [illegible] Chemical Co. - A [illegible] grade of polyvinyl [illegible]

Corn [illegible] Milling Co. - A cold water dispersible [illegible] paste having 45 - [illegible] low reducing [illegible]

Processing [illegible] 61-2-27.

Finished [illegible] as bulletin 61-2-27 [illegible]

Consistency [illegible] range - 69 cc normal.

Packing [illegible] 61-2-27.

Shipment - [illegible] Western Region [illegible]

This [illegible] 3-[illegible]-59.

OP009 0434

OPERATION: [illegible]

[illegible]-A-TAPE CLIENT

[illegible] FORMULA
[illegible]

APPROVED:

This [illegible] authorizes South Gate to make [illegible] [illegible].

[illegible]

[illegible]	2.5
[illegible]	0.9
[illegible]	4.4
[illegible] 4000cps	0.4
[illegible]	1/2 Formula V
[illegible]	40.0
[illegible]	as req'd [illegible]
[illegible]	to make [illegible]
[illegible]	0.1

[illegible]

As [illegible] 61-2-27-C

[illegible]

[illegible]

[illegible]

[illegible] (59 cc normal)
[illegible] 61-2-27

[illegible]

[illegible]

[illegible]

As [illegible] Horsehead [illegible].

[illegible] 3.

OP009 0433

DP009 0435

PRODUCT PROCEDURE	[illegible] CEMENT	[illegible] 1 of 2
APPROVED:	[illegible]	[illegible] Page 1 [illegible] 8-26-[illegible]

This temporary bulletin authori[illegible] to make LE 1[illegible] for field trials.

Formula

Vinac [illegible]	8.5
Vinol [illegible] (L-19)	0.9
Krause Corn Flour 3625	4.4
Regular Methocel 65HG 40[illegible]	0.4
Mica V.C.	1/2 [illegible]
M-350 Dexcite	40.0
[illegible] Asbestos	[illegible]
#400 Whiting	[illegible]
Vanside [illegible]1-2	0.1

*Colton 1084-[illegible] may be substitu[illegible] current stocks of [illegible]

Raw Materials

As per Bulletin 61-2-27 and 61-[illegible]

Processing

Per Bulletin [illegible]-2-27

Finished Product Tests

Consistency range 67-70 as (69 [illegible]
Other tests same as Bulletin 61-[illegible]

Packing

Same as Bulletin 61-2-27

Shipment

As directed by [illegible]

This [illegible] supersedes [illegible]

DP009 0437

[illegible]

[illegible]

[illegible]

[illegible] Topping Cement [illegible] JF185

[illegible] 2-5-59
[illegible] 1 of 1

[illegible] Page 1
[illegible] 2-5-59

[illegible] Bulletin authorizes Gypsum to manufacture Topping Cement for field [illegible] sale as directed by Dept. #144, per Formula JF185.
[illegible] as follows:

[illegible]	JF185
[illegible] (Fine ground, unoiled)	2.5
[illegible]	2.25
[illegible]	0.8
[illegible]	As req'd - approx. 0.1%
Ammonium [illegible]	1.0
Ammonium [illegible]	1.2
[illegible]	.3
[illegible] Fine Ground Mica	Use 0.6 [illegible]
[illegible]	as req'd to [illegible] consistency approx. [illegible] total.
[illegible]	15.0
#9 [illegible]	To make [illegible]
Liquid [illegible]	0.153
[illegible] 0.1	
[illegible] 0.05	
[illegible] 0.003	

[illegible]
[illegible] joint cements except:
[illegible] (Western or [illegible])
[illegible] - [illegible]
[illegible]
[illegible] mesh
[illegible] passing [illegible] mesh

[illegible] Topping Cement

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

[illegible]

OP007 1729

New

Operating Division PRODUCT PROCEDURE	ALL PURPOSE READY-MIXED	No. 61-2-24
		Date 5-19-59
		Page 1 of 3
Approved: JWT14	PERF-A-TAPE JOINT CEMENT	Cancels Page 1
		Dated 10-6-58

DESCRIPTION:

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

MANUFACTURING MILLS: New Brighton, Gypsum

FORMULA: JE-186A

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
Methocel HG	0.8	8
Ferrite Yellow	(to match the manila color of Sheetrock face paper)	
A 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
Plasticized WC-130*	5.5	96
Carbitol	-	9
PMA Preservative	-	4 oz.
Water	-	66 gal. approx.

*contains 5.0 WC-130 solids and 0.5 Dibutyl Phthalate.

RAW MATERIALS

Resin	Per Bulletin 6-104-17
Methocel HG	Per Bulletin 6-16-5
Dibutyl Phthalate	6-98-1
Solvent	6-149-3
P&CF	Per Bulletin 6-143-1
DXW Mineralite	Per Bulletin 6-146-2
Ser-X	Per Bulletin 6-146-2
Asbestos	Per Bulletin 6-7-1, JM-7RF1
CCO Whiting	Per Bulletin 6-30-7
A Dolomite	Per Bulletin 58-2-2
Stonelite	Per Bulletin 6-30-7
Nuodex PMA-18	6-100-2.
Huber CWF Clay	Per Bulletin 6-36-5
Troysan PMA-30	Per Bulletin 6-100-3

PROCESSING:

A. Filler Mix: The dry ingredients are first mixed in a Broughton mixer, and then micropulverized using a coarse screen as is done in manufacturing dry powder products.

NOTE: The mixer-pulverizer-packer unit is to be thoroughly cleaned of other products before making this filler mix.

TPCC 9 1990

Consistency Control Test on Filler Mix

A 300 gram sample of the filler mix should be taken after the fillers are blended and mikropulverized. The sample is mixed with water at a consistency of 65cc per 100 gms. (Mixing the powder into the water eliminates lumping to a large degree; any small lumps will disappear with vigorous stirring). About 2 minutes is allowed for mixing; then the mixture is allowed to stand undisturbed for 10 minutes. After standing the mixture is stirred vigorously again for 30 seconds. A Brabender reading is then taken. The reading is recorded after the Brabender has run 3 minutes (or sooner if the reading has become constant). The temperature of the mixture is taken last. The Brabender reading of the sample should match the Research standard sample reading of 420 ± 30 units at 75°F ± 5°F. The asbestos content of the filler mix must be increased if the Brabender reading is too low, and vice versa.

B. Emulsion Plasticization: The Bakelite WC-130 emulsion as supplied has an average of 58% solid, dispersed, p.v.ac. resin. Stir into the emulsion 5½ lbs. of water (exactly 5 pints, 4½ oz.) per 100 lbs. of WC-130 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 percent 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 WC-130 emulsion. The dibutyl phthalate is then poured slowly into the Bakelite WC-130 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 WC-130 must be above 65°F for this operation.

C. Complete Cement: The various ingredients are to be mixed in a heavy duty paste mixer using the following procedure: The required water(except for 1 - 2 gallons withheld to permit final consistency adjustment) is put into the mixer tub, and the carbitol and preservative are added. The mixer is then started. Most of the filler mix is poured into the mixer over a period of 3-6 minutes until the paste has the approximate consistency of the finished product. The plasticized emulsion is then run in gradually, followed by the balance of the fillers. Finally, small amounts of water are added to bring the cement to standard consistency.

FINISHED PRODUCT TEST:

Viscosity: To be 420 ± 20 units immediately after mixing is finished and after the cement has stood for 24 hours, using the following set-up:

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

(b) Can spindle to rotate 72 R.P.M.

(c) Pin Bladed paddle, and heavy spring suspension in the Brabender are to be used.

