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SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	DURABOND (GB-116A)	No. 61-2-29-F Date 3-31-64 Page 1 of 2 Cancels Page 1 Dated 1-20-64

DESCRIPTION

Gypsum, New Brighton, and South Gate to manufacture Durabond (Formula GB-116A) for field tests and subsequest shipments as directed by Depts. 147-2 and 147-21 (West Coast). Specifications as follows:

MANUFACTURING PLANTS

Gypsum, New Brighton, and South Gate

FINISHED PRODUCT SPECIFICATIONS

Consistency - 54 to 57 cc. for 400 ± 20 Brabender at 77°F (530 ± 30 on VC-3)
pH - 8.0 to 8.4 at 77°f, 15 min. after mixing
Bond - 4 minimum (75°F, - 50% R.H.)
Color - Natural
Set Time Specs. - 2 hr. 45 min. to 3 hr. 45 min. with Vicat Needle in Dixie cup at 75-80°F. Blend in retarder pre-mix or accelerator to adjust proper set time.

FORMULA	GB-116A
Air Separated Hydrocal*	to make 100%
JM7RF1 Asbestos	about 4.5% (as req'd for normal consistency)
Vinac RP-251	4.5%
Vancide 51-Z	0.1%
Mica JC	0.7 formula V
Tylose Methylcellulose	0.5%
Santicizer #9	0.45%
Potassium Sulfate	0.3%
Commercial Retarder	0.12% (adjust retarder pre-blend to give proper set)
Citric Acid	0.08%
Tributyl Phosphate - Neutralizer 50:50	2.203%

*A Base Per Bulletin 69-2-1; South Gate to use "B" Base.

No. 61-2-29-F Date 3-31-64 Page 2 of 2 Cancels Dated New	DURABOND (GB-116A)

RAW MATERIALS - Per 61-2-22 except as follows:

Vancide 51-Z	-	Per Bulletin 6-100-1
Vinac RP-251	-	" " 6-104-18
Santicizer #9 (-60 Mesh)	-	" " 6-98-2
Potassium Sulfate (Type 2)	-	" " 6-99-2

Must be screened through 60 mesh screen before use.

NOTE:

Oakfield Comm. Retarder (Double Strength) - Per Bulletin 53-1-10
Citric Acid - US Granular - #0616 - Mallinckrodt Chem Co.
Hydrocal - Air Separated - Per Bulletin 69-2-1
Tylose Methycellulose - UM 400C P - Per Bulletin 6-25-5
except additional test for screen fineness is necessary:

TENTATIVE SPEC. +40 mesh	- None
-40, +60 mesh	- trace (1% maximum)
-60, +100 mesh	- 25-30%
-100 +200 mesh	- 40-45%
-200, +325 mesh	- about 15%
-325 mesh	- about 10%

MANUFACTURING PROCEDURE
In normal manner used for manufacture of joint compound except a cleanout charge of carbonate filler must be run before the manufacture of Durabond. Even small amounts of casein joint compound will severely contaminate the Durabond compound. A pre-blend of retarders must be made which consists of 12 parts of Oakfield Commercial Retarder and 8 parts of Citric Acid (Monohydrate). This blend is then used to adjust the set time of the batch.

PACKAGING
In regular Durabond bags with the T to follow code.

Shipments - As directed by Depts. #147-2 and 147-21 (West Coast)

This bulletin expires 11-1-64.

[redacted] Bulletin 61-2-29-F

Operating Division PRODUCT PROCEDURE Approved:	DURABOND (GB-116A)	No. 61-2-29 Date 11-25-64 Page 1 of 2 Cancels Dated NEW

MANUFACTURING PLANTS:
Chamblee, Gypsum, New Brighton and South Gate

FINISHED PRODUCT SPECIFICATIONS:

Consistency - 54 to 57 cc for 400 ± 20 Brabender at 77°F (530 ± 30 on VC-3)
pH - 8.0 to 8.4 at 77°F, 15 min. after mixing
Bond - 4 minimum (75°F - 50% R.H.)
Color - Natural
Set Time Specs. - 2 hr. 45 min. to 3 hr. 45 min. with Vicat Needle in Dixie cup at 75-80°F. Blend in retarder pre-mix or Accelerator to adjust proper set time.

