Transite, Pipe, Fiber Blends,
Division

Johns-Manville MANUFACTURING SPECIFICATION JM-260-2-A	PRODUCT: TRANSITE Pipe Fiber Blends	DIVISION	PIPE
		SPEC. NO.	TR-425-1
		PAGE NO.	1

I. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit, so that each bag is marked with two bars on side or end.

The following 4 Grade Jeffrey fibers are to be bag color coded and used at the following point values:

Jeffrey 4T & SP4T and

Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Mauve	69	71
Gray	84	86	Yellow	66	68
White	81	83	Blue	63	65
Brown	78	80	Red	60	62
Black	75	77			
--	72	74	(No Color Code Required on Bag)		

CANCELLED 9/31/81

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

Blue Fiber	Lbs/Bag	Assigned Point Value
"S Pomfret or Koegas, KCB/R3 Kurman, W1, Etc.	110	80
2S	110	80
K35-3/30	110	80
S65	110	80
WMS-6	110	75
ML6	110	80
Jeffrey		
4T30	110	(as above)
SP5R28	110	55
Cassiar		
CP or AK	100	95
CT	100	79
CZ	100	43
Calaveras		
4T	100	68
5K	100	55

X1

X - INDICATES CHANGE	X1 - Delete value, avoid double ref.
AUTHORITY FOR CHANGE	C.B. Allen and A.C. Daley
SUPERSEDES:	Same Spec., Same Page, Dated 1/19/81
DATE ISSUED:	3/16/81

MTC 002531

PRINTED IN U.S.A.

Johns-Manville MANUFACTURING SPECIFICATION JM-260-2-A	PRODUCT: TRANSITE Pipe Fiber Blends	DIVISION	PIPE
		SPEC. NO.	TR-425-1
		PAGE NO.	1

CANCELLED 3/16/81

I. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit, so that each bag is marked with two bars on side or end.

The following 4 Grade Jeffrey fibers are to be bag color coded and used at the following point values:

Jeffrey 4T & SP4T and

Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Mauve	69	71
Gray	84	86	Yellow	66	68
White	81	83	Blue	63	65
Brown	78	80	Red	60	62
Black	75	77			
--	72	74	(No Color Code Required on Bag)		

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

	Blue Fiber	Lbs/Bag	Assigned Point Value
	"S Pomfret or Koegas, KCB/R3 Kurman, W1, Etc.	110	80
	2S	110	80
	K35-3/30	110	80
	S65	110	80
	WMS-6	110	75
	ML6	110	80
	Jeffrey		
X1	4T30	110	74
	SP5R28	110	55
	Cassiar		
X2	CP or AK	100	95
	CT	100	79
	CZ	100	43
	Calaveras		
X3	4T	100	68
	5K	100	55

MTC 002532

X- INDICATES CHANGE	X1 - Pt Val were 60 & 53, X2 - Pt Value was 90, X3 - Pt value was 64
AUTHORITY FOR CHANGE	C.B. Allen and A.C. Daley
SUPERSEDES: Same Spec., Same Page, Dated 12/12/80	DATE ISSUED: 1/19/81

PRINTED IN U.S.A.

Johns-Manville MANUFACTURING SPECIFICATION JM-280-2-A	PRODUCT: TRANSITE Pipe Fiber Blends	DIVISION	PIPE
		SPEC. NO.	TR-425-1
		PAGE NO.	1

CANCELLED 1/19/81

I. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit, so that each bag is marked with two bars on side or end.

The following 4 Grade Jeffrey fibers are to be bag color coded and used at the following point values:

Jeffrey 4T & SP4T and

Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Mauve	69	71
Gray	84	86	Yellow	66	68
White	81	83	Blue	63	65
Brown	78	80	Red	60	62
Black	75	77			
--	72	74	(No Color Code Required on Bag)		

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

X1 The following fibers are to be used at the assigned point values:

Blue Fiber	Lbs/Bag	Assigned Point Value
"S Pomfret or Koegas, KCB/R3 Kurman, W1, Etc.	110	80
2S	110	80
K35-3/30	110	80
S65	110	80
WMS-6	110	75
ML6	110	80
Jeffrey		
4T30	110	60
SP5R28	110	53
Cassiar		
CP or AK	100	90
CT	100	79
CZ	100	43
Calaveras		
4T	100	64
5K	100	55

X2

X - INDICATES CHANGE	X1 - Add Fibers, X2 - Delete Amosite	MTC 002533
AUTHORITY FOR CHANGE	A.C. Daley	
SUPERSEDES:	Same Spec., Same Page, Dated 3/23/78	DATE ISSUED: 12/12/80

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	1

1. Point Value - Fiber

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit, so that each bag is marked with two bars on side or end.

The following 4 Grade Jeffrey fibers are to be bag color coded and used at the following point values:

Jeffery 4T & SP4T and

CANCELLED 12/12/80

Bag Color	Grade	Use at PV	
Brick	87	89	
Gray	84	86	
White	81	83	
Brown	78	80	
Black	75	77	
	72	74	(No Color Code Required on Bag)
Mauve	69	71	
Yellow	66	68	
Blue	63	65	
Red	60	62	

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

Fiber	Lbs/Bag	Assigned Point Value
Blue		
"S Pomfret or Koegas, KC3/R3 Kurman, Wl, Etc.	110	80
Jeffery	100	--
Cassiar		
CP or AK	100	90
CT	100	79
CZ	100	43
Calaveras		
4T	100	64
5K	100	55
Amosite		
S33	110	35
~~3X~~	~~100~~	~~--~~

APPROVED [illegible] DEPT.

X— INDICATES CHANGE —REASON: Delete Color Code - 72 P.V. Fiber

AUTHORITY FOR CHANGE: C. B. Allen

MTC 002534

SUPERSEDES: Same Spec., Same Page, dated 11/11/77

MGR. Q. C.	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT. FIN.	RES. LAB.				DATE ISSUED	3/23/78

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	1

1. Point Value - Fiber

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit, so that each bag is marked with two bars on side or end.

The following 4 Grade Jeffrey fibers are to be bag color coded and used at the following point values:

Jeffery 4T & SP4T and

Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Brown	78	80
Gray	84	86	Black	75	77
White	81	83	Green	72	74
Brown	78	80			
Black	75	77			
Green	72	74			
Mauve	69	71			
Yellow	66	68			
Blue	63	65			
Red	60	62			

CANCELLED
3/23/78

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

Fiber	Assigned Point Value
Blue	
"S Pomfret or Koegas,	
KCB/R3 Kurman, W1, Etc.	80
Cassiar	
CP or AK	90
CT	79
CZ	43
Calaveras	
4T	64
5K	55
Amosite	
S33	35

X- INDICATES CHANGE	-REASON: Review		
AUTHORITY FOR CHANGE	Q/A Manager		MTC 002535
SUPERSEDES:	Same Spec., Same Page, dated 2-24-77		

MGR. Q. C. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES. LAB.				DATE ISSUED	11-11-77

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	1

CANCELLED 11/11/77

1. Point Value - Fiber

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

X Jeffrey is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit, so that each bag is marked with two bars on side or end.

X The following 4 Grade Jeffrey fibers are to be bag color coded and used at the following point values:

X Jeffery 4T & SP4T and

Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Brown	78	80
Gray	84	86	Black	75	77
White	81	83	Green	72	74
Brown	78	80			
Black	75	77			
Green	72	74			
X Mauve	69	71			
Yellow	66	68			
Blue	63	65			
Red	60	62			

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

Fiber	Assigned Point Value
Blue	
"S Pomfret or Koegas, KCB/R3 Kurman, W1, Etc.	80
Cassiar	
CP or AK	90
CT	79
CZ	43
X Calaveras	
4T	64
5K	55
X Amosite	
S33	35

X— INDICATES CHANGE —REASON: Delete Reeves & Boldue, Add Calaveras & Amosite

AUTHORITY FOR CHANGE: W. E. Volwiler's Letter of 12/10/76

MTC 002536

SUPERSEDES: Same Spec., Same Page, dated 9/24/74

MGR. Q. C.	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES. LAB.				DATE ISSUED 2-24-77

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends CANCELLED 2/24/77	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	1

1. Point Value - Fiber

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

X Jeffrey, Bolduc Blend and Reeves is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit so that each bag is marked with two bars on side or end.

X The following 4 Grade Jeffrey, Bolduc Blend and Reeves R-25 fibers are to be bag color coded and used at the following point values:

X

	Jeffery 4T & SP4T and Bolduc 4T35 & SP4T35				
Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Brown	78	80
Gray	84	86	Black	75	77
White	81	83	Green	72	74
Brown	78	80			
Black	75	77			
Green	72	74			
X Mauve	69	71			
Yellow	66	68			
Blue	63	65			
Red	60	62			

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

Fiber	Assigned Point Value
Blue	
"S Pomfret or Koegas, KCB/R3 Kurman, W1, Etc.	80
Cassiar	
CP or AK	90
CT	79

X— INDICATES CHANGE	—REASON:	Add 69-60 Grades & Bolduc Blend
AUTHORITY FOR CHANGE		R. Gomez letter of 7-16-74
SUPERSEDES:		Same Spec., Same Page, Dated 6-25-71

MGR. G. O. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	DEV. LAB.			DATE ISSUED	9-24-74

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends CANCELLED	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	1

1. Point Value - Fiber

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving propoerties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey and Raeves is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit so that each bag is marked with two bars on side or end.

The following 4 Grade Jeffrey and Raeves R-25 fibers are to be bag color coded and used at the following point values:

4 Grade Jeffrey			Raeves R-25		
Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Brown	78	80
Grey	84	86	Black	75	77
White	81	83	Green	72	74
Brown	78	80			
Black	75	77			
Green	72	74			

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

Fiber	Assigned Point Value
Blue	
"S" Pomfret or Koegas, KCB/R3 Kurman, W1, Etc.	80
Cassiar	
CP or AK	90
CT	79

MTC 002538

X- INDICATES CHANGE	-REASON: Fiber points of Cassiar fiber	PLEASE RETURN TO
AUTHORITY FOR CHANGE	J. E. Hasse's letter dated 12/16/70	J-M RESEARCH
SUPERSEDES:	Same Spec., Same Page dated 2/2/70	LIBRARY

MGR. Q. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED 6/25/71

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	1

CANCELLED

1. Point Value - Fiber

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving propoerties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey and Reeves is classified to a 3-point spread system, Color coding consists of four vertical stripes on two sides of each unit so that each bag is marked with two bars on side or end.

The following 4 Grade Jeffrey and Reeves R-25 fibers are to be bag color coded and used at the following point values:

4 Grade Jeffrey			Reeves R-25		
Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Brown	78	80
Grey	84	86	Black	75	77
White	81	83	Green	72	74
Brown	78	80			
Black	75	77			
Green	72	74			

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

Fiber	Assigned Point Value
Blue "S" Pomfret or Koegas, KCB/R3 Kurman, W1, Etc.	80

X The following fibers are to be used at point values determined from the results obtained on samples subjected to the "wet-wash" test.

Cassiar - CP and AK
Cassiar - CT, AS and AX
Pacific Asbestos

MTC 002539

X- INDICATES CHANGE	-REASON:	Fiber Blends Effective January 19, 1970	PLEASE RETURN TO
AUTHORITY FOR CHANGE		J. E. Hesse's letters to Plant Managers	J-M RESEARCH
SUPERSEDES:		Same Spec., Same Page dated 10/30/68	LIBRARY (RSM)

MGR. G. O. C	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED 2/2/70

F. POST CO. 186-...

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	1

1. Point Value - Fiber

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey and Reeves is classified to a 3-point spread system. Color coding consists of four vertual stripes on two sides of each unit so that each bag is marked with two bars on a side or end.