DP0009 0663

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE CEMENT FORMULA DE76	No. 61-2-27 Date 6-15-59 Page 1 of 1
Approved: JWTB	SOUTH GATE	Cancels Page 1 Dated 11-14-58

MANUFACTURING PLANT - South Gate

FORMULA - DE76

Vinac RP 250	4.0
Amijel B 111	3.3
Methocel HG-4000 cps.	.5
Vancide 51-Z	.1
Mica JC	.5 Formula V quantity
M350 Sericite	40.0
JM-7RF1 Asbestos	As required to control consistency, about 8%
Carbonate Filler	To make up 100%

RAW MATERIALS

Vinac RP-250	Per Bulletin 6-104-18
Amijel B 111	" " 6-124-1
Methocel HG-4000 cps.	" " 6-16-5
Vancide 51-Z	" " 6-100-1
Mica JC	" " 6-143-1
M350 Sericite	" " 6-146-2
Asbestos	" " 6-14-2
Carbonate Filler	" " 6-24-1

PROCESSING

Weighing, Mixing, and Mikropulverizing to be done the same as for other Perf-A-Tape Cements - see Bulletin 61-2-22.

FINISHED PRODUCE TESTS

Mixing and application - To be the same as for a standard sample of this product, supplied originally by Research and maintained by the mfg. plant from batches which closely match the original sample.

Consistency - 70 cc normal, range 68-71 cc
@ 500 Brabender, 77°F wet mix temperature
Bond to Perf-A-Tape - 6 or 7, dried at temperatures above 65°F and relative humidities below 75%.
Color - Natural White (Sl. gray or cream tint)

PACKAGING - In 25 lb. Perf-A-Tape Cement bags with "76" stencilled under batch code. Label T-197 to be attached to front of bags.

D

UP009 0427

OPERATING DIVISION PRODUCT PROCEDURE APPROVED: JWT B	PERF-A-TAPE CEMENT J1008C SOUTH GATE	NO. 61-2-22-EE DATE 6-16-59 PAGE 1 of 1 CANCELS Page 1 DATED 12-18-58

This temporary bulletin authorizes South Gate, as directed by Western Region Merchandising, to ship formula J1008C below instead of J885G in 25 lb. cement only and 25 lb. joint system packages to South Pacific and Central Pacific Divisions and Salt Lake City District.

Formula	J1008C
CMC-70H	.3%
Casein (fine, uncoiled)	4.0%
Soy Protein	4.0 (Ad PRO 444 or Procote U. Do not use the old T422A1 Protein in this cement)
Ammonium oxalate	.8
Sodium oxalate	.3
Dowicide G	.3
Hydrated Lime	As required (.1 to .2)
Dicyandiamide	.5
Asbestos (7RF1)	As required (7.5% in lab batches or about 3/4 as much as in J885G)
M350 Sericite	15.0
Mica JC	Per formula V
#400 Whiting	To make 100%
Liquid Mix (sprayed In)	.153
Sterox .1	
TBP .05	
5050 .003	

Raw Materials

All are current joint cement and texture grade with addition of sodium oxalate. This is a 99% (dry) and technical grade, which should screen 100% - 60 mesh and at least 90% - 100 mesh.

Processing

Same as for J885G and J815D cements.

Color

Natural White

Finished Product Tests

Consistency - 68 to 72 cc
pH - 8.1 to 8.5
Mixing and application - to match sample from Research
Bond - 6 minimum (under standard test conditions and with normal sanding type)

This bulletin expires 1-1-60.

OP007 1073

SPECIAL BULLETIN

OPERATING DIVISION		NO. 61-2-27-D
PRODUCT PROCEDURE	PEEL-A-TAPE CEMENT	DATE 6-30-59
		PAGE 1 of 1
APPROVED: JWB	DE 175A FORMULA SOUTH GATE	CANCELS DATED NEW

This temporary bulletin authorizes South Gate to make up to 10,000 pounds of DE 175A cement for field trials.

Formula

Vinac XP250	2.5
Vinol CWS (L-19)	0.9
Krause Corn Flour 3825	4.4
Regular Methocel 65HG 4000cps	0.4
Mica J. C.	1/2 Formula V
M-350 Sericite	40.0
TRF1 Asbestos	as req'd (6% in lab. batches)
#400 Whiting	to make 100%
Vancide 51-Z	0.1

Raw Materials

As per bulletin 61-2-27 and 61-2-27-C

Processing

Per Bulletin 61-2-27

Finished Product Tests

Consistency range 67-70 cc (69 cc normal)
Other tests same as Bulletin 61-2-27

Packing

Same as Bulletin 61-2-27

Shipment

As directed by Western Region Merchandising.

This bulletin expires 9-1-59.

DP009 0439

PROD[illegible]	PERF-A-TAPE J[illegible]	DATE 7-15-59 PAGE 1 of 1
APPROVED:		CANCELS PAGE NEW

This temporary bulletin [illegible] marbles to manufacture and ship Perf-A-Tape [illegible] Formula J 1062A.

FORMULA J 1062A

Casein, fine ground, [illegible]	3.5
Refined Soya Protein	4.0
Ammonium Oxalate	1.2
Ammonium Pentaborate	1.2
Hydrated Lime	0.2
Dicyandiamide	0.5
Ammonium alginate	0.3
Asbestos Floats, JM 7K[illegible]	As required for normal consistency (app. 9%)
Mica J. C.	Formula V
DDW Mineralite	15.0
#4 Peerless Clay	5.0
#9 Georgia Marble	To make 100%
Liquid Mix: Sterox CD	0.10
Tributyl [illegible]	0.05
Neutralizer [illegible]	0.003

Consistency: 67-70 cc [illegible] for 500 Embedded Loading at 77°F. [illegible] per Bulletin [illegible]-22.

For Material Specifications [illegible] not listed in [illegible]-22.

#9 Georgia [illegible] Bulletin 6-[illegible],
#4 Peerless [illegible] Bulletin 6-[illegible].

* This Bulletin expires [illegible]

OP007 1179

[illegible] BULLETIN

[illegible]	[illegible]-A-TAPE [illegible]	NO. 61-2-22-[illegible] JUL 31 1959 PAGE [illegible]
APPROVED: JWT B	[illegible]	CANCELS [illegible] DATED 7-15-59

This temporary bulletin authorizes South Gate to manufacture J 1066 on all orders for Perf-A-Tape Cement for the Salt Lake District and for field trials in Central & South Pacific Divisions. Specific field trial details will be provided by Western Region Mdse. Dept.

	J1066
Fine Ground Casein	[illegible].0
Marex Alginate	0.3
Dewicide G	0.3
Ammonium Oxalate	1.1
Hydrated Lime	0.2 ppm.
Dicyandiamide	1.0
JM [illegible] Asbestos	as required for consistency (about [illegible]%)
(D80 Valencia) Mica T	Formula V
MJ50 Sericite	15.0
#400 Whiting	as required
Liquid Mix	0.153

Storex 1.0
THP 0.05
[illegible]050 0.003

Raw Materials: As per Bulletin 61-2-22 and 61-[illegible].

Finished Product Tests:
Consistency 65-[illegible] as [illegible] [illegible] at [illegible])
Working properties: [illegible] from Research
Other properties: [illegible] on Bulletin 61-2-[illegible].

Processing: per Bulletin 61-[illegible]

Color: Natural White

Shipment: As directed by [illegible]

[illegible]

OP007 1137

[illegible]	ALL PURPOSE READY-MIXED PERF-A-TAPE JOINT CEMENT	[illegible] DATE [illegible]-59 [illegible]
[illegible]	SOUTH GATE	CANCELS DATED NEW

All Purpose Ready-Mixed Perf-A-Tape Joint Cement

A semi-emulsion base, ready-mixed Perf-A-Tape Cement.