NOTE: Durabond with a 1-1/2 hour (allowable shipping range 1 to 2 hours) hardening time to be available on request. No floor stock to be maintained and material not to be shipped after receipt of an order until the next regularly scheduled Durabond run. This material must be ordered in full batch lots (approx. 1,000 lbs.) or multiples of the quantity. Bags for product with this set time to be identified with code letters "TF" to be placed behind regular code. Bags to have caution stickers as directed by 147-2.

FORMULA	GB-116A
Air Separated Hydrocal*	to make 100%
JM7RF1 Asbestos	about 4.5% (as req'd for normal consistency)
Vinac RP-251	4.5%
Vancide 51-Z	0.1%
Mica JC	0.7 formula V
Tylose Methylcellulose	0.5%
Santicizer #9	0.45%
Potassium Sulfate	0.3%
Commercial Retarder	0.15% (adjust retarder pre-blend
Citric Acid	0.075% to give proper set)
Tributyl Phosphate - Neutralizer 50:50	0.203%

* Either A Base from Ft. Dodge, or B Base from Southard may be used.

SPECIAL BULLETIN

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Approved:

DURABOND (GB-116A)

No. 01-2-29-F
Date 5-22-64
Page 1 of 2
Cancels Page 1
Dated 5-6-64

DESCRIPTION:
Gypsum, New Brighton and South Gate to manufacture Durabond (Formula GB-116A) for field tests and subsequent shipments as directed by Depts. 147-2 and 147-21 (West Coast). Specifications as follows:

MANUFACTURING PLANTS:
Chamblee, Gypsum, New Brighton and South Gate

FINISHED PRODUCT SPECIFICATIONS:

Consistency - 54 to 57 cc for 400 ± 20 Brabender at 77°F (530 ± 30 on VC-3)
pH - 8.0 to 8.4 at 77°F, 15 min. after mixing
Bond - 4 minimum (75°F - 50% R.H.)
Color - Natural
Set Time Specs. - 2 hr. 45 min. to 3 hr. 45 min. with Vicat Needle in Dixie cup at 75-80°F. Blend in retarder pre-mix or Accelerator to adjust proper set time.

NOTE: Durabond with a 1-1/2 hour (allowable shipping range 1 to 2 hours) hardening time to be available on request. No floor stock to be maintained and material not to be shipped after receipt of an order until the next regularly scheduled Durabond run. This material must be ordered in full batch lots (approx. 1,000 lbs.) or multiples of the quantity. Bags for product with this set time to be identified with code letters "TF" to be placed behind regular code. Bags to have caution stickers as directed by 147-2.

FORMULA	GB-116A
Air Separated Hydrocal*	to make 100%
JM7RF1 Asbestos	about 4.5% (as req'd for normal consistency)
Vinac RP-251	4.5%
Vancide 51-Z	0.1%
Mica JC	0.7 formula V
Tylose Methylcellulose	0.5%
Santicizer 9	0.45%
Potassium Sulfate	0.3%
Commercial Retarder	0.15% (adjust retarder pre-blend
Citric Acid	0.075% to give proper set)
Tributyl Phosphate - Neutralizer 50:50	0.203%

* A Base Per Bulletin 69-2-1, South Gate to use "B" Base

No. 61-2-29-F Date 5-22-64 Page 2 of 2 Cancels Page 2 Dated 5-6-64	DURABOND (GB-116A)

RAW MATERIALS - Per 61-2-22 except as follows:

Vancide 51-Z	-	Per Bulletin	6-100-1
Vinac RP-251	-	" "	6-104-18
Santicizer #9 (-60 Mesh)	-	" "	6-98-2
Potassium Sulfate (Type 2)	-	" "	6-99-2

Must be screened through 60 mesh screen before use.

NOTE:

Oakfield Comm. Retarder (Double Strength) - Per Bulletin 53-1-10
Citric Acid - USP (Hydrous) - Fine Granular XX - Chas. Pfizer & Co., Inc.
Spec. + 60 mesh - 20% maximum
-200 mesh - 15% maximum
Hydrocal - Air Separated - Per Bulletin 69-2-1
Cylose Methycellulose - UM 4000 P - Per Bulletin 6-25-5
Except additional test for screen fineness is necessary:

TENTATIVE SPEC. +40 mesh	- None
-40, +60 mesh	- trace (1% maximum)
-60, +100 mesh	- 25-30%
-100 +200 mesh	- 40-45%
-200, +325 mesh	- about 15%
-325 mesh	- about 10%

MANUFACTURING PROCEDURE
In normal manner used for manufacture of joint compound except a cleanout charge of carbonate filler must be run before the manufacture of Durabond. Even small amounts of casein joint compound will severely contaminate the Durabond compound. A pre-blend of retarders must be made which consists of 12 parts of Oakfield Commercial Retarder and 8 parts of Citric Acid (Monohydrate). This blend is then used to adjust the set time of the batch.