The following 4 Grade Jeffrey and Reeves R-25 fibers are to be bag color coded and used at the following point values:

	4 GRADE JEFFREY			REEVES R-25	
BAG COLOR	GRADE	USE AT PV	BAG COLOR	GRADE	USE AT PV
Brick	87	89	Brown	78	80
Grey	84	86	Black	75	77
White	81	83	Green	72	74
Brown	78	80			
Black	75	77			
Green	72	74			
Purple	69	71			
Yellow	66	68			
Blue	63	65			
Red	60	62			

Advocate A-25 Fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

FIBER	ASSIGNED POINT VALUE
Blue "S" Pomfret or Koegas, KCB/R3 Kurman, W1, etc.	80

2. Point Value - Standard Blends

A. Used In Products

Water Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" 200)
USBR Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" R18)
"R" Irrigation Pipe (GCS Only) 6" All Classes
Sewer Pipe - 4" thru 8", 10' & 13' All Classes
Type Irrigation Pipe - 3" thru 8", 10' & 13' All Classes
Storm Drain Pipe (LOB & STO only) - 6" & 8", 10' & 13', All Classes

X- INDICATES CHANGE	REASON: Fiber Blends incorporating Reeves R-25 fiber.	PLEASE RETURN TO
AUTHORITY FOR CHANGE	J. E. Hesse's Letter 10/21/68	J-M RESEARCH
SUPERSEDES:	Same Spec., Same Page dated 7/17/68	LIBRARY (MM)

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. ENG.	DIV. MGR.				DATE ISSUED 10/30/68

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	1

1. Point Value - Fiber

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Effective with 4/17/67 shipment from the mine, Jeffrey Fiber is being reclassified to a 3-point spread system. Color coding will consist of four vertual stripes on two sides of each unit so that each bag will carry two bars on a side or end.

Effective with the May, 1967 production at the mine Advocate A-25 was also changed over to the 3-point spread marking system. Bag markings consist of the same color coding and two bar markings as that used on Jeffrey Fiber. (Note: Warehouse stocks of single striped bags classified under the old 4-point classification system and color coding will be shipped until depleted.)

The following 4 Grade Jeffrey and Advocate A-25 fibers are to be bag color coded and used at the following point values:

	4 GRADE JEFFREY		ADVOCATE A-25	
BAG COLOR	GRADE	USE AT PV	GRADE	USE AT PV
Brick	87	89		
Grey	84	86		
White	81	83	81 & up	83
Brown	78	80	78	80
Black	75	77	75	77
Green	72	74	72 (See Note)	74
Purple	69	71	69	71
Yellow	66	68	66	68
Blue	63	65	63	65
Red	60	62		

The following fibers are to be used at the assigned point values:

FIBER	ASSIGNED POINT VALUE
Blue	
"S" Pomfret or Koegas	80
KCB/R3 Kuruman	80

NOTE: Starting 6/18/68 it is the intention of Advocate to supply only 72 grade fiber. These 72 grade bags of A-25 will not be color coded. Any other grades supplied will be coded in accordance with specifications.

X— INDICATES CHANGE —REASON: Delete color code on current shipments 72 P.V A-25

AUTHORITY FOR CHANGE: F. T. Petersen's letter 6/25/68

MTC 002541

SUPERSEDES: Same Spec., Same Page, Dated 8/2/67

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 7/17/68

F. POST CO. 126-3 30187

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	1

1. Point Value - Fiber

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Effective with 4/17/67 shipment from the mine, Jeffrey Fiber is being reclassified to a 3-point spread system. Color coding will consist of four vertual stripes on two sides of each unit so that each bag will carry two bars on a side or end.

Effective with the May, 1967 production at the mine Advocate A-25 was also changed over to the 3-point spread marking system. Bag markings consist of the same color coding and two bar markings as that used on Jeffrey Fiber. (Note: Warehouse stocks of single striped bags classified under the old 4-point classification system and color coding will be shipped until depleted.)

The following 4 Grade Jeffrey and Advocate A-25 fibers are to be bag color coded and used at the following point values:

	4 GRADE JEFFREY		ADVOCATE A-25	
BAG COLOR	GRADE	USE AT PV	GRADE	USE AT PV
Brick	87	89		
Grey	84	86		
White	81	83	81 & up	83
Brown	78	80	78	80
Black	75	77	75	77
Green	72	74	72	74
Purple	69	71	69	71
Yellow	66	68	66	68
Blue	63	65	63	65
Red	60	62		

The following fibers are to be used at the assigned point values:

FIBER	ASSIGNED POINT VALUE
Blue	
"S" Pomfret or Koegas	80
KCB/R3 Kuruman	80

MTC 002542

X- INDICATES CHANGE -REASON: Re-Classification of Fibers	PLEASE RETURN TO
AUTHORITY FOR CHANGE J. E. Hesse's letter dated 8/2/67	J-M RESEARCH
SUPERSEDES: Same Spec., Same Page, Dated 4/19/67	LIBRARY (MM)

MGR. G. & C.	MGR. G. C.	SUPT. G. C.	PROD. SUPT.	PLANT PER.	RES. LAB.				DATE ISSUED 8/2/67

MANUFACTURING SPECIFICATION	TRANSITE Pipe Fiber Blends	Pipe
	SPEC NO.	425-1
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1. Point Value - Fiber

CANCELLED

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Effective with 4-17-67 shipment from the mine, Jeffrey Fiber is being reclassified to a 3-point spread system. Color coding will consist of four vertual stripes on two sides of each unit so that each bag will carry two bars on a side or end.

The following 4 Grade Jeffrey and Advocate Grade A-25 fibers are to be bag color coded and used at the following point values:

GRADE	USE AT PV	BAG COLOR CODE
4-87	89	Brick
4-84	86	Grey
4-81	83	White
4-78	80	Brown
4-75	77	Black
4-72	74	Green
4-69	71	Purple
4-66	68	Yellow
4-63	65	Blue
4-60	62	Red
A-25	74	Green
A-25	70	Purple
A-25	66	Yellow
A-25	62	Red
A-25	58	Blue

The following fibers are to be used at the assigned point values:

FIBER	ASSIGNED POINT VALUE
Blue	
"S" Pomfret or Koegas	80
KCB/R3 Kuruman	80

RETURN TO

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

X— INDICATES CHANGE —REASON: Re-Classification of Fibers

AUTHORITY FOR CHANGE: J. E. Hesse's letter dated 4-17-67

SUPERSEDES: Same Spec., Same Page, Dated 5-19-65

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLANT MGR.	REP.	DATE ISSUED 4-19-67

MTC 002543

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	M,G,J,W,D,R PIPE
		SPEC NO.	425-1
		PAGE NO.	1

1. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

The following 4 Grade Jeffrey and Advocate Grade A-25 fibers are to be bag color coded and used at the following point values:

Grade	Use At FV	Bag Color Code
4-80	82	White
4-76	78	Black
4-72	74	Green
4-69	71	Purple
4-65	67	Yellow
4-61	63	Red
4-58	60	Blue
A-25	74	Green
A-25	70	Purple
A-25	66	Yellow
A-25	62	Red
A-25	58	Blue

The following fibers are to be used at the assigned point values:

Fiber	Assigned Point Value
Lake 4T3	70
BC4T	70
Blue	80
C & G #3	88
C & G #4	74
Cassair AK	80
Cassair AX	80
C & G 4 - B1	69

The 4 Grade component of our fiber furnishes (both M and H Blends) must have an average FV between 60 and 72. Lowpoint value 4 grade and the C & G Fibers are individually outside of these limits and must be blended with other 4 Grade Fibers to meet this requirement.

MTC 002544

PLEASE RETURN TO J-M RESEARCH LIBRARY (MM)

X— INDICATES CHANGE	—REASON:	Re-Classification of Fibers							
AUTHORITY FOR CHANGE		J. B. McCarty's Letter Dated 4-23-65							
SUPERSEDES:		Same Spec., Same Page, Dated 3-25-65							
MGR. Q.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. ENG.	[illegible]			DATE ISSUED	5-19-65

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

MANUFACTURING SPECIFICATION	TRANSITE Pipe Fiber Blends	PIPE	
		SPEC NO.	425-1
		PAGE NO.	1

1. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fibers when used in the manufacture of Asbestos Cement Pipe .

Under a joint Asbestos Fiber Division - Pipe Division agreement, specific grades of fibers of known value, have been allocated for use in TRANSITE Pipe. AFD is controlling the quality of these fibers by daily Point Value Tests and McNett Wet Screen Tests. Our Blue Fiber vendors are also supplying fibers to a McNett Test Specification.

Fibers allocated for use in pipe presently meet the following point value specifications:

GRADE	ASSIGNED POINT VALUE
4T115	77
4T110	73
4T105	70
4T100	66
4T95	63
4T90	59
FIBER	
Lake 4T3	70
BC4T	70
Blue	80
C & G #3	88
C & G #4	74
C & G 4 - B1	69
Cassair AK	80
Cassair AX	80

CANCELLED

Advocate Fibers are to be used in accordance with assigned Point Values by DHQ on each shipment. The following Point Values are reference values only.

Advocate A 25	70
Advocate A 35	40

MTC 002545

The 4 Grade component of our fiber furnishes (both M and H Blends) must have an average PV between 60 and 72. Low 4R28 and the C & G Fibers are individually outside of these limits and must be blended with other 4 Grade Fibers to meet this requirement.

X— INDICATES CHANGE —REASON:	Use of Available Fibers							PLEASE RETURN TO I-M RESEARCH LIBRARY (MM)	
AUTHORITY FOR CHANGE	J. B. McCarty's Letter of 3-8-65								
SUPERSEDES:	Same Spec., Dated, 1/12/65								
MGR. G.Q.C.	MGR. Q.C.	SUPR. C.	PROD. SUPT.	PLNT. FIN.	RES.			DATE ISSUED	3-25-65

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

Johns-Manville MANUFACTURING SPECIFICATION	TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	1

1. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fibers when used in the manufacture of Asbestos Cement Pipe.

Under a joint Asbestos Fiber Division - Pipe Division agreement, specific grades of fibers of known value, have been allocated for use in TRANSITE Pipe. AFD is controlling the quality of these fibers by daily Point Value Tests and McNett Wet Screen Tests. Our Blue Fiber vendors are also supplying fibers to a McNett Test Specification.

Fibers allocated for use in pipe presently meet the following point value specifications:

	FIBER	ASSIGNED POINT VALUE
	Jeffrey 4R28 (Low)	53
	Jeffrey 4R28 (Standard)	60
	Jeffrey 4T30 (Low)	63
	Jeffrey 4T30 (Standard)	70
	Lake 4T3	70
	BC4T	70
	Blue	80
	C & G #3	88
	C & G #4	74
X	C & G 4 - B1	69
X	Cassair AK	80
X	Cassair AX	80

Advocate Fibers are to be used in accordance with assigned Point Values by DHQ on each shipment. The following Point Values are reference values only.

Advocate A 25	70
Advocate A 35	40

The 4 Grade component of our fiber furnishes (both M and H Blends) must have an average PV between 60 and 72. Low 4R28 and the C & G Fibers are individually outside of these limits and must be blended with other 4 Grade Fibers to meet this requirement.

X— INDICATES CHANGE	—REASON:	Instructions in Use of Available Fibers
AUTHORITY FOR CHANGE		J. B. McCarty's Letter of 12-28-64
SUPERSEDES:		Same Spec., Dated 10-16-64

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED JAN 12 1965

Form 333-A Ptd. in U.S.A.

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	M,C,J,W,D,R PIPE
		SPEC NO.	425-1
		PAGE NO.	1

1. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fibers when used in the manufacture of Asbestos Cement Pipe.

Under a joint Asbestos Fiber Division - Pipe Division agreement, specific grades of fibers of known value, have been allocated for use in TRANSITE Pipe. AFD is controlling the quality of these fibers by daily Point Value Tests and McNett Wet Screen Tests. Our Blue Fiber vendors are also supplying fibers to a McNett Test Specification.

Fibers allocated for use in pipe presently meet the following point value specifications:

FIBER	ASSIGNED POINT VALUE
Jeffrey 4H28 (Low)	53
Jeffrey 4H28 (Standard)	60
Jeffrey 4T30 (Low)	63
Jeffrey 4T30 (Standard)	70
S4T	63
Lake	70
BC4T	70
Blue	80
C & G #3	88
C & G #4	74

Advocate Fibers are to be used in accordance with assigned Point Values by DHQ on each shipment. The following Point Values are reference values only.