Manufacturing Plant: South Gate

JE-197C

Filler Mix	% Non-Volatile	Lbs. (for 945 Lbs. Filler Charge)
Mica JC	(2/3 For. V)	100 approx.
M 350	30.0	300
Asbestos Fleece	(As required)	35 approx.
Ether Clay	10.0	100
Methanol 1G	0.8	8
Ferrite Yellow	(To match the vanilla color of Sheetrock Face Paper)	
400 Whiting	(To make 94.5%)	(To make up 945 lbs.)

Paste Mix	% Non-Volatile	Lbs. (for approx. 130 gal. taken)
Fillers	94.5	945
Plasticized UC-130*	5.5	96
Carbital	-	9
HEA Preservative	-	4 oz.
Water	-	66 gal. approx.

* Contains 5.0 UC-130 solids and 0.5 Dibutyl Phthalate.

Raw Materials: Same as for 61-2-24, except as follows:

M 350 Cericite - per Bulletin 6-146-2
400 Whiting - per Bulletin 6-[illegible]

Processing and Finished Product Test: Same as for 61-2-24.

Packaging: Containers and labels as designated by Department 144.

Shipment: Shipment to be made within California only, to jobs as specified by Department 144.

[illegible] expires [illegible]-60.

OPC09 0939

Operating Division PRODUCT PROCEDURE	PERF-A-TAPE CEMENT FORMULA DE76	No. 61-2-27
		Date 10-2-59
		Page 1 of 1
Approved: JWT	SOUTH GATE	Cancels Page 1
		Dated 6-15-59

MANUFACTURING PLANT - South Gate

FORMULA - DE76

Vinac RP 250*	4.0	
Amijel B 111	3.3	
Methocel HG-4000 cps.	.5	
Vancide 51-Z	.1	
Mica JC	.5	Formula V quantity
M350 Sericite	40.0	
JM-7RF1 Asbestos	As required to control consistency, about 8%	
Carbonate Filler	To make up 100%	

*Coltion 1084-56 may be substituted after current stocks of RP250 are exhausted.

RAW MATERIALS

Vinac RP-250	Per Bulletin 6-104-18
Amijel B 111	" " 6-124-1
Methocel HG-4000 cps.	" " 6-16-5
Vancide 51-Z	" " 6-100-1
Mica JC	" " 6-143-1
M350 Sericite	" " 6-146-2
Asbestos	" " 6-14-2
Carbonate Filler	" " 6-24-1
Colton 1084-56	Test under Bulletin 6-104-18

PROCESSING

Weighing, Mixing, and Mikropulverizing to be done the same as for other Perf-A-Tape Cements - see Bulletin 61-2-22.

FINISHED PRODUCE TESTS

Mixing and application - To be the same as for a standard sample of this product, supplied originally by Research and maintained by the mfg. plant from batches which closely match the original sample.

Consistency - 70 cc normal, range 68-71 cc
@ 500 Brabender, 77°F wet mix temperature
Bond to Perf-A-Tape - 6 or 7, dried at temperatures above 65°F and relative humidities below 75%.
Color - Natural White (Sl. gray or cream tint)

PACKAGING - In 25 lb. Perf-A-Tape Cement bags with "76" stencilled under batch code. Label T-197 to be attached to front of bags.

UP009 0426

OPERATING DIVISION PRODUCT PROCEDURE APPROVED: JMTB	PERF-A-TAPE JOINT CEMENT SOUTH [illegible]	NO. 61-3-22-PP DATE 10-6-59 PAGE 1 of 1 [illegible] Page 1 DATE 7-31-59

This temporary bulletin authorizes South [illegible] to manufacture [illegible] all orders for Perf-A-Tape Cement [illegible] Sc[illegible] District and for [illegible] in Central & South Pacific Divisions. [illegible] field trial details will be provided by Western Region Mdse. Dept.

	#1066
Fine Ground Casein	7.0
Merex Alginate	0.5
Dowicide G	0.3
Ammonium Oxalate	1.[illegible]
Hydrated Lime	0.2 [illegible]
Dicyandiamide	1.0
GM 7RF1 Asbestos	as required [illegible]
(P80 Valencia) Mica [illegible]	Formula [illegible]
M350 Sericite	15.0
#400 Whiting	as required
Liquid Mix	0.153

Sterex	[illegible]
[illegible]	[illegible]5
5050	[illegible]

Raw Materials: As per Bulletin [illegible]

Finished Product Plans:

Consistency [illegible]

Forming properties [illegible]

Other properties [illegible]

Processing: [illegible] per Bulletin [illegible]

Color: [illegible] White

Shipment: [illegible]

This bulletin [illegible]

OP007 1136

PRODUCT NO. SPARE	AERO-X-RAY JOINT COMPANY	DATE [illegible]
ORDER NO. [illegible]	SPECIFICATION	PAGE [illegible]
		CANCELS DATED [illegible]

This temporary bulletin authorizes Sweetwater to manufacture JC05. The product is to be shipped for field trials as directed by Department 6104.

FORMULA

Fine mineral material	7.0
[illegible]	0.3
[illegible]	0.3
Ammonium chloride	1.1
Hydrated lime	Amount 0.2 (as required for pH,
Diethanolamide	1.0
Modified [illegible] resin	2.1 mg/l /about 1.1
Resin I	Formula 7
[illegible]	7.0
Flavorant	3% Base 100%
Aligned film	0.153
	(Sterox 0.100
	(T.B.P. 0.050
	(Neutralizer 5050 0.003

PRE-MATERIALS

Film as used in JC96, Bulletin 61-2-22.

PROCESSING

[illegible]

[illegible]

[illegible]

[illegible] PRODUCT PROCEDURE	[illegible]-TAPE DUAL PURPOSE CEMENT [illegible] FORMULA	[illegible] DATE 12-3-59 PAGE 1 of 1
	[illegible]	CANCELS DATED [illegible]

[illegible] manufacture and ship up to 5000 lbs. of J-1124 dual purpose cement. [illegible] to be conducted at the discretion of Dept. [illegible]. Specifications [illegible]

J-1124

[illegible] wire ground, unoiled	4.0%
[illegible] soy protein	1.5
[illegible] alginate	0.5
[illegible] perborate	1.2
[illegible] chlorate	1.0
Hydrated lime	to give required pH (0.15% in lab)
[illegible]	1.0
[illegible] Carey [illegible] asbestos	to give required consistency (5% in lab)
[illegible]	per Formula V
[illegible]	15.0
No. 9 Georgia Marble	to make 100%
Sterox CD	0.1
[illegible]phosphate	0.05
[illegible] 5050	0.003
[illegible] yellow	to match color of SR manila paper (ca 0.15 in lab)

[illegible] Specifications

No. 9 Georgia Marble	per Bulletin 6-[illegible]
[illegible]	" " [illegible]
[illegible] Carey [illegible] asbestos	" "
[illegible]	as shown in Bulletin [illegible]
[illegible]	per Bulletin [illegible]

[illegible] Specifications

[illegible]	to match [illegible] manila paper
[illegible]	[illegible] as preferred [illegible]
[illegible]	per Bulletin [illegible]
[illegible]	[illegible] preferred

[illegible]

[illegible] Department [illegible]

OP007 1227

[illegible] PRODUCT [illegible]	PERF-A-TAPE DUAL PURPOSE CEMENT J-1130 FORMULA HAGERSVILLE	NO. 61-2-22-33 DATE 12-3-59 PAGE 1 of 1 CANCELS DATED NEW

[illegible] to manufacture and ship formula J-1130 Dual-Purpose Cement as directed by Department #144.