PACKAGING
In regular Durabond bags per 7-16-29 (when approved), with the T to follow code.
Shipments - As directed by Depts. #147-2 and 147-21 (West Coast)

This bulletin expires 11-1-64.

SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved:	DURABOND (GB-116A)	No. 61-2-29 Date 5-22-64 Page 1 of 3 Cancels Page 1 Dated 5-6-64

DESCRIPTION:
Gypsum, New Brighton and South Gate to manufacture Durabond (Formula GB-116A) for field tests and subsequent shipments as directed by Depts. 147-2 and 147-21 (West Coast). Specifications as follows:

MANUFACTURING PLANTS:
Chamblee, Gypsum, New Brighton and South Gate

FINISHED PRODUCT SPECIFICATIONS:

Consistency - 54 to 57 cc for 400 ± 20 Brabender at 77°F (530 ± 30 on VC-3)
p^H - 8.0 to 8.4 at 77°F, 15 min. after mixing
Bond - 4 minimum (75°F - 50% R.H.)
Color - Natural
Set Time Specs. - 2 hr. 45 min. to 3 hr. 45 min. with Vicat Needle in Dixie cup at 75-80°F. Blend in retarder pre-mix or Accelerator to adjust proper set time.

NOTE: Durabond with a 1-1/2 hour (allowable shipping range 1 to 2 hours) hardening time to be available on request. No floor stock to be maintained and material not to be shipped after receipt of an order until the next regularly scheduled Durabond run. This material must be ordered in full batch lots (approx. 1,000 lbs.) or multiples of the quantity. Bags for product with this set time to be identified with code letters "TF" to be placed behind regular code. Bags to have caution stickers as directed by 147-2.

FORMULA	GB-116A
Air Separated Hydrocal*	to make 100%
JM/RF1 Asbestos	about 4.5% (as req'd for normal consistency)
Vinac RP-251	4.5%
Vancide 51-Z	0.1%
Mica JC	0.7 formula V
Tylose Methylcellulose	0.5%
Santicizer #9	0.45%
Potassium Sulfate	0.3%
Commercial Retarder	0.15% (adjust retarder pre-blend
Citric Acid	0.075% to give proper set)
Tributyl Phosphate - Neutralizer 50:50	0.203%

* A Base Per Bulletin 69-2-1, South Gate to use "B" Base

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SPECIAL BULLETIN

Operating Division PRODUCT PROCEDURE Approved: J.C.	DURABOND (GB-116A)	No. 61-2-29-F Date 9-30-64 Page 3 of 3 Cancels Dated New

PACKAGING
In regular Durabond bags per 7-16-29 (when approved), with the T to follow code.

Shipments - As directed by Depts. #147-2 and 147-21 (West Coast)

This bulletin expires 11-1-64.

DP009 0464

Operating Division PRODUCT PROCEDURE Approved: JGP	DURABOND (GB-116A)	No. 61-2-29 Date 1-19-65 Page 1 of 3 Cancels Page 1 Dated 11-25-64

MANUFACTURING PLANTS:

Chamblee, Gypsum, New Brighton and South Gate

FINISHED PRODUCT SPECIFICATIONS:

Consistency - 54 to 57 cc for 400 ± 20 Brabender at 77°F (530 ± 30 cm VC-3)
pH - 8.0 to 8.4 at 77°F, 15 min. after mixing
Bond - 4 minimum (75°F - 50% R.H.)
Color - Natural

SETS:

1. Regular (Slow Set) 3-4 hours (3-1/2 hours normal).
2. DURABOND 150 (Medium Set) 2-3 hours (2-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof.
3. DURABOND 90 (Fast Set) 1-2 hours (1-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof.