Advocate A 25	70
Advocate A 35	40

The 4 Grade component of our fiber furnishes (both M and M Blends) must have an average PV between 60 and 72. Low 4H28 and the C & G Fibers are individually outside of these limits and must be blended with other 4 Grade Fibers to meet this requirement.

X — INDICATES CHANGE	—REASON: Instructions for Use of 4 Grade Asbestos Fibers
AUTHORITY FOR CHANGE	J. B. McCarty's letter of 7/27/64 and 9/1/64
SUPERSEDES:	Same Spec., Issued 3/5/64

MGR. G.E.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. ENG.				DATE ISSUED	OCT 1 6 1964

Form 333-A Ptd. in U.S.A.

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	M,G,J,W,D,R PIPE
		SPEC NO.	425-1
		PAGE NO.	1

1. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fibers when used in the manufacture of Asbestos Cement Pipe.

Under a joint Asbestos Fiber Division - Pipe Division agreement, specific grades of fibers of known value, have been allocated for use in TRANSITE Pipe. AFD is controlling the quality of these fibers by daily Point Value Tests and McNett Wet Screen Tests. Our Blue Fiber vendors are also supplying fibers to a McNett Test Specification.

Fibers allocated for use in pipe presently meet the following point value specifications:

Fiber	Assigned Point Value
Jeffrey 4D,4H	60
Jeffrey 4T30 (Jute Bags)	70
Munro M-100	46
Blue	80
Special Jeffrey 4T30 (in 2 ply paper bags)	74

Advocate - As assigned on each shipment by DHQ

X— INDICATES CHANGE —REASON: Lower Point Value of M-100 Fiber

AUTHORITY FOR CHANGE. J. B. McCarty's Letter of 2-7-64

SUPERSEDES: Same Spec., Issued 10-10-63

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED 3-5-64

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

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	M, G, J, W, L, R PIPE
		SPEC NO.	425-1
		PAGE NO.	1

1. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fibers when used in the manufacture of Asbestos-Cement Pipe.

Under a joint Asbestos-Fiber Division - Pipe Division agreement, specific grades of fibers of known value, have been allocated for use in TRANSITE Pipe. AFD is controlling the quality of these fibers by daily Point Value Tests and McNett Wet Screen Tests. Our Blue Fiber vendors are also supplying fibers to a McNett Test Specification.

Fibers allocated for use in pipe presently meet the following point value specifications:

POINT VALUE

Fiber	Average	Range
Jeffrey 4D, 4H	60	55 - 65
Jeffrey 4T30 (Jute Bags)	70	68 - 73
Munro M-100	55	53 - 57
Blue	80	75 - 85
Special Jeffrey 4T30 (in 2 ply paper bags)	74	— —

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

X— INDICATES CHANGE	—REASON:	Lower Point Value of M-100 Fiber	MTC 002549
AUTHORITY FOR CHANGE		J. B. McCarty's Letter of 9-19-63	
SUPERSEDES:		Same Spec., Issued 4-23-63	

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED 10-10-63

MANUFACTURING SPECIFICATION	TRANSITE PIPE FIBER BLENDS	SPEC NO.	425-1
		PAGE NO.	1

1. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fibers when used in the manufacture of Asbestos-Cement Pipe.

Under a joint Asbestos-Fiber Division - Pipe Division agreement, specific grades of fibers of known value, have been allocated for use in TRANSITE Pipe. AFD is controlling the quality of these fibers by daily Point Value Tests and McNett Wet Screen Tests. Our Blue Fiber vendors are also supplying fibers to a McNett Test Specification.

Fibers allocated for use in pipe presently meet the following point value specifications:

POINT VALUE

Fiber	Average	Range
Jeffrey 4D, 4H	60	55 - 65
Jeffrey 4T30 (Jute Bags)	70	68 - 73
X Munro M-100	60	58 - 62
Blue	80	75 - 85
Special Jeffrey 4T30 (in 2 ply paper bags)	74	——

X— INDICATES CHANGE —REASON: Lower Point Value of M-100 Fiber

AUTHORITY FOR CHANGE: J. B. McCarty's Letter of 4/18/63

SUPERSEDES: Same Spec., Issued 1/10/63

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 4/23/63

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	M,G,J,W,D,R PIPE
		SPEC NO.	425-1
		PAGE NO.	1

I. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fibers when used in the manufacture of Asbestos-Cement Pipe.

Under a joint Asbestos-Fiber Division - Pipe Division agreement, specific grades of fibers of known value, have been allocated for use in TRANSITE pipe. AFD is controlling the quality of these fibers by daily Point Value Tests and McNett Wet Screen Tests. Our Blue Fiber vendors are also supplying fibers to a McNett Test Specification.

Fibers allocated for use in pipe presently meet the following point value specifications:

Fiber	Point Value Average	Point Value Range
Jeffrey 4D, 4H	60	55 - 65
Jeffrey 4T30	70	68 - 73
X Munro M-100	64	62 - 66
Blue	80	75 - 85

X— INDICATES CHANGE	—REASON:	Increase Point Value of M-100 Fiber
AUTHORITY FOR CHANGE		J. B. McCarty's Letter of 12/28/62
SUPERSEDES:		Same Spec., Issued 3/2/62

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES. ENG.			DATE ISSUED	1/10/63

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

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	M,G,J,W,D & R PIPE
		SPEC NO.	425-1
		PAGE NO.	1

FIBER BLENDS

C-1 DESIGNATION - BLEND FOR NON-PRESSURE PRODUCTS

RECEIVED
AUG 31 1961
Transite Pipe Dept.

X BLEND FORMULA - H-3

	lbs.	%
Blue	50	9.1
M100	300	54.5
4D	200	36.4
	550	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

BLENDS FOR 13' MACHINE PRODUCTS AND PRESSURE PRODUCTS ON 10' MACHINE

P-1 DESIGNATION - PIPE SIZES 3" - 8"

M-625	lbs.	%
Blue	200	14.8
4T30	700	51.8
M100	450	33.4
	1350	100.0

X

CANCELLED

P-2 DESIGNATION - PIPE SIZES 10" - 16"

M-626	lbs.	%
Blue	200	20.0
4T30	500	50.0
M100	300	30.0
	1000	100.0

X

P-3 DESIGNATION - PIPE SIZES 18" - 36"

M-627	lbs.	%
Blue	300	23.1
4T30	600	46.2
M100	400	30.7
	1300	100.0

X

Note: 1. M-Blends do not permit the use of scrap. Any use of scrap must be covered by a Headquarters approved deviation.

2. 4T30, 4K and 4D are considered equivalent.

MTC 002552

RETURN TO
J-M RESEARCH
FILE ROOM

X— INDICATES CHANGE —REASON:	To show new Blends
AUTHORITY FOR CHANGE	W. L. Van Derbeek's letters of 8-9-61 and 8-18-61
SUPERSEDES:	Page 1 Same spec Issued 4-20-61

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES.			DATE ISSUED 9-1-61

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

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	DHQ - PIPE
		SPEC NO.	425-1
		PAGE NO.	1

4-5

FIBER BLENDS

C-1 DESIGNATION - BLEND FOR NON-PRESSURE PRODUCTS

BLEND FORMULA - H-1

CANCELLED

Blue	18.2%
M100	81.8%
	100.0%

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

BLENDS FOR 13' MACHINE PRODUCTS AND PRESSURE PRODUCTS ON 10' MACHINE

P-1 DESIGNATION - PIPE SIZES 3" - 8"

M-609

Blue	16.7%
4T30	50.0%
M100	33.3%
	100.0%

P-2 DESIGNATION - PIPE SIZES 10" - 16"

M-610

Blue	22.2%
4T30	48.2%
M100	29.6%
	100.0%

P-3 DESIGNATION - PIPE SIZES 18" - 36"

M-611

Blue	26.1%
4T30	43.5%
M100	30.4%
	100.0%

MTC 002553

Note: 1. M-Blends do not permit the use of scrap. Any use of scrap must be covered by a Headquarters approved deviation.

2. 4T30, 4K and 4D are considered equivalent.

X— INDICATES CHANGE —REASON:	Establish General Division Manufacturing Specifications.
AUTHORITY FOR CHANGE	Minutes of December, 1960 Plant Managers' Meeting.
SUPERSEDES:	All local Plant Mfg. Specs.

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLANT ENG.	SEC'Y			DATE ISSUED	4-20-61

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

Johns-Manville MANUFACTURING SPECIFICATION JM-260-2-A	PRODUCT: TRANSITE PIPE FIBER BLENDS	DIVISION	PIPE
		SPEC. NO.	TR-425-1
		PAGE NO.	2

I. POINT VALUE - FIBER (Continued)

A. Fiber Blend Point Value Calculation

EXAMPLE:

Fiber	Fiber Point Value	Bags	Lbs.	%	Blend Point Value
Blue	80	1	110	10.1	8.1
Cassiar CP or AK	90	1	100	9.2	8.3
Jeffrey 4T30	74	8	880	80.7	59.7
			1090	100.0	76.1

B. Point Blends

Fiber Blue	Point Value	STOCKTON M-1400 13'-#2&#3 Non-Press	STOCKTON M-1401 13'-1,2,3,4 Press 13'-#4 Non-Press	STOCKTON H-72 10'- Non-Press	LONG BEACH M-1500 13'-FLEX #2&#3	LONG BEACH M-1501 13'-ALL Other	DENISON M-1600 10'&13' Press	DENISON M-1601 13'- Non-Press	DENISON H-19 10' Non-Press
2S, ML6, S65	80	110	220		110	220	330	220	
K35, or S CAPE	75	110	110		110	110			
WMS-6									
CASSIAR									
AK	90	200	200		300	200			
CZ	43			200	100				
CALAVERAS									
4T68	68	100	100	100					
JEFFREY									
4T30	74	660	550	220	440	550	1100	1100	550
SP5R28	55	110	110	520	110	1080	1430	1320	550
		1290	1290		1170				

CANCELLED 8/20/81

X

X- INDICATES CHANGE	X - Point value was 95	MTC 002554
AUTHORITY FOR CHANGE	C. B. Allen & A. C. Daley	
SUPERSEDES:	Same Spec, Page 2, Dated 3/16/31	DATE ISSUED: 7/23/81

Johns-Manville

MANUFACTURING SPECIFICATION

JM-260-2-A

PRODUCT: TRANSITE PIPE FIBER BLENDS

DIVISION	PIPE
SPEC. NO.	TR-425-1
PAGE NO.	2

CANCELLED 7/23/81

I. POINT VALUE - FIBER (Continued)

A. Fiber Blend Point Value Calculation

EXAMPLE:

Fiber Blue	Fiber Point Value	Bags	Lbs.	%	Blend Point Value
	80	1	110	10.1	8.1
Cassiar CP or AK	95	1	100	9.2	8.7
Jeffrey 4T30	74	8	880	80.7	59.7
			1090	100.0	76.5

B. Point Blends

Fiber Blue	Point Value	STOCKTON M-1400 13'-#2&#3 Non-Press	M-1401 13'-1,2,3,4 Press 13'-#4 Non-Press	H-72 10'- Non-Press	LONG BEACH M-1500 13'-FLEX #2&#3	LONG BEACH M-1501 13'-ALL Other	DENISON M-1600 10'&13' Press	DENISON M-1601 13'- Non-Press	H-19 10' Non-Press
2S, ML6, S65	80	110	220		110	220	330	220	550
K35, or S CAPE	75	110	110		110	110			
WMS-6				200					
CASSIAR									
AK	95	200	200		300	200			
CZ	43			200	100				
CALAVERAS									
4T68	68	100	100	100					
JEFFREY									
4T30	74	660	550	220	440	550	1100	1100	550
SP5R28	55	110	110		110	110	110	220	
		1290	1290	520	1170	1080	1430	1320	550

X

X - INDICATES CHANGE

X - SP5-R28 was stated as SR28

MTC 002555

AUTHORITY FOR CHANGE: Correction

SUPERSEDES: Same Spec, Page 2, Dated 1/29/81

DATE ISSUED: 3/16/81

CANCELLED 3/16/81

I. POINT VALUE - FIBER (Continued)

A. Fiber Blend Point Value Calculation

EXAMPLE:

Fiber Blue	Fiber Point Value	Bags	Lbs.	%	Blend Point Value
	80	1	110	10.1	8.1
Cassiar CP or AK	95	1	100	9.2	8.7
Jeffrey 4T30	74	8	880	80.7	59.7
			1090	100.0	76.5

B. Point Blends

Fiber Blue	Point Value	STOCKTON M-1400 13'-#2&#3 Non-Press	STOCKTON M-1401 13'-1,2,3,4 Press 13'-#4 Non-Press	H-72 10'- Non-Press	LONG BEACH M-1500 13'-FLEX #2&#3	LONG BEACH M-1501 13'-ALL Other	DENISON M-1600 10'&13' Press	DENISON M-1601 13'- Non-Press	H-19 10' Non-Press
2S, ML6, S65 K35, or S CAPE WMS-6	80	110	220		110	220	330	220	
	75	110	110		110	110			
CASSIAR AK	95	200	200		300	200			
CZ	43			200	100				
CALAVERAS 4T68	68	100	100	100					
JEFFREY 4T30	74	660	550	220	440	550	1100	1100	550
SR28	55	110	110	520	110	1080	1430	1320	550
		1290	1290		1170				

X

X - INDICATES CHANGE: X - WMS-6 was posted as 85 pts

AUTHORITY FOR CHANGE: Correction

SUPERSEDES: Same Spec, Page 2, Dated 1/19/81

DATE ISSUED: 1/29/81

MTC 002556

Johns-Manville

MANUFACTURING SPECIFICATION

JM-260-2-A

PRODUCT: TRANSITE PIPE FIBER BLENDS

DIVISION	PIPE
SPEC. NO.	TR-425-1
PAGE NO.	2

CANCELLED 1/29/81

I. POINT VALUE - FIBER (Continued)

A. Fiber Blend Point Value Calculation

EXAMPLE:

Fiber Blue	Fiber Point Value	Bags	Lbs.	%	Blend Point Value
	80	1	110	10.1	8.1
Cassiar CP or AK	95	1	100	9.2	8.7
Jeffrey 4T30	74	8	880	80.7	59.7
			1090	100.0	76.5

B. Point Blends

Fiber Blue	Point Value	STOCKTON M-1400 13'-#2&#3 Non-Press	M-1401 13'-1,2,3,4 Press 13'-#4 Non-Press	H-72 10'- Non-Press	LONG BEACH M-1500 13'-FLEX #2&#3	LONG BEACH M-1501 13'-ALL Other	DENISON M-1600 10'&13' Press	DENISON M-1601 13'- Non-Press	H-19 10' Non-Press
2S, ML6, S65	80	110	220		110	220	330	220	
K35, or S CAPE	85	110	110		110	110			
WMS-6				200	100				
CASSIAR									
AK	95	200	200		300	200			
CZ	43			100					
CALAVERAS									
4T68	68	100	100						
JEFFREY									
4T30	74	660	550	220	440	550	1100	1100	550
SR2B	55	110	110		110				
		1290	1290	520	1170	1180	1430	1320	550

X- INDICATES CHANGE	Change Plant Blends
AUTHORITY FOR CHANGE	C.B. Allen
SUPERSEDES:	Same Spec, Pages 2&3, Dated 3/23/78 & 10/1/79
DATE ISSUED:	1/19/81

PRINTED IN U.S.A.

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	PIPE
		SPEC NO.	TR-423-1
		PAGE NO.	2

CANCELLED 1/19/81

A. Fiber Blend Point Value Calculation

EXAMPLE:

Fiber	Fiber Point Value	Bags	Lbs.	%	Blend Point Value
Blue	80	1	110	10.9	8.7
Cassiar CP or AK	90	1	100	9.9	8.9
Jeffrey 4-7	77	8	800	79.2	61.0
			1010	100.0	78.6

B. Manville Plant

Blend No.	H-9			M-720			M-941		
	Bags	Lbs.	%	Bags	Lbs.	%	Bags	Lbs.	%
Blue				2	220	21.6	2	220	18
Jeffrey	--	--	100	8	800	78.4	10	1000	82
Amosile-DX									
Amosile-S33									
Advocate									
Cassiar									
Glaveras									
Pipe Mach.	No.1			No.1			No.2		

Blend No.	M-862			M-938			M-37		
	Bags	Lbs.	%	Bags	Lbs.	%	Bags	Lbs.	%
Blue	1	110	9.1	2	220	17.8			
Jeffrey	11	1100	90.9	9	900	73.3	--	--	100
Amosile-DX									
Amosile-S33				1	110	8.9			
Advocate									
Cassiar									
Glaveras									
Pipe Mach.	No.2			No.3			No.4		

C. Products:

Water & Transmission Pipe - 3" thru 6", 10' & 13', all classes (except 6" 200 & 6" R30)
Sewer Pipe - 8" thru 12", 13', all classes
Underdrain & Storm Drain Pipe - 6" thru 12", 10' & 13', all classes
Gas Vent & Air Duct Vent Pipe - 10" thru 16", 13'

Blend No.	M-1051		M-1054		M-1055		M-945		M-1047	
	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%
Blue	1	10	2	18.2	2	16.7	1	10	1	10
Jeffrey	6	60					5	50	4	40
Advocate			9	81.8	6	50.0				
Cassiar AK							1	10	1	10
Cassiar CT	2	20			3	25.0	2	20	2	20
Cassiar CZ	1	10			1	8.3	1	10	1	10
Calaveras 4T									1	10
Plant	Waukegan		Green Cove		Denison		Long Beach		Stockton	

X- INDICATES CHANGE —REASON: Change Manville Plant Blends

AUTHORITY FOR CHANGE: C. B. Allen

SUPERSEDES: Same Spec., Same Page, Dated 11/11/77

MGR. G. Q. C	MGR. Q. C.	SUPV. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED	3/23/78

MTC 002558

CANCELLED 3/23/78

A. Fiber Blend Point Value Calculation

EXAMPLE:

Fiber	Fiber Point Value	Bags	Lbs.	%	Blend Point Value
Blue	80	1	100	10.0	8.0
Cassiar CP or AK	90	1	100	10.0	9.0
Jeffrey 4-7	77	8	800	80.0	61.6
			1000	100.0	79.

B. Used in Products

Water Pipe - 3" through 6", 10' & 13', all classes (except 6" 200)
Irrigation & USBR Pipe - 6", 10' & 13', all classes (except 6" R80)
Sewer Pipe - 8" through 12", 13', all classes
Underdrain & Storm Drain Pipe - 6" through 12", 10' & 13', all classes
Gas Vent & Air Duct Vent Pipe - 10" through 16", 13'

Blend No.	M-1043		M-1051		M-1054		M-1055		M-945		M-1047	
	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%
Blue	2	16.7	1	10	2	18.2	2	16.7	1	10	1	10
Jeffrey	5	41.7	6	60					5	50	4	40
Advocate	5	41.7			9	81.8	6	50.0				
Cassiar AK									1	10	1	10
Cassiar CT			2	20			3	25.0	2	20	2	20
Cassiar CZ			1	10			1	8.3	1	10	1	10
Calaveras 4T											1	10
Plant	Manville		Waukegan		Green Cove		Denison		Long Beach		Stockton	

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	2

CANCELLED
11/11/77

A. Fiber Blend Point Value Calculation

EXAMPLE:

Fiber	Fiber Point Value	Bags	Lbs.	%	Blend Point Value
Blue	80	1	100	10.0	8.0
Cassiar CP or AK	90	1	100	10.0	9.0
Jeffrey 4-7	77	8	800	80.0	61.6
			1000	100.0	79.

B. Used in Products

Water Pipe - 3" through 6", 10' & 13', all classes (except 6" 200)
Irrigation & USBR Pipe - 6", 10' & 13', all classes (except 6" R80)
Sewer Pipe - 8" through 12", 13', all classes
Underdrain & Storm Drain Pipe - 6" through 12", 10' & 13', all classes
Gas Vent & Air Duct Vent Pipe - 10" through 16", 13'

Blend No.	M-1043		M-1051		M-1054		M-1055		M-945		M-1047	
	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%
Blue	2	16.7	1	10	2	18.2	2	16.7	1	10	1	10
Jeffrey	5	41.7	6	60					5	50	4	40
Advocate	5	41.7			9	81.8	6	50.0				
Cassiar AK									1	10	1	10
Cassiar CT			2	20			3	25.0	2	20	2	20
Cassiar CZ			1	10			1	8.3	1	10	1	10
Calaveras 4T											1	10
Plant	Manville		Waukegan		Green Cove		Denison		Long Beach		Stockton	

X— INDICATES CHANGE —REASON: Standard Blends - 1977

AUTHORITY FOR CHANGE: W. E. Volwiler's Letter of 12/10/76

MTC 002560

SUPERSEDES: Same Spec., Same Page, dated 1/10/73

MGR. Q. C.	MGR. Q. C.	SUPV. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 2-24-77

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
	CANCELLED 7/31/77	PAGE NO.	2

2. Point Value - Standard Blends

A. Used in Products

Water Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" 200).
("R") USBR Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" R18).
("T") USBR & Transmission Pipe - 6", 10'&13', All Classes (Except 6" T90).
Sewer Pipe - 4" thru 8", 10' & 13', All Classes.
Storm Drain Pipe - 6" & 8", 10' & 13', All Classes.

M-869 (Waukegan)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Reeves R-25	1	100	7.1	5.4
Jeffrey 4-T	12	1200	85.8	66.1
	14	1400	100.0	77

M-862 (Manville, Stockton and Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.6
Jeffrey 4-T	11	1100	91.7	70.6
	12	1200	100.0	77

X— INDICATES CHANGE —REASON: Standard Fiber Blends - 1973

AUTHORITY FOR CHANGE: K. J. Whalen's letter 11/17/72

MTC 002561

SUPERSEDES: Same Spec., Same Page, Dated 4/5/72

MGR. Q. C.	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.			DATE ISSUED 1/10/73

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2

2. Point Value - Standard Blends

A. Used in Products

X Water Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" 200).
X ("R") USBR Pipe - 3" thru 6", 10'&13', All Classes (Except 6" R18).
("T") USBR & Transmission Pipe - 6", 10'&13', All Classes (Except 6" T90).
Sewer Pipe - 4" thru 8", 10' & 13', All Classes.
Storm Drain Pipe - 6" & 8", 10' & 13', All Classes.

M-766 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Reeves R-25	3	300	30.0	23.1
Jeffrey 4-T	7	700	70.0	53.9
	10	1000	100.0	77

M-819 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Cassiar CT, AS, AX	2	200	16.7	12.6
Cassiar CP or AK	2	200	16.7	15.0
Reeves R-25	4	400	33.3	25.6
Jeffrey 4-T	4	400	33.3	25.6
	12	1200	100.0	79

M-799 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Cassiar CP or AK	2	200	14.3	12.9
Reeves R-25	8	800	57.1	44.0
Jeffrey 4-T	4	400	28.6	22.0
	14	1400	100.0	79

MTC 002562

PLEASE RETURN TO
J-M RESEARCH
LIBRARY

X- INDICATES CHANGE —REASON: Delete type Irrigation Pipe

AUTHORITY FOR CHANGE K. J. Whalen's letter 8/6/71 & K.P. Sutton's Marketing Bulletin PM 72-12

SUPERSEDES: Same Spec., Same Page, Dated 2/25/72

MGR. G. O. C	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT. FIN.					DATE ISSUED	4/5/72

FORM CO 1843 8/67

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2

2. Point Value - Standard Blends

CANCELLED

A. Used in Products

Water Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" 200).
USBR Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" R 18).
'T' Transmission Pipe - 6", 10' & 13', All Classes (Except 6" T 90).
Sewer Pipe - 4" thru 8", 10' & 13', All Classes.
Irrigation Pipe - - 4" thru 8", 10' & 13', All Classes.
Storm Drain Pipe (LOB & STO only) - 6" & 8", 10' & 13', All Classes.