Formula	J-1130
Montreal Casein	5.5
Marine Alginate	0.6
Ammonium Oxalate	1.0
Dowicide G	0.2
Dicyandiamide	0.6
Asheville Mica (P-60F)	use 0.6 formula V quantity
TRP9-PC Asbestos	as req'd to give normal consistency (7.5% in Lab Batches)
Hydrated Lime	as req'd - approx. [illegible]
M-4 Talc	15.0
FF-Limestone	15.0
A - Dolomite	to make 100%
Liquid Mix	0.153

Sterox CD	0.1
Tributylphosphate	0.05
Neutralizer	0.003

[illegible]

[illegible] same as listed under 61-2-22.

[illegible] Perf-A-Tape cements.

[illegible] Product Tests

[illegible] mated manila paper
[illegible] - range: 62-66 as normal 64 [illegible] to give a 400 [illegible].
[illegible] - [illegible] match standard sample from Research.
[illegible] 9.
[illegible] - [illegible] (when [illegible] at relative humidities [illegible]

[illegible]

[illegible] to be packaged in [illegible] 25 lb. [illegible] Roping Cement [illegible] printed as suffix to code numbers.

[illegible] 17 [illegible] points by [illegible]

[illegible]

[illegible]

[illegible]

DP007 1219

[illegible] | [illegible] J1008C | [illegible] 12-31-59 | [illegible] 1 of 1 | [illegible] Page 1 | [illegible] 6-15-59

JWT3

SOUTH GATE

This temporary bulletin authorizes South Gate, as directed by Western Region Merchandising, to ship formula J1008C below instead of J885G in 25 lb. cement only and 25 lb. joint system packages to South Pacific and Central Pacific Divisions and Salt Lake City District.

Formula	J1008C
[illegible]	.3%
Casein (fine, unoiled)	4.0%
Soy Protein	4.0 (Ad PRO 444 or Procote U. Do not use the old T422A1 Protein in this cement)
Ammonium oxalate	.8
Sodium oxalate	.3
Dowicide G	.3
Hydrated Lime	As required (.1 to .2)
Dicyandiamide	.5
Asbestos (7RF1)	As required (7.5% in lab batches or about 3/4 as much as in J885G)
M350 Sericite	15.0
Mica JC	Per formula V
#400 Whiting	To make 100%
Liquid Mix (Sprayed In)	.153
Starox .1	
TBP .05	
5050 .003	

[illegible]
[illegible] current joint cement and texture grade with addition of sodium oxalate. This is a [illegible] (dry) and technical grade, which should screen 100% - [illegible] mesh and [illegible] - 100 mesh.

[illegible]
[illegible] J885G and J815D [illegible].

[illegible]

[illegible] Product Tests
[illegible] - [illegible] to 72 cc
[illegible] to 8.5
[illegible] application - to match [illegible] from [illegible]
[illegible] (under standard [illegible] conditions [illegible] with [illegible] [illegible]

[illegible] expires 4-1-60.

OP007 1072

PRODUCT DIVISION APPROVED: JWTB	PERF-A-TAPE JOINT CEMENT SOUTH GATE	NO. 61-2-22-AT DATE 12-31-59 PAGE 1 OF 1 CANCELS Page 1 DATED 10-6-59

This temporary bulletin authorizes South Gate to manufacture J 1066 on all orders for Perf-A-Tape Cement for the Salt Lake District and for field trials in Central & South Pacific Divisions. Specific field trial details will be provided by Western Region Mine. Dept.

	J.1066
Fine Ground Casein	7.0
Marex Alginate	0.3
Dowicide G	0.3
Ammonium Oxalate	1.1
Hydrated Lime	0.2 spp.
Dicyandiamide	1.0
JM 7MF1 Asbestos	as required for consistency (about 5%)
(#80 Valencia) Mica T	Formula V
M350 Sericite	15.0
#400 Whiting	as required
Liquid Mix	0.153
Stearex 1.0	
THP 0.05	
5050 0.003	

Raw Materials: As per Bulletin 61-2-22 and 61-2.41.

Finished Product Tests:
Consistency 65-70 cc (68 normal) 50053 at 77°F.
Working properties: To equal Standard from Research.
Other properties: Same as listed in Bulletin 61-2-22.

Processing: per Bulletin 61-2-22.

Color: Natural White

Shipment: as directed by Western Region Merchandising

This bulletin expires 4-1-60.

NP007 1115

PRINTED IN U.S.A.

OPERATING DIVISION PRODUCT PROCEDURE APPROVED: JWT B	PENN-A-TAPE DUAL PURPOSE CEMENT J-1124 FORMULA GYPSUM	NO. 61-2-22 [illegible] DATE 1-6-60 PAGE 1 of 1 CANCELS Page 1 DATED 12-3-59

Gypsum to manufacture and ship J-1124 formula dual-purpose Cement to Districts as specified by Dept. 144, Chicago on receipt of orders from sales. Specifications as follows:

J-1124

Casein, fine ground, unoiled	4.0%
Refined soy protein	1.5
Ammonium alginate	0.5
Ammonium pentaborate	1.2
Ammonium oxalate	1.0
Hydrated lime	to give required pH (0.15% in lab.)
Dicyandiamide	1.0
Philip Carey 7EF9 Asbestos	to give required consistency (5% in lab.)
Mica JC	per Formula V
Ser-X	15.0
No. 9 Georgia Marble	to make 100%
Sterox CD	0.1
Tributylphosphate	0.05
Neutralizer 5050	0.003
Ferrite yellow	to match color of SR manila paper (ca 0.15 in lab.)

RAW MATERIAL SPECIFICATIONS

No. 9 Georgia Marble	per Bulletin 6-24-9
Tributylphosphate	" " 61-2-41
Philip Carey 7EF9 Asbestos	" "
All others	as shown in Bulletin 61-2-22
Processing	per Bulletin 61-2-22

FINISHED PRODUCT SPECIFICATIONS

Color	to match Sheetrock manila paper
Consistency	63-66 cc, 65 cc preferred (for 500 ± 25 Bracender)
Moisture	per Bulletin 61-2-22
pH	8.1-8.5, 8.3-8.4 preferred

BACKGOING

Regular Joint Cement bag will be used with the letters [illegible] to follow manufacturing code number.

This bulletin expires [illegible]

9/20

OP007 1226

Cancels Temporary Bulletin 61-2-27-I

Operating Division PRODUCT PROCEDURE Approved: JWTB	PERF-A-TAPE CEMENT "76" SOUTH GATE	No. 61-2-27 Date 1-6-60 Page 1 of 1 Cancels Page 1 Dated 10-2-59

MANUFACTURING PLANT - South Gate

Formula: DE175

Vinac RP1084-56	2.5
Vinol CWS (L-19)	0.9
Krause Corn Flour 3825	4.4
Regular Methocal 65HG-4000 cps.	0.4
Mica J. C.	1/2 Formula V
M-350 Sericite	40.0
7RF1 Asbestos	as req'd (6% in lab batches)
#400 Whiting	to make 100%
Vancide 51-Z	0.1

RAW MATERIALS

Vinac RP1084-56	Per Bulletin 6-104-18
Krause Corn Flour 3825	" " 6-55-5
Methocel 65HG-4000 cps.	" " 6-16-5
Vancide 51-Z	" " 6-100-1
Mica JC	" " 6-143-1
M-350 Sericite	" " 6-146-2
Asbestos	" " 6-14-2
Carbonate Filler	" " 6-24-1
Vinol CWS (L-19)	

PROCESSING

Weighing, Mixing, and Mikropulverizing to be done the same as for other Perf-A-Tape Cements - see Bulletin 61-2-22.

FINISHED PRODUCT TESTS

Mixing and application - To be the same as for a standard sample of this product, supplied originally by Research and maintained by the mfg. plant from batches which closely match the original sample.