FORMULA	GB-116A
Air Separated Hydrocal*	to make 100%
JM7RF1 Asbestos	about 4.5% (as req'd for normal consistency)
Vinac RP-251	4.5%
Vancide 51-Z	0.1%
Mica JC	0.7 formula V
Tylose Methylcellulose	0.5%
Santicizer #9	0.45%
Potassium Sulfate	0.3%
Commercial Retarder	0.15% (adjust retarder pre-blend
Citric Acid	0.075% to give proper set)
Tributyl Phosphate - Neutralizer 50:50	0.203%

*Either A Base from Ft. Dodge, or B Base from Southard may be used.

DURABOND (GB-116A)

RAW MATERIALS - Per 61-2-22 except as follows:

Vancide 51-Z	- Per Bulletin	6-100-1
Vinac RP-251	- " "	6-104-18
Santicizer #9 (-60 Mesh)	- " "	6-98-2
Potassium Sulfate (Type 2)	- " "	6-99-2

Must be screened through 60 mesh screen before use.

NOTE:

Oakfield Comm. Retarder (250 Efficiency) - per Bulletin 53-1-10.
Citric Acid - USP (Hydrous) - Fine Granular XX - Chas. Pfizer & Co., Inc.
Spec. / 60 mesh - 20% maximum
-200 mesh - 15% maximum
Hydrocal - Air Separated - Per Bulletin 69-2-1
Tylose Methycellulose - UM 4000 P - Per Bulletin 6-25-5
except additional test for screen fineness is necessary:

TENTATIVE SPEC.	
/ 40 mesh	- None
-40, / 60 mesh	- trace (1% maximum)
-60, /100 mesh	- 25-30%
-100, /200 mesh	- 40-45%
-200, /325 mesh	- about 15%
-325 mesh	- about 10%

MANUFACTURING PROCEDURE

In normal manner used for manufacture of joint compound except a cleanout charge of carbonate filler must be run before the manufacture of Durabond. Even small amounts of casein joint compound will severely contaminate the Durabond compound. A pre-blend of retarders must be made which consists of 12 parts of Oakfield Commercial Retarder and 8 parts of Citric Acid (Monohydrate). This blend is then used to adjust the set time of the batch.

The set time of Durabond must be checked at both 90-95°F and 40-45°F whenever a new batch of retarder is used. The set time shall not vary more than 30 minutes between 40° and 90°F. If the set time at 90° is excessively long, the amount of Citric acid in the retarder blend must be increased. If the set time at 40°F is long, this shows that there is excessive citric acid in the retarder blend. The set time values are to be shown on the production control reports along with an indication when the new batch of retarder blend is used.

This is a rejection specification for the retarder blend.

Operating Division PRODUCT PROCEDURE Approved: JJP	DURABOND (GB-116A)	No. 61-2-29 Date 4-20-65 Page 1 of 3 Cancels Page 1 Dated 1-19-65

32# - cc: 2675
25# - cc: 2700

MANUFACTURING PLANTS:

Chamblee, Dallas, Gypsum, New Brighton and South Gate

FINISHED PRODUCT SPECIFICATIONS:

Consistency - 54 to 57 cc for 400 ± 20 Brabender at 77°F (530 ± 30 on VC-3)
pH - 8.0 to 8.4 at 77°F, 15 min. after mixing
Bond - 4 minimum (75°F - 50% R.H.)
Color - Natural

SETS:

1. Regular (Slow Set) 3-4 hours (3-1/2 hours normal).
2. DURABOND 150 (Medium Set) 2-3 hours (2-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof.
3. DURABOND 90 (Fast Set) 1-2 hours (1-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof.

FORMULA	GB-116A
Air Separated Hydrocal*	to make 100%
JM7RF1 Asbestos	about 4.5% (as req'd for normal consistency)
Vinac RP-251	4.5%
Vancide 51-Z	0.1%
Mica JC	0.7 formula V
Tylose Methylcellulose	0.5%
Santicizer #9	0.45%
Potassium Sulfate	0.3%
Commercial Retarder - Citric Acid Blend	0.2% approx. (adjust amount of blend and blend proportioning to give proper set)
Tributyl Phosphate - Neutralizer 50:50	0.203%

*Either A Base from Ft. Dodge, or B Base from Southard may be used.