M-766 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Reeves R-25	3	300	30.0	23.1
Jeffrey 4-T	7	700	70.0	53.9
	10	1000	100.0	77

M-819 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Cassiar CT, AS, AX	2	200	16.7	12.6
Cassiar CP or AK	2	200	16.7	15.0
Reeves R-25	4	400	33.3	25.6
Jeffrey 4-T	4	400	33.3	25.6
	12	1200	100.0	79

M-799 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Cassiar CP or AK	2	200	14.3	12.9
Reeves R-25	8	800	57.1	44.0
Jeffrey 4-T	4	400	28.6	22.0
	14	1400	100.0	79

MTC 002563

X- INDICATES CHANGE	-REASON:	Standard Fiber Blends - 1972
AUTHORITY FOR CHANGE		K. J. Whalen's letters to Plant Managers Dated 12/14/71 and 12/16/71
SUPERSEDES:		Same Spec., Same Page, Dated 2/17/71

MGR G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES. ENG.				DATE ISSUED 2/25/72

FORM CO 126-3 8/67

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: T NSITE Pipe F.ber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2

CANCELLED

2. Point Value - Standard Blends

A. Used in Products

Water Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" 200).
USBR Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" R 18).
'T' Transmission Pipe - 6", 10' & 13', All Classes (Except 6" T 90).
Sewer Pipe - 4" thru 8", 10' & 13', All Classes.
X Irrigation Pipe - - 4" thru 8", 10' & 13', All Classes.
Storm Drain Pipe (LOB & STO only) - 6" & 8", 10' & 13', All Classes.

M-766 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Reeves R-25	3	300	30.0	23.1
Jeffrey 4-T	7	700	70.0	53.9
	10	1000	100.0	77

X M-819 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Cassiar CT, AS, AX	2	200	16.7	12.6
Cassiar CP or AK	2	200	16.7	15.0
Reeves R-25	4	400	33.3	25.6
Jeffrey 4-T	4	400	33.3	25.6
	12	1200	100.0	79

M-799 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Cassiar CP or AK	2	200	14.3	12.9
Reeves R-25	8	800	57.1	44.0
Jeffrey 4-T	4	400	28.6	22.0
	14	1400	100.0	79

X- INDICATES CHANGE	-REASON:	Standard Fiber Blends - 1971	PLEASE RETURN TO
AUTHORITY FOR CHANGE		J. E. Hesse's letters dated 12/17/70	J-M RESEARCH
SUPERSEDES:		Same Spec., Same Page, Dated 9/8/70	LIBRARY

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES. LAB.			DATE ISSUED 2/17/71

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2

2. Point Value - Standard Blends

CANCELLED

A. Used in Products

Water Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" 200).
USBR Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" R 18).
'T' Transmission Pipe - 6", 10' & 13', All Classes (Except 6" T 90).
Sewer Pipe - 4" thru 8", 10' & 13', All Classes.
Type Irrigation Pipe - 4" thru 8", 10' & 13', All Classes.
Storm Drain Pipe (LOB & STO only) - 6" & 8", 10' & 13', All Classes.

M-813 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Reeves R-25	6	600	50.0	38.5
Jeffrey 4-T	6	600	50.0	38.5
	12	1200	100.0	77

M-806 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Cassiar CP or AK	2	200	16.7	15.0
Reeves R-25	6	600	50.0	38.5
Jeffrey 4-T	4	400	33.3	25.6
	12	1200	100.0	79

M-799 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Cassiar CP or AK	2	200	14.3	12.9
Reeves R-25	8	800	57.1	44.0
Jeffrey 4-T	4	400	28.6	22.0
	14	1400	100.0	79

MTC 002565

X M-808 (Marrero)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.6
Reeves R-25	2	200	16.7	12.9
Jeffrey 4-T	2	200	16.7	12.9
Advocate A-25	7	700	58.3	43.1
	12	1200	100.0	76

X- INDICATES CHANGE	-REASON:	Revised Fiber Blends for Denison Plant	PLEASE RETURN TO
AUTHORITY FOR CHANGE		J. E. Hesse's letter of 8/27/70	J-M RESEARCH
SUPERSEDES:		Same Spec., Same Page, Dated 2/2/70	LIBRARY (MM)

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. PIN.	RES. LAB			DATE ISSUED 9/8/70

2. Point Value - Standard Blends

A. Used in Products

Water Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" 200)
USBR Pipe - 3" thru 6", 10' & 13', All Classes (Except 6" R18)
"T" Transmission Pipe - 6", 10' & 13', All Classes (Except 6" T90)
Sewer Pipe - 4" thru 8", 10' & 13', All Classes
Type Irrigation Pipe - 4" thru 8", 10' & 13', All Classes
Storm Drain Pipe (LOB & STO only) - 6" & 8", 10' & 13', All Classes

M-813 (Waukegan and Manville

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Reeves R-25	6	600	50.0	38.5
Jeffrey 4-T	6	600	50.0	38.5
	12	1200	100.0	77

M-806 (Long Beach)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Cassiar CP or AK	2	200	16.7	15.0
Reeves R-25	6	600	50.0	38.5
Jeffrey 4-T	4	400	33.3	25.6
	12	1200	100.0	79

M-799 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Cassiar CP or AK	2	200	14.3	12.9
Reeves R-25	8	800	57.1	44.0
Jeffrey 4-T	4	400	28.6	22.0
	14	1400	100.0	79

M-808 (Marrero and Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.6
Reeves R-25	2	200	16.7	12.9
Jeffrey 4-T	2	200	16.7	12.9
Advocate A-25	7	700	58.3	43.1
	12	1200	100.0	76

Johns-Manville MANUFACTURING SPECIFICATION JM-260-2-A	PRODUCT: TRANSITE Pipe Fiber Blends	DIVISION	PIPE
		SPEC. NO.	TR-425-1
		PAGE NO.	1

CANCELLED 8/20/81

I. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit, so that each bag is marked with two bars on side or end.

The following 4 Grade Jeffrey fibers are to be bag color coded and used at the following point values:

Jeffrey 4T & SP4T and

Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Mauve	69	71
Gray	84	86	Yellow	66	68
White	81	83	Blue	63	65
Brown	78	80	Red	60	62
Black	75	77			
--	72	74	(No Color Code Required on Bag)		

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

Blue Fiber	Lbs/Bag	Assigned Point Value
"S Pomfret or Koegas, KCB/R3 Kurman, W1, Etc.	110	80
2S	110	80
K35-3/30	110	80
S65	110	80
WMS-6	110	75
ML6	110	80
Jeffrey		
4T30	110	(as above)
SP5R28	110	55
Cassiar		
CP or AK	100	90
CT	100	79
CZ	100	43
Calaveras		
4T	100	68
5K	100	55

X

MTC 002567

X - INDICATES CHANGE	X - Pt. Value was 95
AUTHORITY FOR CHANGE	C.B. Allen and A.C. Daley
SUPERSEDES:	Same Spec., Same Page, Dated 3/16/81
DATE ISSUED:	7/23/81

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	2

2. POINT VALUE - STANDARD BLENDS (Cont'd)

M-765 (MANVILLE)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	8.3	7
Reeves R-25	2	200	16.7	13
Jeffrey 4-T	9	900	75.0	57
	12	1200	100.0	77

M-766 (WAUKEGAN)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Reeves R-25	3	300	30.0	23
Jeffrey 4-T	7	700	70.0	54
	10	1000	100.0	77

M-767 (LONG BEACH)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	8.3	7
Reeves R-25	3	300	25.0	19
Jeffrey 4-T	8	800	66.7	51
	12	1200	100.0	77

M-768 (STOCKTON)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	8.3	7
Reeves R-25	4	400	33.3	26
Jeffrey 4-T	3	300	25.0	19
Advocate A-25	4	400	33.4	25
	12	1200	100.0	77

M-769 (DENISON)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	10.0	8
Reeves R-25	1	100	10.0	8
Jeffrey 4-T	2	200	20.0	15
Advocate A-25	6	600	60.0	44
	10	1000	100.0	75

X— INDICATES CHANGE —REASON:	FIBER BLENDS INCORPORATING REEVES R-25 FIBER
AUTHORITY FOR CHANGE	J. E. HESSE'S LETTER 12/23/68
SUPERSEDES:	Same Spec., Page Dated 10/30/68

MGR. G. O. C	MGR. O. C.	SUPV. O. C.	PROD. SUPT.	PLNT. ENG.	QUAL. CONT.			DATE ISSUED 1/7/69

Based on forecasted tonnages and quality, the white fiber (Chrysotile) for M-Blends can be kept above a 65 point value minimum, and that for H-Blends above 60 point value minimum.

2. POINT VALUE - STANDARD BLENDS

A. 13' Machine Products and Pressure Products on 10' Machine

Pipe Sizes 3" Through 16" Tube

M-713 (All Plants)

Fiber	LBS.	%	*Blend Point Value
Jeffrey 4	650	65.0	49
Blue	100	10.0	8
Advocate A25	250	25.0	17
	1000	100.0	74

*Sample blend point value calculations using an average point value of 75 for Jeffrey and 68 for Advocate. (See paragraph III, Page 4).

M-719 (Marrero, Green Cove and Denison)

Fiber	Lbs.	%	*Blend Point Value
Blue	100	10.0	3
Advocate A25	900	90.0	61
	1000	100.0	69

X— INDICATES CHANGE —REASON: Reduction in Blue Fiber Usage

AUTHORITY FOR CHANGE: J. E. Hesse's Letter 3-30-67

SUPERSEDES: Same Spec., Same Page dated 10-26-66

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED 4-13-67

Form 333-A Pd. In U.S.A.

Based on forecasted tonnages and quality, the white fiber (Chrysotile) for M-Blends can be kept above a 65 point value minimum, and that for H-Blends above 60 point value minimum.

2. POINT VALUE - STANDARD BLENDS

A. 13' Machine Products and Pressure Products on 10' Machine Pipe Sizes 3" Through 8" Tube

M-713 (All Plants)

Fiber	Lbs.	%	*Blend Point Value
Jeffrey 4	650	65.0	49
Blue	100	10.0	8
Advocate A25	250	25.0	17
	1000	100.0	74

*Sample blend point value calculations using an average point value of 75 for Jeffrey and 68 for Advocate. (See paragraph III, Page 4).

M-719 (Marrero, Green Cove and Denison)

Fiber	Lbs.	%	*Blend Point Value
Blue	100	10.0	8
Advocate A25	900	90.0	61
	1000	100.0	69

PLEASE [illegible] TO

X Based on forecasted tonnages and quality from the Asbestos Fiber Division, the Jeffrey component for the Swing Arm blend can be kept at 65 PV minimum. In the Tube Mandrel blend, the Jeffrey plus Lake, Jeffrey plus BC4T or Jeffrey plus C & G 4 can be kept at 65 PV minimum. The Jeffrey component in the Non-Pressure Blend should be kept above 60 PV.

2. POINT VALUE - STANDARD BLENDS

A. 11' Machine Products and Pressure Products on 10' Machine

X Pipe Sizes 3" - 16" M670

Fiber	Lbs.	%	Blend Point Value Range With 4 Grade Component Average PV65-72
X Jeffrey 4	700	70.0	44-50
X Blue	100	10.0	8-8
X *Advocate A25	200	20.0	14-14
X	1000	100.0	66-72

X *Above Sample Calculation Using 70 Reference Point Value for Advocate A25.

For Cost Purposes 18" - 36"
Swing Mandrels - M 666

Fiber	Lbs.	%	Range With 4 Grade Component Average PV65-72
X Blue	200	20.0	16-16
X Jeffrey	800	80.0	52-58
X	1000	100.0	68-74

MTC 002571

PLEASE RETURN TO J-M RESEARCH LIBRARY (MM)

X— INDICATES CHANGE — REASON: Instructions in Use of Available Fibers

AUTHORITY FOR CHANGE: J. B. McCarty's Letter of 12-28-64

SUPERSEDES: Same Spec., Same Page, Dated 10-16-64

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RE			DATE ISSUED 1-12-65

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

II. POINT VALUE - STANDARD BLENDS

A. 13' Machine Products and Pressure Products on 10' Machine

X

Pipe Sizes 3" - 16" M648 — Blend Point Value

Fiber	Lbs.	%	With Std. 4H	With Std. 4T	Range With 4 Grade Component Average PV60-72
Jeffrey	950	79.2	47	55	47 - 57
Advocate A25	250	20.8	14	14	14 - 14
	1200	100.0	61	69	61 - 71

X

For Cost Purposes 18" - 36" Swing Mandrels - M 666

Fiber	Lbs.	%	With Std.4H	With Std.4T	Range With 4 Grade Component Avg. PV60-72
Blue	200	20.0	16	16	16 - 16
Jeffrey	800	80.0	48	56	48 - 58
	1000	100.0	64	72	64 - 74

Up to 5.0% of scrap may be added to amaximum of 50 lbs. per batch.