Consistency - 69 cc normal, range 67-70 cc
@ 500 Brubender, 77°F wet mix temperature
Bond to Perf-A-Tape - 6 or 7, dried at temperatures above 65°F and relative humidites below 75%.
Color - Natural White (Sl. gray or cream tint)

PACKAGING

In 25 lb. Perf-A-Tape Cement bags with "76" stencilled in numbers 2 inches high on each side of the U.S.G. emblem.

SHIPMENT

As requested by Sales Districts in the South Pacific Division only.

DP009 0425

[illegible]	[illegible]	[illegible]
APPROVED: [illegible]	JF254 FORMULA HAGERSVILLE	DATE [illegible] PAGE [illegible] CANCELS DATED NEW

Hagersville to manufacture and ship formula JF254 Topping Cement as directed by Department #144.

FORMULA		JF254
Montreal Casein		3.75
Marex Ammonium alginate		0.80
Ammonium Oxalate		1.00
Ammonium Pentaborate		1.20
Mica J.C. (Ashville P80-P)		0.6 formula V
Dicyandiamide		1.0
Hydrated Lime		(Approx. 0.1%) as needed for pH control
M-4 Talc		15.0
TDF-1 EM Asbestos		As needed (control has 4.7%)
PF Limestone		15.0
A - Dolomite		To make 100%
Ferrite Yellow		As required
Liquid Mix		0.153
Sterox CD	0.100	
Tributylphosphate	0.030	
Neutraliser 5050	0.003	

RAW MATERIALS

Same as listed under 61-2-23.

PROCESSING

Same as present Topping Cement

FINISHED PRODUCT TESTS

Color - To match manila paper
Consistency - Range 59-63 oz (61 oz normal) for a [illegible] Brabender.
Application - To match standard sample [illegible]
pH - 8.2 - 8.5
Bond to tape - 3 minimum (when dried at [illegible] humidities below [illegible])

PACKAGING

Material to be packed in standard [illegible] pound [illegible] Topping Cement [illegible] with the letter D imprinted as a [illegible] to the [illegible] number.

Change mixing water volume to 11-1/2 - [illegible] pints by [illegible] of a small stamped sticker over the present [illegible].

[illegible] 8-1-60.

OP007 1846

[illegible]	PERF-A-TAPE TOPPING CEMENT	NO. [illegible]
		DATE 2-5-60
	GYPSUM	PAGE 1 of 1
APPROVED MJB		CANCELS
		DATED Reinstated

This temporary bulletin authorizes Gypsum to manufacture and ship the following formulated Perf-A-Tape Topping Cement to the Milwaukee Market when "Special Milwaukee Formula" is noted on the 379 order form.

PERF-A-TAPE TOPPING CEMENT - FORMULA [illegible] - For all 25# bags of Perf-A-Tape Topping Cement:

Casein	3.0
Soy Protein	2.5
Marex Alginate	.8
Hydrated Lime	.15 - .25
Ammonium Oxalate	1.0 - 1.2
Sodium Pentachlorophenate	.2
Dicyandiamide	.3
Mica [illegible]	For Quantity V
Asbestos	As Required for Normal Consistency and application properties.
M-350 Sericite Mica, [illegible] Mineralite or Ser-X	15.0
GCO Whiting	15.0
Sterox CD (1)	.1
Tributylphosphate	.05
Carbonate Filler	To make up 100%
Neutralizer #5050 (1)	.003

(1) The liquid wetting agents - Sterox CD, Tributylphosphate and Neutralizer #5050 are to be mixed together in proper proportions and sprayed into the batch in the Broughton Mixer. In cold weather the solution may be thinned with isopropyl alcohol if necessary to facilitate spraying.

[illegible] TO BE COLORED [illegible] THE AMOUNT OF PIGMENT [illegible] TOPPING CEMENT.

This bulletin expires 7-1-60.

Cancelled

JP007 0833

REQUEST FOR ~~NEW OR~~ REVISION OF OPERATING BULLETIN

170-K, CHICAGO (2 COPIES)

_____, CHICAGO (PROD.MGR. 1 COPY WHEN REQUESTED BY PLANT)

FILE COPY

DATE 2-16-60

BULLETIN 61-2-22-~~M~~

SUBJECT: **Perf-A-Tape Joint Cement**

PLANTS CONCERNED:

DETAILS AND OBJECT OF PROPOSED PRACTICE: (INDICATE *WHAT* IS WANTED, LIST MAJOR CHANGES, EXPLAIN WHY CHANGE IS WANTED).

Remove shipping restrictions on J105½, to permit shipment on all orders for Perf-A-Tape Cement from the Denver District, as requested by Department 6666.

The J105½ has materially reduced edge crack complaints from the Denver District, and is to be substituted for the J6850 formerly supplied.

EFFECT ON QUALITY:

ECONOMICS : (EXPLAIN EFFECT ON FACTORS BELOW IF APPLICABLE TO PROPOSAL)

		SOURCE OF INFORMATION PERSON	DEPT.	DATE
MILL COST (CURRENT)	(EXPECTED) N/A	JEW	151-L	2-15-60
SELLING PRICE (CURRENT)	(EXPECTED) *			
SALES VOLUME				
EQUIPMENT CHANGES AND CAPACITIES	None			
RAW MATERIALS, CONTAINERS, LABELS OR TAPES MADE OBSOLETE *				

INSTRUCTIONS:

All information requested is required to obtain approval. Mark "Not Applicable" where required. INCOMPLETE REQUESTS WILL BE RETURNED.

Use back of this sheet or additional sheets if necessary. Attach laboratory test reports, field trip reports, and copies of pertinent correspondence.

See Bulletins 1-1 & 1-2 for additional instructions. Plants to supplement request with marked-up copies (photo copy will do) of bulletin showing proposed revision.

*PLANTS WILL USE UP PRESENT STOCKS OF CONTAINERS, LABELS AND TAPES UNLESS REVISED BULLETIN INDICATES OTHERWISE.

DO NOT FILL OUT THIS SECTION - PERSONS TO APPROVE WILL BE LISTED BY DEPT. 170-K.

PLEASE SIGN BULLETIN HERE

DEPT.	NAME	INITIALS	DATE SIGNED

HAVE THE CORRESPONDING CHANGES IN OTHER COMPANY BULLETINS AND MANUALS BEEN REQUESTED?

N/A

REQUEST PREPARED BY - J.E. Walker

FOR DEPARTMENT 151-L

OPROT 0819A

2-6642 RE... 1/60 (PRINTED IN U.S.A.)

OPERATING DIVISION		NO.
PRODUCT PROCEDURE	ALL PURPOSE READY-MIXED PERF-A-TAPE JOINT CEMENT	DATE 3-3-60
APPROVED:	SWEETWATER	PAGE 1
		CANCELS Page 1
		DATED 3-3-60

All-Purpose Ready-Mixed Perf-A-Tape Joint Cement

A resin-emulsion base, ready-mixed Perf-A-Tape Cement.

Manufacturing Plant: Sweetwater

Filler Mix	% Non-Volatile	JE-204 lbs. (For a 945 lb. filler charge)
Mica JC	(Formula V)	150 approx.
NW Mineralite	30.0	300
Nicolet 7XG25 Asbestos	(As Required)	35 approx.
Zuber CHF Clay	10.0	100
Methocel 65HG (4000 CPS)	0.8	8
Ferrite Yellow	(To match manila color of Sheetrock face paper)	
Carbonate Filler	(To make 94.5%)	(To make 945 lbs.)

Paste Mix	% Non-Volatile	Lbs. (for approx. 130 gal. batch)
Fillers	94.5	945
Plasticized HC-130	5.5*	56
Carbitol	-	9
PMA Preservative	-	4 oz.
Water	-	70 gals. approx.