TP009 0455

No. 61-2-29 Date 4-20-65 Page 2 of 3	DURABOND (GB-116A)
Cancels Page 2 Dated 1-19-65	

RAW MATERIALS - Per 61-2-22 except as follows:

Vancide 51-Z	- Per Bulletin	6-100-1
Vinac RP-251	- " "	6-104-18
Santicizer #9 (-60 Mesh)	- " "	6-98-2
Potassium Sulfate (Type 2)	- " "	6-99-2

Must be screened through 60 mesh screen before use.

NOTE:

Oakfield Comm. Retarder (250% Efficiency) - per Bulletin 53-1-10.
Citric Acid - USP (Hydrous) - Fine Granular XX - Chas. Pfizer & Co., Inc.
Spec. / 60 mesh - 20% maximum
-200 mesh - 15% maximum
Hydrocal - Air Separated - Per Bulletin 69-2-1
Tylose Methycellulose - UM 4000 P - Per Bulletin 6-25-5
except additional test for screen fineness is necessary:

TENTATIVE SPEC.	/ 40 mesh - None
-40, / 60 mesh	- trace (1% maximum)
-60, /100 mesh	- 25-30%
-100, /200 mesh	- 40-45%
-200, /325 mesh	- about 15%
-325 mesh	- about 10%

MANUFACTURING PROCEDURE

In normal manner used for manufacture of joint compound except a cleanout charge of carbonate filler must be run before the manufacture of Durabond. Even small amounts of casein joint compound will severely contaminate the Durabond compound.

A pre-blend of Oakfield Commercial Retarder and Citric Acid must be used to control the setting time. The setting time must be checked at both 90-95°F and 40-45°F whenever a new batch of retarder is used to determine the proportions to be used in the retarder blend. The set time shall not vary more than 30 minutes between 40° and 90°F. If the setting time at 90° is excessively long, the amount of Citric acid in the retarder blend must be increased. If the setting time at 40°F is long, there is excessive Citric acid in the retarder blend.

The recommended initial blend is 2 parts of Oakfield Commercial Retarder (250% Eff.) to 1 part Citric acid (Monohydrate) by weight. The setting time values are to be shown on the production control reports along with the date the current retarder blend was first put into use, the Oakfield Retarder code markings and efficiency, and the proportions of retarder and Citric acid in the blend.

This is a rejection specification for the retarder blend.

Operating Division PRODUCT PROCEDURE Approved: JP	DURABOND (GB-116A)	No. 61-2-29 Date 5-7-65 Page 1 of 3 Cancels Page 1 Dated 4-20-65

32# - cc: 2675
25# - cc: 2700

MANUFACTURING PLANTS:

Chamblee, Dallas, Gypsum, New Brighton and South Gate

FINISHED PRODUCT SPECIFICATIONS:

Consistency - 54 to 57 cc for 400 ± 20 Brabender at 77°F (530 ± 30 on VC-3)
pH - 8.0 to 8.4 at 77°F, 15 min. after mixing
Bond - 4 minimum (75°F - 50% R.H.)
Color - Natural

SETS:

1. Regular (Slow Set) 3-4 hours (3-1/2 hours normal).
2. DURABOND 150 (Medium Set) 2-3 hours (2-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof. (See NOTE)
3. DURABOND 90 (Fast Set) 1-2 hours (1-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof. (See NOTE)

NOTE: Full batch lots at Chamblee shall be 3000 lbs. or multiples thereof.

FORMULA	GB-116A
Air Separated Hydrocal*	to make 100%
JM7RF1 Asbestos	about 4.5% (as req'd for normal consistency)
Vinac RP-251	4.5%
Vancide 51-Z	0.1%
Mica JC	0.7 formula V
Tylose Methylcellulose	0.5%
Santicizer #9	0.45%
Potassium Sulfate	0.3%
Commercial Retarder - Citric Acid Blend	0.2% approx. (adjust amount of blend and blend proportioning to give proper set)
Tributyl Phosphate - Neutralizer 50:50	0.203%

*Either A Base from Ft. Dodge, or B Base from Southard may be used.

DIABOND

VC-3 at 77°F

mixin

3-1/2 hours normal).

(2- hours normal). Not to

batch (.000 lbs.) or multiples

(1-1/2 hours normal). Not to

batch (.000 lbs.) or multiples

000 lbs. or multiples thereof.

