Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: No. 450 Insulating Cement	PLANT & DIV.	Pittsburg EP
		SPEC NO.	431-29
		PAGE NO.	1

I. FORMULA:

	Spec. No. #450 Cement	Material	%	Lbs. per Batch
X	- - - -	CBX Bonded Granulated Wool	51.0	255
	See below	Premix	48.0	245
	Premix			
	- - -	6D20 Asbestos Fibre	35.79	400
	P.S. BP 1112	Raw Wyoming Bentonite	48.12	535
	P.S. 63440	Karaya Gum, #2 Grade	2.23	25
	P.S.BP 3232	Sodium Nitrite	2.23	25
	- - -	Oronite Detergent D40-FG	0.52	6
	- - -	Soda Ash, 58%, fine granular	0.90	10
	P.S. BP-1424	Black Slate Dust	10.21	114
			100.00	1120

II. MANUFACTURING INSTRUCTIONS:

1. Mix premix thoroughly, 5 minutes minimum, in the large willow mixer. Store premix temporarily in bags or other suitable containers, 100 lbs. net per container.
2. Charge ingredients for #450 Cement to idle mixer in the order shown above. Distribute premix evenly over the top of the mineral wool. Mix until large chunks of mineral wool are broken up and premix is uniformly dispersed. Avoid overmixing with consequent breakdown of nodules of mineral wool.

III. PACKAGING:

1. Package in accordance with Finished Product Specifications, as summarized below.
2. Package cement 50 lbs. net per bag in printed Paper Bag for #450 Cement (P.S. BP-9026).
3. Close bag with wire tie.
4. Stamp or stencil manufacturing date code on each bag.

PLAINTIFF'S EXHIBIT K-1639

DEFENDANT'S EXHIBIT OE-211

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Form 333-2

X— INDICATES CHANGE	—REASON: Revise formula to show use of 51% Granulated CBX bonded wool.
AUTHORITY FOR CHANGE	Change No. 048-14-60 dated 10/21/60, Res. P.P. 433-48 dated 10/13/60
SUPERSEDES:	Page 1 same Specification issued 3/20/59.

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	REC.	B.C. Lindstrom		DATE ISSU	12/13/60

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: No. 450 Insulating Cement	PLANT & DIV.	Pittsburg EP
		SPEC NO.	431-29
		PAGE NO.	1

I FORMULA:

Spec. No. #450 Cement	Material	%	Lbs. per Batch
- - -	Granulated FX Bonded Wool	51.0	255
See below	Premix	49.0	245
		100.0%	500#
Premix			
- - -	GD20 Asbestos Fibre	35.70	400
P.S. EP 1112	Raw Wyoming Bentonite	48.20	540
P.S. 63440	Karaya Gum, #2 Grade	2.24	25
P.S. EP 3232	Sodium Nitrite	2.24	25
- - -	Granite Detergent D40-78	0.52	6
- - -	Soda Ash, 58%, fine granular	0.90	10
	Black Slate Dust	10.20	105
		100.00%	1111#

II MANUFACTURING INSTRUCTIONS:

1. Mix premix thoroughly, 5 minutes minimum, in the large willow mixer. Store premix temporarily in bags or other suitable containers, 100 lbs. net per container.
2. Charge ingredients for #450 Cement to idle mixer in the order shown above. Distribute premix evenly over the top of the mineral wool. Mix until large chunks of mineral wool are broken up and premix is uniformly dispersed. Avoid overmixing with consequent breakdown of nodules of mineral wool.

III PACKAGING:

1. Package in accordance with Finished Product Specifications, as summarized below.
2. Package cement 50 lbs. net per bag in printed Paper Bag for #450 Cement (P.S. EP-9026).
3. Close bag with wire tie.
4. Stamp or stencil manufacturing date code on each bag.

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Pd. in U.S.A.

X— INDICATES CHANGE —REASON: X Revised Formula
XI Revise Mfg. Spec. and Purchase Spec. numbers

AUTHORITY FOR CHANGE: Interim Agreement Product Proposal Research 433-P-33; Congdon's letter of 9/12/58.

SUPERSEDES: Page 1 of Mfg. Spec. C-I-2.1 issued 5/20/54 and Notice of Deviation C-56-1 issued 1/9/56.