* Contains 5.0 HC-130 solids and 0.5 Dibutyl Phthalate

Raw Materials: Same as for 61-2-A except as follows:

NW Mineralite	- per Building Bulletin
Nicolet 7XG25 Asbestos	- per Building Bulletin
Carbonate Filler	- per Building Bulletin

Processing: Same as for 61-2-A except on page 2 of 3 under Intermediate Control Tests. Mix the 300 gram sample of filler and JE-204 as per 100 grams to give a Brookfield reading of between 400 and 800 cps.

Finished Product Test: Same as 61-2-A except as follows:
Viscosity - Brookfield reading to be 400 to 800 after the sample has been run 25 rpm.

Color: To match manila color of Sheetrock face paper. Light colored Ready Mixed Cement will be shipped when called for specially. Normally will be white over or under the code number.

Packaging and Shipment: As determined by Department 844.

This formulation replaces 61-2-C.

TP009 1012

[illegible]

[illegible]	PERF-A-TAPE JOINT CEMENT J-1054C FORMULA SWEETWATER	NO. 61-2-22-[illegible] DATE 3-11-60 PAGE 1 of 2 CANCELS Page 1 DATED 7-15-59
APPROVED:		

Sweetwater to manufacture J-1054C for shipment on all orders for Perf-A-Tape Cement from the Denver District.

FORMULA

Fine Gasoline, unmilled	7.0%	
Murex alginate	0.3	
Dovicide G	0.3	
Ammonium oxalate	1.1	
Hydrate lime	about 0.2 as required for pH	
Dicyanodiamide	1.0	
Nicolet 7TG25 Asbestos	as required (about 8%)	
Mica J.C.	Formula V	
ENN Mineralite	15.0	
Carbotex	to make 100%	
Liquid Mix	0.153 (Sterox	0.100
	(Tributylphosphate	0.050
	(Neutralizer 5050	0.003

BAG MATERIALS

Same as used in J-885G, Bulletin 61-2-22.

PROCESSING

Same as for J-885G

COLOR

Natural color

FINISHED PRODUCT TESTS

Consistency: 6[illegible]-60 at 77°F Brabender Reading 400 ± 20
pH; 8.1 to 8.5
Mixing and Application: to match sample from Research
Bond; 5 minimum (under standard test conditions)
Other tests as per Bulletin 61-2-22.

OP007 1153

9/20

OPERATING [illegible] PRODUCT PROCEDURE	PERF-A-TAPE DUAL PURPOSE CEMENT J-1124 FORMULA	NO. [illegible] DATE 3-11-60 PAGE 1 of 1
APPROVED:	GYPSUM	CANCELS Page 1 DATED 1-6-[illegible]

Gypsum to manufacture and ship J-1124 formula dual-purpose Cement to Districts as specified by Dept. 144, Chicago on receipt of orders from sales. Specifications as follows:

J-1124

Casein, fine ground, unoiled	4.0%
Refined soy protein	1.5
Ammonium alginate	0.5
Ammonium pentaborate	1.2
Ammonium oxalate	1.0
Hydrated lime	to give required pH (0.1[illegible] in lab.)
Dicyandiamide	1.0
Philip Carey 7RF9 Asbestos	to give required consistency (9% in lab.)
Mica JC	per Formula V
Ser-X	15.0
No. 9 Georgia Marble	to make 100%
Sterox CD	0.1
Tributylphosphate	0.05
Neutralizer 5050	0.003
Ferrite yellow	to match color of [illegible] paper (ca 0.15 in lab.)

RAW MATERIAL SPECIFICATIONS

No. 9 Georgia Marble	per Bulletin 6-24-9
Tributylphosphate	per Bulletin 61-2-41
Philip Carey 7RF9 Asbestos	per Bulletin _____
All others	as shown in Bulletin [illegible] 2
Processing	per Bulletin 61-2-2[illegible]

[illegible] PRODUCT SPECIFICATIONS

Color	to match [illegible] paper
Consistency	63-66 cc, 65 cc [illegible] 500 ± 25 [illegible]
[illegible]	per Bulletin 61-2-2[illegible]
pH	8.1-8.5, 8.3-8.4 [illegible]

[illegible]

Regular Joint Cement bag will be used with the [illegible] manufacturing code number.

[illegible] Bulletin [illegible] 1-[illegible]0.

OP007 1225

Also cancels Temporary Bulletins 61-2-22-NN and 61-2-22-PP

Operating Division PRODUCT PROCEDURE Approved: JMB	PERF-A-TAPE JOINT CEMENTS	No. 61-2-22 Date 3-17-60 Page 1 of 10 Cancels Page 1 Dated 4-24-57

MANUFACTURING PLANTS

Chamblee, Gypsum, Hagersville, New Brighton, South Gate, and Sweetwater

JOINT CEMENT FORMULAS

	Gypsum and New Brighton J815C	South Gate J815D	South Gate J1066
Casein	3.5	3.5	7.0
Refined Soy Protein	4.0	4.0	-
Ammonium Oxalate	1.2	1.2	1.1
Sodium Pentachlorphenate	-	-	0.3
Ammonium Pentaborate	1.2	1.2	-
Ammonium Alginate - (Note 2)	0.3	0.3	0.3
Hydrated Lime	0-0.15	0-0.5	0.1-0.2
Dicyandiamide	0.5	0.5	1.0
Asbestos Floats - (Note 3)	As Req.	As Req.	As Req.
Sericite Mica - (Note 4)	15.0	15.0	15.0
Whiting - (Note 5)	15.0	15.0	-
Mica J.C. - (Note 6)	Formula V	Formula V	-
Mica T - (Note 6)	-	-	Formula V
Carbonate Filler - (Note 7)	To Make 100%	To Make 100%	To Make 100%
Sterox CD - (Note 8)	0.100	0.100	0.100
Tributylphosphate - (Note 8)	0.050	0.050	0.050
Neutralizer #5050 - (Note 8)	0.003	0.003	0.003

OP010 0353

JOINT CEMENT FORMULAS (Cont'd)

	Sweetwater J-885G	Hagersville J-920E	Chamblee J-1062A
Casein	3.5	7.5	3.5
Refined Soy Protein	4.0	-	4.0
Ammonium Oxalate	1.2	1.2	1.2
Sodium Pentachlorphenate - (Note 1)	0.2	-	-
Ammonium Pentaborate	-	1.2	1.2
Ammonium Alginate	0.3	0.3	0.3
Hydrated Lime	0.05-0.3	0.05-0.2	0.1-0.3
Dicyandiamide	0.5	0.5	0.5
Asbestos Floats - (Note 3)	As Req.	As Req.	As Req.
Sericite Mica - (Note 4)	15.0	-	15.0
Mica J.C. - (Note 6)	Formula V	Formula V	Formula V
Talc M-4	-	15.0	-
#4 Peerless Clay	-	-	5.0
Carbonate Filler - (Note 7)	To Make 100%	To Make 100%	To Make 100%
Sterox CD - (Note 8)	0.100	0.100	0.100
Tributylphosphate - (Note 8)	0.050	0.050	0.050
Neutralizer #5050 - (Note 8)	0.003	0.003	0.003

FORMULA NOTES

Note 1 - J885G - For shipments into the Southeast Division and Houston District the Sodium Pentachlorphenate is to be increased to 0.4%. All five pound boxes of cement and 60 foot Perf-A-Tape, with or without knives, are to be made with 0.3% Sodium Pentachlorphenate.

Note 2 - Gypsum and New Brighton may use 0.225% Protamon "S" alginate in place of 0.3% Marex alginate.