Operating Division	DURABOND (GB-116A)	No. 61-2-29
PRODUCT PROCEDURE		Date 7-12-66
Approved:		Page 1
		Cancels Page 1
		Dated 5-7-65

32# - cc: 2675
25# - cc: 2700

MANUFACTURING PLANTS

Chamblee, Dallas, Gypsum, New Brighton and South Gate

PACKAGING

In regular 25 and 32 lb. Durabond bags per Bulletin 7-16-29, with the letter T to follow code.

SPECIAL LABELING: In addition to labels prescribed, DURABOND 90 and 150 should have a stick-on warning label attached to each bag. Initial supplies of labels will be supplied by Dept. 147-2 subsequent requirements to be supplied by plants.

DURABOND 90: "FAST" to be printed on each bag beneath the code.

DURABOND 150: "MEDIUM" to be printed on each bag beneath the code.

JPCCG 0479

No. 61-2-29 Date 7-12-66 Page 2 Cancels Page 2 Dated 4-20-65	DURABOND (GB-116A)

FINISHED PRODUCT SPECIFICATIONS

Consistency - 54 to 57 cc for 400 ℄ 20 Brabender at 77°F (530 ℄ 30 on VC-3)

pH - 8.0 to 8.4 at 77°F, 15 min. after mixing

Bond - 4 minimum (75°F - 50% R.H.)

Color - Natural

SETS:

1. Regular (Slow Set) 3-4 hours (3-1/2 hours normal).
2. DURABOND 150 (Medium Set) 2-3 hours (2-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof. (See NOTE)
3. DURABOND 90 (Fast Set) 1-2 hours (1-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof. (See NOTE)

NOTE: Full batch lots at Chamblee shall be 3000 lbs. or multiples thereof.

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No. 61-2-29 Date 7-12-66 Page 4	CONFIDENTIAL DO NOT REPRODUCE OR COPY
Cancels Dated NEW	DURABOND (GB-116A)

MANUFACTURING PROCEDURE

In normal manner used for manufacture of joint compound except a cleanout charge of carbonate filler must be run before the manufacture of Durabond. Even small amounts of casein joint compound will severely contaminate the Durabond compound.

A pre-blend of Oakfield Commercial Retarder and Citric Acid must be used to control the setting time. The setting time must be checked at both 90-95°F and 40-45°F whenever a new batch of retarder is used to determine the proportions to be used in the retarder blend. The set time shall not vary more than 30 minutes between 40° and 90°F. If the setting time at 90° is excessively long, the amount of Citric acid in the retarder blend must be increased. If the setting time at 40°F is long, there is excessive Citric acid in the retarder blend.

The recommended initial blend is 2 parts of Oakfield Commercial Retarder (250% Eff.) to 1 part Citric acid (Monohydrate) by weight. The setting time values are to be shown on the production control reports along with the date the current retarder blend was first put into use, the Oakfield Retarder code markings and efficiency, and the proportions of retarder and Citric acid in the blend.

This is a rejection specification for the retarder blend.

End

Cancels Special Bulletin 61-2-29-A, dated 3-22-66

Operating Division PRODUCT PROCEDURE Approved: JD	DURABOND (GB-116A)	No. 61-2-29 Date 9-8-66 Page 1 Cancels Page 1 Dated 7-12-66

32# - cc: 2675
25# - cc: 2700

MANUFACTURING PLANTS

Chamblee, Dallas, Gypsum, New Brighton and South Gate

PACKAGING

C In regular 25 and 32 lb. Durabond bags per Bulletin 7-16-29, with the letter G to follow code.

SPECIAL LABELING: In addition to labels prescribed, DURABOND 90 and 150 should have a stick-on warning label attached to each bag. Initial supplies of labels will be supplied by Dept. 147-2 subsequent requirements to be supplied by plants.

DURABOND 90: "FAST" to be printed on each bag beneath the code.

DURABOND 150: "MEDIUM" to be printed on each bag beneath the code.

No. 61-2-29 Date 9-8-66 Page 2	DURABOND (GB-116A)
Cancels Page 2 Dated 7-12-66	

FINISHED PRODUCT SPECIFICATIONS

C Consistency - 54 to 57 cc for 530 ± 30 VC-3 Brabender at 77°F

pH - 8.0 to 8.4 at 77°F, 15 min. after mixing

Bond - 4 minimum (75°F - 50% R.H.)