Form 333-2

DIR. Q.C.	MGR. Q.C.	SUPT. Q.C.	PROD. SUPT.	PLNT. FIN.	[illegible]				DATE ISSUED 12/4/58

MANUFACTURING SPECIFICATIONS

[redacted] DEPT.

[redacted] PLANT

PRODUCT: [redacted] DIVISION [redacted]

SPEC. NO. C-I-2.I

PAGE NO. 1

I [redacted]:

Spec. No.	Material	%	Lbs. per Batch
#450 Cement			
- - -	Special Dark Mineral Wool	60.0	300
See below	Premix	40.0	200
		100.0%	500#
Premix			
- - -	[illegible] Asbestos Fibre	37.2	400
P.S.61112	Raw Wyoming Bentonite	55.9	600
P.S.63440	Maraya Gum, #2 Grade	2.7	29
P.S.63[illegible]	Sodium Nitrite	2.5	27
- - -	Granite Detergent B40-PG	0.5	5
- - -	Soda Ash, 58%, fine granular	1.2	13
		100.0%	1074#

II [redacted]:

1. Mix premix thoroughly, 5 minutes minimum, in the large willow mixer. Store premix temporarily in bags or other suitable containers, 100 lbs. net per container.
2. Charge ingredients for #450 Cement to idle mixer in the order shown above. Distribute premix evenly over the top of the mineral wool. Mix until large chunks of mineral wool are broken up and premix is uniformly dispersed. Avoid overmixing with consequent breakdown of nodules of mineral wool.

III [redacted]:

1. Package in accordance with Finished Product Specifications, as summarized below.
2. Package cement 50 lbs. net per bag in printed Paper Bag for #450 Cement (P.S. [illegible]).
3. Close bag with wire tie.
4. Stamp or stencil manufacturing date code on each bag.

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X— INDICATES CHANGE — REASON: Revised Premix Formula

AUTHORITY — FOR CHANGE: [illegible] Pittsburg 54; E. R. [illegible] letter 5/17/54

FILE-HOLDERS: [illegible] | SUPR. QUAL. CONTROL | PROD. DEPT. | PLANT FINANCE OFFICE | RESEARCH LAB. | MGR. QUAL. CONTROL | DIV. QUAL. CONT.

SUPERSEDES: Page 1 same Specification 7/24/54 and Notice of Deviation C-54-2 issued 4/22/54

DATE ISSUED: 5/20/54

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MANUFACTURING SPECIFICATIONS

CEMENT DEPT.

PITTSBURG PLANT

PRODUCT: NO. 450 [illegible]

DIVISION UP

SPEC. NO. C-I-2.1

PAGE NO. 1

I FORMULA:

Spec. No.	Material	%	Lbs. per Batch
#450 Cement			
- - -	Special Dark Mineral Wool	60.0	300
See below	Premix	40.0	200
		100.0%	500#
Premix			
- - -	6D20 Asbestos Fibre	37.4	400
P.S.61112	Raw Wyoming Bentonite	56.3	600
P.S.63440	Korayo Gum, #2 Grade	2.7	29
- - -	Powdered Soap	1.2	13
- - -	Sodium Nitrite	2.4	27
		100.0%	1069#

II MANUFACTURING INSTRUCTIONS:

1. Mix premix thoroughly, 5 minutes minimum, in the large willow mixer. Store premix temporarily in bags or other suitable containers, 100 lbs. net per container.
2. Charge ingredients for #450 Cement to idle mixer in the order shown above. Distribute premix evenly over the top of the mineral wool. Mix until large chunks of mineral wool are broken up and premix is uniformly dispersed. Avoid overmixing with consequent breakdown of modules of mineral wool.

III PACKAGING:

1. Package in accordance with Finished Product Specifications, as summarized below.
2. Package cement 50 lbs. net per bag in printed Paper Bag for #450 Cement (P.S.68168).
3. Close bag with wire tie.
4. Stamp or stencil manufacturing date code on each bag.

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X— INDICATES CHANGE — REASON: Transferred from Mfg. Spec. titled "Asbestos Cements".

AUTHORITY FOR CHANGE — Rearrangement.

FILE-HOLDERS | SUPR. QUAL. CONTROL | PROD. SUPT. | PLANT FINANCE OFFICE | RESEARCH LAB. | MGR. QUAL. CONTROL | DIR. QUAL. CONTR.

SUPERSEDES: Part of pages 1 & 2 of specification titled "Asbestos Cements" issued 4/9/47.

DATE ISSUED [illegible]

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