NOTE: Any plant making pipe on Swing Mandrels smaller than 18" will use M 666 Blend.

At Marrero Only: Willow 15 lbs. of soda ash with each batch of fiber.

II. POINT VALUE - STANDARD BLENDS

A. 13' Machine Products and Pressure Products on 10' Machine

Pipe Sizes 3" - 16" M-623

	Fiber	Lbs.	%	Blend Point Value With 4D,4H	With 4T30	Special* 4T30
	Jeffrey	900	75.0	45	52	56
X	Munro	300	25.0	12	12	12
X		1200	100.0	57	64	65

For Cost Purposes 18 " - 36"
Swing Mandrels - M - 626

	Fiber	Lbs.	%	With 4D,4H	With 4T30	Special* 4T30
	Blue	200	20.0	16	16	16
	Jeffrey	500	50.0	30	35	37
X	Munro	300	30.0	14	14	14
X		1000	100.0	60	65	67

Up to 5.0% of scrap may be added to a maximum of 50 lbs. per batch.

NOTE: Any plant making pipe on Swing Mandrels smaller than 18" will use M-626 Blend.

*Special 4T30 with 74 point value in 2 ply paper bags.

At Marrero Only: Willow 15 lbs. of soda ash with each batch of fiber.

II. POINT VALUE - STANDARD BLENDS:

A. 13' Machine Products and Pressure Products on 10' Machine

Pipe Sizes 3" - 16" M-623			Blend Point Value		
Fiber	Lbs.	%	With 4D.4H	With 4T30	Special* 4T30
Jeffrey	900	75.0	45	52	56
Munro	300	25.0	14	14	14
	1200	100.0	59	66	70

For Cost Purposes 18" - 36"
Swing Mandrels - M - 626

Fiber	Lbs.	%	With 4D.4H	With 4T30	Special* 4T30
Blue	200	20.0	16	16	16
Jeffrey	500	50.0	30	35	37
Munro	300	30.0	16	16	16
	1000	100.0	62	67	69

X Up to 5.0% of scrap may be added to a maximum of 50 lbs. per batch.

NOTE: Any plant making pipe on Swing Mandrels smaller than 18" will use M-626 Blend.

*Special 4T30 with 74 point value in 2 ply paper bags.

At Marrero Only: Willow 15 lbs. of soda ash with each batch of fiber.

X— INDICATES CHANGE —REASON: Show Addition of Scrap

MTC 002574

AUTHORITY FOR CHANGE: J. B. McCarty's Letter of 10-21-63

SUPERSEDES: Same Spec., Same Page Dated 10-10-63; Marrero Deviation #10 Dated 9-27-61; Sto.Dev.R62-1.

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES. QAC.				DATE ISSUED 11-8-63 11-13-6

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

2. POINT VALUE - STANDARD BLENDS (Cont'd)

M-744 (MANVILLE, WAUKEGAN, STOCKTON AND LONG BEACH)

FIBER	LBS.	%	*BLEND POINT VALUE
Reeves R-25	200	20.0	15
Jeffrey 4-T	800	80.0	62
	1000	100.0	77

*Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

M-742 (MARRERO, GREEN COVE, AND DENISON)

FIBER	LBS.	%	*BLEND POINT VALUE
Reeves R-25	200	20.0	15
Jeffrey 4-T	300	30.0	23
Advocate A-25	500	50.0	37
	1000	100.0	75

*Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", All Classes
USBR Pipe - 6" R18 & 8" thru 16", All Classes
"R" Irrigation Pipe (GCS Only) 8" All Classes
"T" Transmission Pipe - 12" thru 16", All Classes
Sewer Pipe - 10" thru 16", All Classes
Type Irrigation Pipe - 10" thru 16", All Classes
Underdrain and Storm Drain Pipe - 10" thru 16"
Gas Vent & Air Duct - Vent Pipe - 10" thru 16"
On-Farm Irrigation Pipe - 12" thru 16"
Coupling Stock - 3" thru 16"

M-748 (MANVILLE AND WAUKEGAN)

FIBER	LBS	%	*BLEND POINT VALUE
Blue	100	7.2	6
Reeves R-25	300	21.4	16
Jeffrey 4-T	1000	71.4	55
	1400	100.0	77

MTC 002575

II. POINT VALUE - STANDARD BLEND:

A. 13' Machine Products and Pressure Products on 10' Machine

Pipe Sizes 3" - 16" M-623

Fiber	Lbs.	%	Blend Point Value With 4D,4H	With 4T30	Special* 4T30
Jeffrey	900	75.0	45	52	56
Munro	300	25.0	14	14	14
	1200	100.0	59	66	70

For Cost Purposes 18" - 36"
Swing Mandrels - M-626

Fiber	Lbs.	%	With 4D,4H	With 4T30	Special* 4T30
Blue	200	20.0	16	16	16
Jeffrey	500	50.0	30	35	37
Munro	300	30.0	16	16	16
	1000	100.0	62	67	69

NOTE: Any plant making pipe on Swing Mandrels smaller than 18" will use M-626 Blend.

*Special 4T30 with 74 point value in 2 ply paper bags.

II. POINT VALUE - STANDARD BLENDS:

A. 13' Machine Products and Pressure Products on 10' Machine

	Pipe Sizes 3"-16" M-623			Blend Point Value		
	Fiber	Lbs.	%	With 4D,4H	With 4T30	Special* 4T30
	Jeffrey	900	75.0	45	52	56
X	Munro	300	25.0	15	15	15
X		1200	100.0	60	67	71

	For Cost Purposes 18"-36" Swing Mandrels - M-626			Blend Point Value		
	Fiber	Lbs.	%	With 4D,4H	With 4T30	Special* 4T30
	Blue	200	20.0	16	16	16
	Jeffrey	500	50.0	30	35	37
X	Munro	300	30.0	18	18	18
X		1000	100.0	64	69	71

Note: Any plant making pipe on Swing Mandrels smaller than 18" will use M-626 Blend.

* Special 4T30 with 74 point value in 2 ply paper bags.

RETURN TO
J-M RESEARCH
FILE ROOM

X-- INDICATES CHANGE —REASON: Lower Point Value of M-100 Fiber

AUTHORITY FOR CHANGE: J. B. McCarty's Letter of 4/28/63

SUPERSEDES: Same Spec., Same Page Dated 1/10/63

MTC 002577

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES. LAB.				DATE ISSUED 4/23/63

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

II. POINT VALUE - STANDARD BLENDS:

A. 13' Machine Products and Pressure Products on 10' Machine

CANCELLED

Pipe Sizes 3"-16" M-623 — Blend Point Value

Fiber	Lbs.	%	With 4D, 4H	With 4T30
Jeffrey	900	75.0	45	52
X Munro	300	25.0	16	16
	1200	100.0	61	68
X				

For Cost Purposes 18"-36" Swing Mandrels - M-626 — Blend Point Value

Fiber	Lbs.	%	With 4D, 4H	With 4T30
Blue	200	20.0	16	16
Jeffrey	500	50.0	30	35
X Munro	300	30.0	19	19
X	1000	100.0	65	70

Note: Any plant making pipe on Swing Mandrels smaller than 18" will use M-626 Blend.

II. POINT VALUE - STANDARD BLENDS:

A. 13' Machine Products and Pressure Products on 10' Machine

Pipe Sizes 3"-16" M-623			Blend Point Value	
Fiber	Lbs.	%	With 4T, 4H	With 4T30
Jeffrey	900	75.0	45	52
Munro	300	25.0	15	15
	1200	100.0	60	67

X

For Cost Purposes 18"-36" Swing Mandrels			Blend Point Value	
Fiber	Lbs.	%	With 4T, 4H	With 4T30
Blue	200	20.0	16	16
Jeffrey	500	50.0	30	34
Munro	300	30.0	18	18
	1000	100.0	64	68

X Note: Any plant making pipe on Swing Mandrels smaller than 18" will use M-626 Blend.

RETURN TO
J-M RESEARCH
FILE ROOM

X— INDICATES CHANGE	—REASON:	Add Notes on M-626 Blend
AUTHORITY FOR CHANGE		Clarification of Blend Use
SUPERSEDES:		Same Spec., Same Page Dated 10/4/62

MTC 002579

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES LAB				DATE ISSUED	11/30/62

Form 333-2 Printed in U.S.A.

II. POINT VALUE - STANDARD BLENDS:

A. 13' Machine Products and Pressure Products on 10' Machine

X

Pipe Sizes 3"-16" M-623

Fiber	Lbs.	%	Blend Point Value With 4D, 4H	Blend Point Value With 4T30
Jeffrey	900	75.0	45	52
Munro 60	300	25.0	15	15
	1200	100.0	[60]	[67]

X

Pipe Sizes 18"-36" M-626

Fiber	Lbs.	%	Blend Point Value With 4D, 4H	Blend Point Value With 4T30
Blue	200	20.0	16	16
Jeffrey	500	50.0	30	34
Munro	300	30.0	18	18
	1000	100.0	[64]	[68]

RETURN TO
J-M RESEARCH
FILE ROOM

X— INDICATES CHANGE —REASON: Silicate Fiber Treatment Blend Change

AUTHORITY FOR CHANGE: J. B. McCarty's Letter of 9/24/62

SUPERSEDES: Same Spec., Same Page Dated 3/2/62

MTC 002580

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES. LAB.				DATE ISSUED 10/4/62

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

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: Transite Pipe Fiber Blends	PLANT & DIV.	[illegible]
		SPEC NO.	[illegible]
		PAGE NO.	

II. POINT VALUE - STANDARD BLENDS

CANCELLED

A. 12' Machine Products and [illegible] on 12' Machine

Pipe Sizes [illegible] 4-624

Fiber	Lbs.	%	Blend Point Value With 41, 43	Blend Point Value With 47-50
Blue	200	14.8	12	12
Jeffrey	700	51.8	31	35
Munro	450	33.4	20	20
	1350	100.0	63	67

Pipe Sizes 10" - 16" 4-626

Fiber	Lbs.	%	Blend Point Value With 41, 43	Blend Point Value With 47-50
Blue	200	20.0	16	16
Jeffrey	500	50.0	30	34
Munro	300	30.0	18	18
	1000	100.0	64	68

Pipe Sizes 18" - 36" 4-627

Fiber	Lbs.	%	Blend Point Value With 41, 43	Blend Point Value With 47-50
Blue	300	23.1	[illegible]	19
Jeffrey	600	46.2	[illegible]	32
Munro	400	30.7	18	18
	1300	100.0	65	69

RETURN TO
J-M RESEARCH
FILE ROOM

X— INDICATES CHANGE —REASON: General Revision to Include Point Values

AUTHORITY FOR CHANGE: W. L. Van Derbeek's letter of [illegible]

MTC 002581

SUPERSEDES: Same Spec., Issued [illegible]

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. APPR.	PLNT. P.M.