Color - Natural

SETS:

1. Regular (Slow Set) 3-4 hours (3-1/2 hours normal).
2. DURABOND 150 (Medium Set) 2-3 hours (2-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof. (See NOTE)
3. DURABOND 90 (Fast Set) 1-2 hours (1-1/2 hours normal). Not to be stocked; orders must be in full batch lots (1000 lbs.) or multiples thereof. (See NOTE)

NOTE: Full batch lots at Chamblee shall be 3000 lbs. or multiples thereof.

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Operating Division PRODUCT PROCEDURE Approved:	**CONFIDENTIAL** **DO NOT REPRODUCE OR COPY** DURABOND (GB-116A)	No. 61-2-29 Date 9-8-66 Page 3 Cancels Page 3 Dated 7-12-66

FORMULA

	GB-116A
Air Separated Hydrocal*	to make 100%
JM7RF1 Asbestos	about 4.5% (as req'd for normal consistency)
C Gelva Powder 702	4.5%
Vancide 51-Z	0.1%
Mica JC	0.7 formula V
Tylose Methylcellulose	0.5%
Santicizer #9	0.45%
Potassium Sulfate	0.3%
Commercial Retarder - Citric Acid Blend	0.2% approx. (adjust amount of blend and blend proportioning to give proper set)
Tributyl Phospnate - Neutralizer 50:50**	0.203%

* Either A Base from Ft. Dodge, or B Base from Southard may be used.

** EXCEPTION: Gypsum Only

Liquid Mix		0.153%
(Tributyl Phosphate	0.150%)	
(Neutralizer 50:50	0.003%)	

RAW MATERIALS - Per 61-2-22 except as follows:

Vancide 51-Z	- Per Bulletin 6-100-1
C Gelva Powder 702	- " " 6-104-18-1
Santicizer #9 (-60 Mesh)	- " " 6-98-2
Potassium Sulfate (Type 2)	- " " 6-99-2

Must be screened through 60 mesh screen before use.

NOTE:

Oakfield Comm. Retarder (250% Efficiency) - per Bulletin 53-1-10.
Citric Acid - USP (Hydrous) - Fine Granular XX - Chas. Pfizer & Co., Inc.
Spec. ∤ 60 mesh - 20% maximum
-200 mesh - 15% maximum
Hydrocal - Air Separated - Per Bulletin 69-2-1
Tylose Methycellulose - UM 4000 P - Per Bulletin 6-25-5
except additional test for screen fineness is necessary:

TENTATIVE SPEC.	∤ 40 mesh	- None
-40, ∤ 60 mesh		- trace (1% maximum)
-60, ∤ 100 mesh		- 25-30%
-100, ∤ 200 mesh		- 40-45%
-200, ∤ 325 mesh		- about 15%
-325 mesh		- about 10%

Operating Division PRODUCT PROCEDURE Approved:	CONFIDENTIAL DO NOT REPRODUCE OR COPY DURABOND (GB-116A)	No. 61-2-29 Date 11-7-66 Page 3 Cancels Page 3 Dated 9-8-66

FORMULA

	GB-116A
C Air Separated Hydrocal (Note 1)	to make 100%
C JM7RF1 Asbestos (Note 3)	about 4.5% (as req'd for normal consistency)
Galva Powder 702	4.5%
Vancide 51-Z	0.1%
Mica JC	0.7 formula V
Tylose Methylcellulose	0.5%
Santicizer #9	0.45%
Potassium Sulfate	0.3%
Commercial Retarder - Citric Acid Blend	0.2% approx. (adjust amount of blend and blend proportioning to give proper set)
C Tributyl Phosphate - Neutralizer 50:50 (Note 2)	0.203%

C Note 1 - Either a Base from Ft. Dodge, or B Base from Southard may be used.

C Note 2 - EXCEPTION: Gypsum Only

Liquid Mix	0.153%
(Tributyl Phosphate	0.150%)
(Neutralizer 50:50	0.003%)

A Note 3 - Chamblee Only JM7RF02

RAW MATERIALS - Per 61-2-22 except as follows:

Vancide 51-Z	- Per Bulletin 6-100-1
Galva Powder 702	- " " 6-104-18-1
Santicizer #9 (-60 Mesh)	- " " 6-98-2
Potassium Sulfate (Type 2)	- " " 6-99-2

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