DPQ10 0354

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved: JMB	PERF-A-TAPE DUAL PURPOSE CEMENT J-1130 FORMULA HAGERSVILLE	No. 61-2-22-SS Date 3-28-60 Page 1 of 1 Cancels Page 1 Dated 12-3-59

Hagersville to manufacture and ship formula J-1130 Dual-Purpose Cement as directed by Department #144.

Formula	J-1130
Montreal Casein	5.5
Marex Alginate	0.6
Ammonium Oxalate	1.0
Dowicide G	0.2
Dicyandiamide	0.6
Ashville Mica (P-80F)	use 0.6 formula V quantity
7HF9-PC Asbestos	as req'd to give normal consistency (7.5% in Lab Batches)
Hydrated Lime	as req'd - approx. 0.1%
M-4 Talc	15.0
FF-Limestone	15.0
A - Dolomite	to make 100%
Liquid Mix	0.153
Sterox CD 0.1	
Tributylphosphate 0.05	
Neutralizer 0.003	

Raw Materials

All are the same as listed under 61-2-22.

Processing

Same as present Perf-A-Tape cements.

Finished Product Tests

Color - To match manila paper
Consistency - Range: 62-66 cc, Normal 64 cc to give a 400 BB.
Application - To match standard sample from Research
pH - 8.2 - 8.9
Bond to Tape - 6 minimum (when dried at relative humidities below 50%)

/ Packaging

Material to be packaged in 25 lb. bags, bag layout per Bulletin 8-103-4.

This bulletin expires 6-1-60.

DP007 1219

[illegible]	[illegible] DUAL PURPOSE CEMENT J-1124 FORMULA GYPSUM	NO. 61-2-26-[illegible] DATE [illegible]-60 PAGE 1 of 1 CANCELS DATED [illegible]
APPROVED:		

Gypsum to manufacture and ship J-1124 formula dual-purpose Cement to Districts as specified by Dept. 144, Chicago on receipt of orders from sales. Specifications as follows:

J-1124

Casein, fine ground, unfiled	4.0%
Refined soy protein	1.5
Ammonium alginate	0.5
Ammonium pentaborate	1.2
Ammonium oxalate	1.0
Hydrated lime	to give required pH (0.15% in lab.)
Dicyandiamide	1.0
Philip Carey [illegible] Asbestos	to give required consistency -
Mica [illegible]	per Formula V (3% in lab)
Ser-X	15.0
No. 9 Georgia Marble	to make 100%
Storex CD	0.1
Tributylphosphate	0.05
Neutralizer [illegible]	0.003
Ferrite yellow	to match color of SR manila paper (ca 0.15 in lab.)

RAW MATERIAL SPECIFICATIONS

No. 9 Georgia Marble	per Bulletin 6-24-9
Tributylphosphate	Per Bulletin 61-2-41
Philip Carey [illegible] Asbestos	Per Bulletin
All [illegible]	As shown in Bulletin 61-2-22
Processing	Per Bulletin 61-2-42

[illegible]

Color	[illegible]
[illegible]	[illegible]
[illegible]	per Bulletin [illegible]
pH	[illegible]

[illegible]

[illegible]

[illegible]

JP009 0119

Operating Division		No. 61-2-27
PRODUCT PROCEDURE	PERF-A-TAPE CEMENT "76"	Date 5-25-60
Approved: 7/18/B	SOUTH GATE	Page 1 of 1
		Cancels Page 1
		Dated 1-6-60

MANUFACTURING PLANT - South Gate

Formula: DE175

Vinac RP1084-56	2.5
Vinol CWS (L-19)	0.9
Krause Corn Flour 3825	4.4
Regular Methocal 65HG-4000 cps.	0.4
Mica J. C.	1/2 Formula V
M-350 Sericite	40.0
7MF1 Asbestos	as req'd (6% in lab batches)
#400 Whiting	to make 100%
Vancide 51-Z	0.1

RAW MATERIALS

Vinac RP1084-56	Per Bulletin 6-104-18
Krause Corn Flour 3825	" " 6-55-5
Methocel 65HG-4000 cps.	" " 6-16-5
Vancide 51-Z	" " 6-100-1
Mica JC	" " 6-143-1
M-350 Sericite	" " 6-146-2
Asbestos	" " 6-14-2
Carbonate Filler	" " 6-24-1
Vinol CWS (L-19)	

PROCESSING

Weighing, Mixing, and Mikropulverizing to be done the same as for other Perf-A-Tape Cements - see Bulletin 61-2-22.

FINISHED PRODUCT TESTS

Mixing and application - To be the same as for a standard sample of this product, supplied originally by Research and maintained by the mfg. plant from batches which closely match the original sample.

Consistency - 69 cc normal, range 67-70 cc
@ 500 Brabender, 77°F wet mix temperature
Bond to Perf-A-Tape - 6 or 7, dried at temperatures above 65°F and relative humidites below 75%.
Color - Natural White (Sl. gray or cream tint)

PACKAGING

Layout per Bulletin 7-16-32-2

SHIPMENT

As requested by Sales Districts in the South Pacific Division only.

JP009 0424

Operating Division PRODUCT PROCEDURE Approved: MJB	ALL PURPOSE READY-MIXED PERF-A-TAPE JOINT CEMENT	No. 61-2-24 Date 6-8-60 Page 1 of 3 Cancels Page 1 Dated 5-19-59

DESCRIPTION:
A resin-emulsion base, ready-mixed Perf-A-Tape, with a package life of one year.

MANUFACTURING MILLS: New Brighton, Gypsum

FORMULA: JE-186A

FILLER MIX	% Non Volatile	lbs. (For 945lbs. 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
Methocel HG	0.8	8
Ferrite Yellow	(to match the manila color of Sheetrock face paper)	
A 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
Plasticized WC-130*	5.5	96
Carbitol	-	9
PMA Preservative	-	4 oz.
Water	-	66 gal.approx.

*contains 5.0 WC-130 solids and 0.5 Dibutyl Phthalate.

RAW MATERIALS

Resin	Per Bulletin 6-104-17
Methocel HG	Per Bulletin 6-16-5
Dibutyl Phthalate	6-98-1
Solvent	6-149-3
P80F	Per Bulletin 6-143-1
DXW Mineralite	Per Bulletin 6-146-2
Ser-X	Per Bulletin 6-146-2
Asbestos	Per Bulletin 6-7-1, JM-7RF1
CCO Whiting	Per Bulletin 6-24-7
A Dolomite	Per Bulletin 58-2-2
Stonelite	Per Bulletin 6-24-2
Nuodex PMA-18	6-100-2.
Huber CWF Clay	Per Bulletin 6-36-5
Troysan PMA-30	Per Bulletin 6-100-3

PROCESSING:

A. Filler Mix: The dry ingredients are first mixed in a Broughton mixer, and then mikropulverized using a coarse screen as is done in manufacturing dry powder products.

NOTE: The mixer-pulverizer-packer unit is to be thoroughly cleaned of other products before making this filler mix.

9/2W

M-5791 6/55 (Printed in U.S.A.)

/ Indicates change.

UPOC9 0659

Operating Division PRODUCT PROCEDURE Approved: JMB	ALL PURPOSE READY MIXED PERF-A-TAPE JOINT CEMENT CHAMBLEE	No. 61-2-24-1 Date 7-7-60 Page 1 of 3 Cancels Dated

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

Manufacturing Mill: Chamblee

Formula: Je-217

	% Non-Volatile	Lbs. (for 100 gal. batch approx.)
Mica JC	(2/3 Formula V)	80 approx.
DXW Mineralite	30.0	240
Asbestos Floats	(as required)	24 approx.
Huber CWF Clay	10.0	80
Methocel 65 HG	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)
Plasticized WC-130*	5.5	77
Carbitol	-	7
PMA Preservative	-	4 oz.
Water	-	53 gals. approx.