C. Used in Products

Water Pipe - 6" 200 & 8" through 16", all classes
Irrigation & USBR Pipe - 6" R80 & 8" through 16", all classes
Sewer Pipe - 14" & 16", all classes
Storm Drain Pipe - 14" & 16"
On-Farm Irrigation Pipe - 12" through 16"
Coupling Stock - 3" through 16"

CANCELLED 4/25/77

Blend No.	M-1043		M-1051		M-1054		M-1032		M-1040		M-1047	
	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%
Blue	2	16.7	1	10	2	18.2	2	16.7	2	20	1	10
Jeffrey	5	41.7	6	60					4	40	4	40
Advocate	5	41.7			9	81.8	7	58.3				
Cassiar AK									1	10	1	10
Cassiar CT			2	20			3	25.0	2	20	2	20
Cassiar CZ			1	10					1	10	1	10
Calaveras 4T											1	10
Plant	Manville		Waukegan		Green Cove		Denison		Long Beach		Stockton	

D. Used in Products

Water Pipe - 18" through 36", all classes
USBR Pipe - 18" through 36", all classes
"T" Transmission Pipe - 18" through 36", all classes
Sewer Pipe - 18" through 36", all classes
Storm Drain Pipe - 18" through 36"
Air Duct Vent Pipe - 18" through 36"
On-Farm Irrigation Pipe - 18" and 21"
Coupling Stock - 18" through 36"

Blend No.	M-771		M-1053		M-1032		M-1040	
	Bags	%	Bags	%	Bags	%	Bags	%
Blue	2	16.7	2	16.7	2	16.7	2	20
Jeffrey	3	25.0	7	58.3			4	40
Advocate	7	58.3			7	58.3		
Cassiar AK							1	10
Cassiar CT			3	25.0	3	25.0	2	20
Cassiar CZ							1	10
Calaveras 4T								
Plant	Manville		Waukegan		Denison		Long Beach Stockton	

M-865 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	6	600	42.9	33.0
Advocate A-25	7	700	50.0	37.0
	14	1400	100.0	76

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

*NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", All Classes.
("R") USSR Pipe - 6" R 18 & 8" thru 16", All Classes.
"T" USSR & Transmission Pipe - 8" thru 16" All Classes and 6" T 90.
Sewer Pipe - 10" thru 16", All Classes.

Underdrain and Storm Drain Pipe - 10" thru 16".
Oil Field & Gas Line - Vent Pipe - 10" thru 16".
On-Farm Irrigation Pipe - 12" thru 16"

MTC 002583

M-754 (Waukegan)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Reeves R-25	2	200	20.0	15.4
Jeffrey 4-T	7	700	70.0	53.9
	10	1000	100.0	77

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.1

M-830 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Reeves R-25	2	200	14.3	11.0
Jeffrey 4-T	4	400	28.6	22.0
Advocate A-25	7	700	50.0	37.0
	14	1400	100.0	76

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

*NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", All Classes.
X ("R") USBR Pipe - 6" R 18 & 8" thru 16", All Classes.
X "T" USBR & Transmission Pipe - 8" thru 16" All Classes and 6" T 90.
Sewer Pipe - 10" thru 16", All Classes.
X

Underdrain and Storm Drain Pipe - 10" thru 16".
Gas Vent & Air Duct - Vent Pipe - 10" thru 16".
On-Farm Irrigation Pipe - 12" thru 16"

MTC 002584

M-796 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Reeves R-25	4	400	33.3	25.6
Jeffrey 4-T	7	700	58.4	45.0
	12	1200	100.0	77

X- INDICATES CHANGE — REASON: Delete Type Irrigation Pipe

AUTHORITY FOR CHANGE: K. J. Whalen's letter 8/6/71 & K. P. Sutton's Marketing Bulletin PM 72-12

SUPERSEDES: Same Spec., Same Page, Dated 2/25/72.

MGR. G. O. C	SEC. G. C.	SUPT. G. C.	PROD. SUPT.	PLNT. MGR.			DATE ISSUED 4/5/72

CANCELLED

M-830 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
X Reeves R-25	2	200	14.3	11.0
Jeffrey 4-T	4	400	28.6	22.0
Advocate A-25	7	700	50.0	37.0
	14	1400	100.0	76

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

*NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", All Classes.
USBR Pipe - 6" R 18 & 8" thru 16", All Classes.
'T' Transmission - 8" thru 16" All Classes and 6" T 90.
Sewer Pipe - 10" thru 16", All Classes.
Irrigation Pipe - 10" thru 16", All Classes.
Underdrain and Storm Drain Pipe - 10" thru 16".
Gas Vent & Air Duct - Vent Pipe - 10" thru 16".
On-Farm Irrigation Pipe - 12" thru 16"

M-796 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Reeves R-25	4	400	33.3	25.6
Jeffrey 4-T	7	700	58.4	45.0
	12	1200	100.0	77

X- INDICATES CHANGE —REASON: Standard Fiber Blends 1972

AUTHORITY FOR CHANGE: K. J. Whalen's letters to Plant Managers dated 12/14/71 and 12/16/71

SUPERSEDES: Same Spec., Same Page, Dated 2/17/71.

MGR G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED	2/25/72

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.1

CANCELLED

X M-830 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Reeves R-25	2	200	14.2	11.0
Jeffrey 4-T	4	400	28.6	22.0
Advocate A-25	7	700	50.0	37.0
	14	1400	100.0	76

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

*NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", All Classes.
USBR Pipe - 6" R 18 & 8" thru 16", All Classes.
'T' Transmission - 8" thru 16" All Classes and 6" T 90.
Sewer Pipe - 10" thru 16", All Classes.
X Irrigation Pipe - 10" thru 16", All Classes.
Underdrain and Storm Drain Pipe - 10" thru 16".
Gas Vent & Air Duct - Vent Pipe - 10" thru 16".
On-Farm Irrigation Pipe - 12" thru 16"

MTC 002586

X M-796 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Reeves R-25	4	400	33.3	25.6
Jeffrey 4-T	7	700	58.4	45.0
	12	1200	100.0	77

X- INDICATES CHANGE —REASON: Standard Fiber Blends 1971

AUTHORITY FOR CHANGE: J. E. Hesse's letters dated 12/17/70

SUPERSEDES: Same Spec., Same Page, Dated 9/8/70

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	REG. LAB			DATE ISSUED 2/17/71

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CANCELLED

X M-719 (Special Blend For Coupling Stock at Denison)

X	FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
X	Blue	1	100	10.0	8.0
X	Advocate A-25	9	900	90.0	66.6
X		10	1000	100.0	75

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.0	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

M-801 (Special Blend For Coupling Stock at Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
Jeffrey 4-T or Pacific Asbestos	3	300	30.0	23.1
Cassiar CT or AX	3	300	30.0	22.5
	10	1000	100.0	81

C. Used In Products

Water Pipe - 18" thru 36", All Classes.
USBR Pipe - 18" thru 36", All Classes.
'T' Transmission Pipe - 18" thru 36", All Classes.
Sewer Pipe - 18" thru 36", All Classes.
Air Duct-Vent Pipe - 18" thru 36".
Coupling Stock - 18" thru 36".

MTC 002587

M-815 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	5	500	35.7	27.5
Jeffrey 4-T	7	700	50.0	38.5
	14	1400	100.0	77

X- INDICATES CHANGE —REASON: Revised Fiber Blends for Denison Plant

AUTHORITY FOR CHANGE: J. E. Hesse's letter of 8/27/70

SUPERSEDES: Same Spec., Same Page, Dated 4/30/70

PLEASE RETURN TO J-M RESEARCH LIBRARY (MM)

MGR. Q. Q. C	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT. FIN.	RES.			DATE ISSUED 9/8/70

FORM CO 186-3 80187

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	2.3

2. Point Value - Standard Blends (Continued)

C. Used in Products

Water Pipe - 18" thru 36", all classes
USBR Pipe - 18" thru 36", all classes
"T" Transmission Pipe - 18" thru 36", all classes
Sewer Pipe - 18" thru 36", all classes
Air Duct-Vent Pipe - 18" thru 36"
Coupling Stock - 18" thru 36"

M-815 (Waukegan and Manville)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	5	500	35.7	27.5
Jeffrey 4-T	7	700	50.0	38.5
	14	1400	100.0	77

M-807 (Long Beach)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Jeffrey 4-T	2	200	16.7	12.9
Cassiar CT, AS or AX	6	600	50.0	37.5
	12	1200	100.0	80

X M-821 (Stockton)

FIBER	BAGS	LBS	%	*BLEND POINT VALUES
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
X Jeffrey 4-T or Pacific Asbestos	1	100	10.0	7.7
X Cassiar CT or AX	2	200	20.0	15.0
X Reeves R-25	3	300	30.0	23.1
X	10	1000	100.0	81.

MTC 002588

X- INDICATES CHANGE —REASON:	Revised Fiber Blends For Stockton Plant.
AUTHORITY FOR CHANGE	J. E. Hasse letter of 4/21/70.
SUPERSEDES:	Same Spec., Same Page, Dated 2/2/70.

MGR. G. O. C	MGR. O. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED	4/30/70

2. Point Value - Standard Blends (Continued)

C. Used in Products

Water Pipe - 18" thru 36", all classes
USBR Pipe - 18" thru 36", all classes
"T" Transmission Pipe - 18" thru 36", all classes
Sewer Pipe - 18" thru 36", all classes
Air Duct-Vent Pipe - 18" thru 36"
Coupling Stock - 18" thru 36"

M-815 (Waukegan and Manville)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	5	500	35.7	27.5
Jeffrey 4-T	7	700	50.0	38.5
	14	1400	100.0	77

M-807 (Long Beach)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Jeffrey 4-T	2	200	16.7	12.9
Cassiar CT, AS or AX	6	600	50.0	37.5
	12	1200	100.0	80

M-801 (Stockton)

FIBER	BAGS	LBS	%	*BLEND POINT VALUES
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
Jeffrey 4-T or Pacific Asbestos	3	300	30.0	23.1
Cassiar CT or AX	3	300	30.0	22.5
	10	1000	100.0	81

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	2.3

2. POINT VALUE - STANDARD BLENDS (Cont'd)

C. Used In Products

Water Pipe - 18" thru 36", All Classes
USBR Pipe - 18" thru 36" , All Classes
"T" Transmission Pipe -18" thru 36", All Classes
Sewer Pipe - 18" thru 36", All Classes
Air Duct-Vent Pipe - 18" thru 36"
Coupling Stock - 18" thru 36"

M-775 (MANVILLE)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	20.0	16
Reeves R-25	2	200	20.0	15
Jeffrey 4-T	6	600	60.0	+6
	10	1000	100.0	77

M-776 (WAUKEGAN & LONG BEACH)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	20.0	16
Reeves R-25	3	300	30.0	23
Jeffrey 4-T	5	500	50.0	38
	10	1000	100.0	77

M-777 (STOCKTON)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	20.0	16
Reeves R-25	2	200	20.0	15
Jeffrey 4-T	2	200	20.0	15
Advocate A-25	4	400	40.0	30
	10	1000	100.0	76

M-774 (DENISON)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	10.0	8
Reeves R-25	2	200	20.0	15
Jeffrey 4-T	1	100	10.0	8
Advocate A-25	6	600	60.0	44
	10	1000	100.0	75

MTC 002590

X- INDICATES CHANGE -REASON:	FIBER BLENDS INCORPORATING REEVES R-25 FIBER
AUTHORITY FOR CHANGE	J. E. HESSE's LETTER 12/23/68
SUPERSEDES:	SAME SPEC. PAGE 2.1 DATED 10/30/68

PLEASE RETURN TO I-M RESEARCH LIBRARY (MM)

MGR. G. Q. C	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT. FIN.	REG. LAB.			DATE ISSUED 1/7/69

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV	M,G,J,D,W,R PIPE
		SPEC NO.	425-1
		PAGE NO.	23

Blend M702

Fiber	Lbs.	%
Cassiar	100	10.0
Advocate A25	200	20.0
BC4T	200	20.0
Jeffrey 4	500	50.0
	1000	100.0

X— INDICATES CHANGE —REASON: Instructions in Use of Available Fibers

AUTHORITY FOR CHANGE: J. B. McCarty's Letter of 12-28-64

SUPERSEDES: None, New Page

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED 1-12-65

Form 333-A Pld. in U.S.A.