*Contains 5.0 WC-130 solids and 0.5 dibutyl phthalate.

Raw Materials

Resin	Per Bulletin	6-104-17
Methocel HG, 4000 cps.	" "	6-16-5
Dibutyl Phthalate	" "	6-98-1
Solvent	" "	6-149-3
Mica JC	" "	6-143-1
DXW Mineralite	" "	6-146-2
Asbestos	" "	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	" "	

7/20

UP0009 1429

Operating Division PRODUCT PROCEDURE MGB	PERF-A-TAPE JOINT CEMENT HAGERSVILLE	No. 61-2-22-W Date 7-8-60 Page 1 of 1 Cancels Dated NEW

Hagersville to manufacture and ship formula J-1169B Taping Cement as directed by Department #144.

Formula	J-1169B
Montreal Casein	6.8
Marex Alginate	0.3
Ammonium Oxalate	1.2
Ammonium Pentaborate	1.2
Ashville Mica(P-80F)	(0.8 X Formula V quatity)
Hydrated Lime	As required (0.1 to 0.2)
JM 7HF1 Asbestos	As required (5.5% in lab batches)
Dicyandiamide	1.0
M-4 Talc	15.0
FF Limestone	To make up 100%
Liquid Mix	0.153
Sterox CD 0.1	
Tributylphosphate 0.05	
Neutralizer 50-50 0.003	

Raw Materials: All are the same as listed under 61-2-22.

Processing: Same as present Taping Cement.

Finished Product Tests: Color - Natural color as given by the cement ingredients.
Consistency - 63 to 67 cc, 65 cc normal for 420 BB at 75°F.
pH - 8.1 to 8.5
Mixing and Application - To match sample from Research.
Bond - 6 minimum (under standard test conditions and with normal bonding tape).

Packaging: Material to be packaged in standard 25 lb P-A-T Taping Cement bags.

Mixing water volume is to be changed to read 12 to 13 pints by over printing or use of small stamped sticker over the present amounts. For Ames Tool - no more than 15 pints per 25 lbs.

Other specifications per Bulletin 61-2-22.

This bulletin expires 7-15-61

OP007 1234

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved: MJB	PERF-A-TAPE DUAL PURPOSE CEMENT J-1124 FORMULA GYPSUM	No. 61-2-26-K Date 8-22-60 Page 1 of 1 Cancels Page 1 Dated 5-10-60

Gypsum to manufacture and ship J-1124 formula dual-purpose Cement to Districts as specified by Dept. 144, Chicago on receipt of orders from sales.
Specifications as follows:

	J-1124
Casein, fine ground, unoiled	4.0%
Refined soy protein	1.5
Ammonium alginate	0.5
Ammonium pentaborate	1.2
Ammonium oxalate	1.0
Hydrated lime	to give required pH (0.15% in lab.)
Dicyandiamide	1.0
Philip Carey 7RF9 Asbestos	to give required consistency -
Mica JC	per Formula V (9% in lab)
Ser-X	15.0
No. 9 Georgia Marble	to make 100%
Sterox CD	0.1
Tributylphosphate	0.05
Neutralizer 5050	0.003
Ferrite yellow	to match color of SR manila paper (ca 0.15 in lab.)

RAW MATERIAL SPECIFICATIONS

No. 9 Georgia Marble	per Bulletin 6-24-9
Tributylphosphate	per Bulletin 61-2-41
Philip Carey 7RF9 Asbestos	per Bulletin _____
All others	As shown in Bulletin 61-2-22
Processing	per Bulletin 61-2-22

FINISHED PRODUCT SPECIFICATIONS

Color	to match Sheetrock manila paper
Consistency	63-66 cc, 65 cc preferred (for 500 ± 25 Brabender)
Moisture	per Bulletin 61-2-22
pH	8.1-8.5, 8.3-8.4 preferred

PACKAGING

/ Per Bulletin 7-16-32-3

This Bulletin expires 12-1-60

0p009 0115

Research

[illegible]	[illegible]	[illegible]
PRODUCT [illegible]	[illegible] FORMULA	PAGE 1 of 1
APPROVED:	SOUTH GATE	CHANGES DATED NEW

This [illegible] Bulletin authorizes South Gate to make up to [illegible] lbs. of [illegible] for field trials per the following specifications:

Formula:

[illegible]

[illegible]	2.6%
[illegible] L-19	0.7
Krause Corn Flour #3025	4.5
[illegible] cps - [illegible]	0.4
[illegible]	.5 formula [illegible] quantity
[illegible]	40.0
[illegible]	0.1
[illegible] asbestos	As required to [illegible] in lab trials or [illegible] in DE76 cement.
Carbonate Filler	To make 100%

Raw Materials - All per Bulletin 61-2-27 except
[illegible] L-19 - (Colton Chemical Co. - A special cold water [illegible] hydrolyzed grade of polyvinyl alcohol.)
Corn Flour #3025 - (Krause Milling Co. - A cold water dispersible [illegible] corn paste having 45 - 55% cold water [illegible] very low reducing sugar content - [illegible]

[illegible] - See Bulletin 61-2-27.

[illegible] - [illegible] Vests - [illegible] as Bulletin 61-2-27 except [illegible] 67 - 10 [illegible] range - 69 [illegible] normal.

[illegible] - [illegible] as Bulletin 61-2-27.

[illegible] - As directed by [illegible]

[illegible] Bulletin [illegible]

[illegible]	ALL PURPOSE READY-MIXED PERF-A-TAPE JOINT CEMENT SOUTH GATE	[illegible]
APPROVED:		[illegible] 10-2-59

All Purpose Ready-Mixed Perf-A-Tape Joint Cement

A resin-emulsion base, ready-mixed Perf-A-Tape Cement.

Manufacturing Plant: South Gate

Filler Mix	% Non-Volatile	JD-201 Lbs. (for [illegible] Filler [illegible])
Mica JC	(Formula V)	150 approx.
M 350	30.0	300
Asbestos Fibers	(As required)	35 approx.
Kaolin Clay	10.0	100
Methocel HG	0.6	6
Ferrite Yellow	(To match the manila color of Sheetrock [illegible] Paper)	
400 Whiting	(To make 94.5%)	(To make up [illegible] Lbs.)

Paste Mix	% Non-Volatile	Lb. (for approx. 150 gal. batch)
Fillers	94.5	945
Plasticized VC-130*	5.5	55
Carbitol	-	5
PMA Preservative	-	4 oz.
Water	-	72 gal. approx.

*Contains 5.0 VC-130 solids and 0.5 Dibutyl Phthalate.

Raw Materials: Same as for [illegible], except as follows:

M 350 Asbestos - per Bulletin [illegible]
400 Whiting - per Bulletin [illegible]

Processing and Finished Product Test: Same as for [illegible] under Consistency General Test on Filler Mix. [illegible] 75 [illegible] 100 grams to give a Standard [illegible]. The procedure of [illegible] is to be followed.

Packaging: Containers and labels as designated [illegible]

Shipment: Shipment to be made within California [illegible] Department [illegible].

This bulletin expires 10-[illegible]-60.

DP009 0937

[illegible]	PERF-A-TAPE [illegible]	[illegible]
		DATE 5-11-60
		PAGE 2 of 2
		CAMERAS Page 2
APPROVED:	SUBMITTED	DATE 12-31-59

PACKAGING

Regular Perf-A-Tape Cement bags, with printing in red ink (rubber stamp will do), the following on the back of the bag near the directions.

Correction: Use approximately 15-1/2 to 16-1/2 pints of water per 25 pound bag of cement.
This material to be coded SD instead of SW to facilitate identification.

This bulletin expires 10-1-60.

OP007 1154