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends CANCELLED 2/24/77	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.4

M-864 (Long Beach and Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	1	300	10.0	9.0
Jeffrey 4-T	8	500	80.0	61.6
	10	900	100.0	79

X M-831 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Jeffrey 4-T	3	300	30.0	23.1
Advocate A-25	6	600	60.0	44.4
	10	1000	100.0	76

X D. Blends Used For Coupling Stock

M-831 (Green Cove and Denison)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Jeffrey 4-T	3	300	30.0	23.1
Advocate A-25	6	600	60.0	44.4
	10	1000	100.0	76

X— INDICATES CHANGE —REASON: Standard Fiber Blends - 1973 - Correction

AUTHORITY FOR CHANGE: K. J. Whalen's letters to Plant Managers dated 11/17/72

SUPERSEDES: Same Spec., Same Page, dated 1/10/73

MGR. G. O. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED 1/30/73

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.4

M-864 (Long Beach and Stockton)

CANCELLED

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	1	300	10.0	9.0
Jeffrey 4-T	8	500	80.0	61.6
	10	900	100.0	79

M-831 (Green Cove and Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Jeffrey 4-T	3	300	30.0	23.1
Advocate A-25	6	600	60.0	44.4
	10	1000	100.0	76

X— INDICATES CHANGE —REASON: Standard Fiber Blends - 1973

AUTHORITY FOR CHANGE: K. J. Whalen's letters to Plant Managers dated 11/17/72

SUPERSEDES: Same Spec., Same Page, dated 2/25/72

MGR. Q. C.	MGR. O. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED 1/10/73

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.4

CANCELLED

X M-848 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Reeves R-25	3	300	25.0	19.2
Jeffrey 4-T	5	500	41.7	32.1
	12	1200	100.0	80

X M-849 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	2	200	20.0	18.0
Reeves R-25	3	300	30.0	23.1
Jeffrey 4-T	4	400	40.0	30.8
	10	1000	100.0	80

M-830 (Denison)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
X Reeves R-25	2	200	14.3	11.0
Jeffrey 4-T	4	400	28.6	22.0
Advocate A-25	7	700	50.0	37.0
	14	1400	100.0	76

X— INDICATES CHANGE —REASON: Standard Fiber Blends - 1972

AUTHORITY FOR CHANGE: K. J. Whalen's letters to Plant Managers dated 12/14/71 and 12/16/71

SUPERSEDES: Same Spec., Same Page, dated 2/17/71

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES. LAB.				DATE ISSUED 2/25/72

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.4

X M-838 (Long Beach) CANCELLED

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Reeves R-25	3	300	25.0	19.2
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Jeffrey 4-T	4	400	33.3	25.6
Cassiar CT, AS or AX	1	100	8.3	6.2
	12	1200	100.0	80

M-821 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
Jeffrey 4-T or Pacific Asbestos	1	100	10.0	7.7
Cassiar CT or AX	2	200	20.0	15.0
Reeves R-25	3	300	30.0	23.1
	10	1000	100.0	81

X M-830(Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Reeves R-25	2	200	14.2	11.0
Jeffrey 4-T	4	400	28.6	22.0
Advocate A-25	7	700	50.0	37.0
	14	1400	100.0	76

MTC 002595

X- INDICATES CHANGE -REASON:	Standard Fiber Blends - 1971	PLEASE RETURN TO
AUTHORITY FOR CHANGE	J. E. Hesse's letters dated 12/17/70	J-M RESEARCH
SUPERSEDES:	Same Spec., Same Page, dated 9/8/70	LIBRARY

MGR G.Q.C	MGR. Q.C.	SUPR. Q.C.	PROD SUPT.	PLNT. FIN.				DATE ISSUED 2/17/71

POST CO 1863 5087

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.4

M-807 (Long Beach) CANCELLED

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Jeffrey 4-T	2	200	16.7	12.9
Cassiar CT, AS or AX	6	600	50.0	37.5
	12	1200	100.0	80

M-821 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
Jeffrey 4-T or Pacific Asbestos	1	100	10.0	7.7
Cassiar CT or AX	2	200	20.0	15.0
Reeves R-25	3	300	30.0	23.1
	10	1000	100.0	81

X M-827 (Denison)

X

X FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
X Blue	1	100	7.1	5.7
X Reeves R-25	2	200	14.2	11.0
X Advocate A-25	11	1100	78.7	58.0
X	14	1400	100.0	75

M-719 (Special Blend For Coupling Stock at Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Advocate A-25	9	900	90.0	66.6
	10	1000	100.0	75

MTC 002596

X- INDICATES CHANGE -REASON:	Revised Fiber Blends for Denison Plant	PLEASE RETURN TO
AUTHORITY FOR CHANGE	J. E. Hesse's letter of 8/27/70	J-M RESEARCH
SUPERSEDES:	Same Spec., Same Page, Dated 2/2/70.	LIBRARY (MM)

MGR. G. Q. C	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT FIN	RES.			DATE ISSUED	9/8/70

POST CO 126-8 80187

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	2.4

M-809 (Denison)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1½	150	10.7	8.6
Reeves R-25	4	400	28.6	22.0
Jeffrey 4-T	6	600	42.8	33.0
Advocate A-25	2½	250	17.9	13.2
	14	1400	100.0	77

M-811 (Marrero)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	2	200	14.3	11.0
Jeffrey 4-T	2	200	14.3	11.0
Advocate A-25	8	800	57.1	42.3
	14	1400	100.0	76

* NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T, or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

NOTE AT ALL PLANT

Up to 5.0% of scrap may be added to all M-Blends up to a maximum of 50 lbs. per batch. This amount of scrap is not to be included in reporting the weight willowed.

At the pipe machines, the fiber blend is to be used at the blend point value, disregarding the scrap content.

X- INDICATES CHANGE —REASON:	Fiber blends effective January 19, 1970	PLEASE RETURN TO
AUTHORITY FOR CHANGE	J. E. Hesse letters to Plant Managers	J-M RESEARCH
SUPERSEDES:	Same Spec., Same Page, Dated 3/28/69	LIBRARY (MM)

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED 2/2/70

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE* PIPE FIBER BLENDS	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.4

2. POINT VALUE - STANDARD BLENDS (CONT'D)

M-778 (MARRERO)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	20.0	16
Reeves R-25	2	200	20.0	15
Jeffrey 4-T	1	100	10.0	8
Advocate A-25	5	500	50.0	37
	10	1000	100.0	76

* Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

X NOTE: All M-Blends at All Plants

Up to 5.0% of scrap may be added to all M-Blends up to a maximum of 50 lbs. per batch. This amount of scrap is not to be included in reporting the weight willowed.

At the Pipe machines, the Fiber Blend is to be used at the blend point value, disregarding the scrap content.

MTC 002598

X- INDICATES CHANGE	-REASON:	Additional Information on Usage of Scrap	PLEASE RETURN TO
AUTHORITY FOR CHANGE		Clarification of Specification	J-M RESEARCH
SUPERSEDES:		Same Spec., Page 2.4 Dated 1/7/69	LIBRARY (MM)

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. ENG.	REG. LAB.			DATE ISSUED MAR 2 8 1969

F POST CO 188-3 80187

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	2.4

3. POINT VALUE - STANDARD BLENDS (Cont'd)

M-778 (MARRERO)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	20.0	16
Reeves R-25	2	200	20.0	15
Jeffrey 4-T	1	100	10.0	8
Advocate A-25	5	500	50.0	37
	10	1000	100.0	76

* Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

Note: Up to 5.0% of scrap may be added to all M-Blends up to a maximum of 50 lbs. per batch.

MTC 002599

X- INDICATES CHANGE	-REASON:	FIBER BLENDS INCORPORATING REEVES R-25 FIBER
AUTHORITY FOR CHANGE		J. E. HESSE'S LETTER 12/23/68
SUPERSEDES:		SAME SPEC. PAGE 2.1 DATED 10/30/68

PLEASE RETURN TO J-M RESEARCH LIBRARY (TEM)

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. ENG.	MGR. LAB.			DATE ISSUED 1/7/69

POST CO 126-3 80187

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends CANCELLED 7/24/77	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.5

D. Blends Used For Coupling Stock

M-718 (Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Jeffrey 4-T	9	900	90.0	69.3
	10	1000	100.0	77

M-754 (Waukegan)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Reeves R-25	2	200	20.0	15.4
Jeffrey 4-T	7	700	70.0	53.9
	10	1000	100.0	77

M-864 (Stockton and Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	1	100	10.0	9.0
Jeffrey 4-T	8	800	80.0	61.6
	10	1000	100.0	79

X * All Plants - scrap usage reporting, see next page

MTC 002600

X- INDICATES CHANGE	REASON: Revise scrap usage reporting	PLEASE RETURN TO J-M RESEARCH INFORMATION CENTER
AUTHORITY FOR CHANGE	W. A. Sells wire of 1-3-75	
SUPERSEDES:	Same spec., same page, dated 1-10-73	

MGR. G. S. C	MGR. S. C.	SUPR. S. C.	PROD. SUPT.	PLNT. FNL				DATE ISSUED 1-6-75

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.5

D. Blends Used For Coupling Stock

M-718 (Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Jeffrey 4-T	9	900	90.0	69.3
	10	1000	100.0	77

M-754 (Waukegan)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Reeves R-25	2	200	20.0	15.4
Jeffrey 4-T	7	700	70.0	53.9
	10	1000	100.0	77

M-864 (Stockton and Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	1	100	10.0	9.0
Jeffrey 4-T	8	800	80.0	61.6
	10	1000	100.0	79

*NOTE AT ALL PLANTS

Up to 5% scrap added to M-Blends will not be included in reporting the weight willowed. Any scrap addition over 5% must be reported. It is also to be included in calculation of the blend point value, with scrap having 0 value.

X- INDICATES CHANGE —REASON: Standard Fiber Blends - 1973

AUTHORITY FOR CHANGE: K. J. Whalen's letter to Plant Managers dated 11/17/72

SUPERSEDES: Same Spec., pages 2.5 & 2.5.1 dated 2/25/72

MGR. C.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. ENG.				DATE ISSUED 1/10/73

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	M,SP,J,D,W&R TR
		SPEC NO.	425-1
		PAGE NO.	2.5

D. Blends Used For Coupling Stock

M-755 (Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Reeves R-25	3	300	30.0	23.1
Jeffrey 4-T	6	600	60.0	46.2
	10	1000	100.0	77

M-829 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1½	150	10.7	8.6
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	7½	750	53.6	41.3
	14	1400	100.0	77

M-831 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Jeffrey 4-T	3	300	30.0	23.1
Advocate A-25	6	600	60.0	44.4
	10	1000	100.0	76

M-832 (Waukegan)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Reeves R-25	6	600	60.0	46.2
Jeffrey 4-T	3	300	30.0	23.1
	10	1000	100.0	77

MTC 002602

X— INDICATES CHANGE —REASON: Standard Fiber Blends - 1972

AUTHORITY FOR CHANGE: K. J. Whalen's letters to Plant Managers dated 12/14/71 and 12/16/71

SUPERSEDES: Same Spec., Same Page, dated 6/14/71

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.					DATE ISSUED 2/25/72

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	M,SP,J,D,W&R TR
		SPEC NO.	425-1
		PAGE NO.	2.5

CANCELLED

D. Blends Used For Coupling Stock

M-755 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Reeves R-25	3	300	30.0	23.1
Jeffrey 4-T	6	600	60.0	46.2
	10	1000	100.0	77

M-836 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
X Cassiar CP or AK	1	100	10.0	9.0
Jeffrey 4T	4	400	40.0	30.1
Reeves R-25	4	400	40.0	30.1
	10	1000	100.0	77

M-821 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
Jeffrey 4-T or Pacific Asbestos	1	100	10.0	7.7
Cassiar CT or AX	2	200	20.0	15.0
Reeves R-25	3	300	30.0	23.1
	10	1000	100.0	81

M-829 (Denison)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1½	150	10.7	8.6
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	7½	750	53.6	41.3
	14	1400	100.0	77

MTC 002603

*NOTE AT ALL PLANTS

Up to 5% scrap added to M-Blends will not be included in reporting the weight willowed. (continued on next page)

X— INDICATES CHANGE —REASON:	Correct blend M-836	PLEASE RETURN TO
AUTHORITY FOR CHANGE	Correction	J-M RESEARCH
SUPERSEDES:	Same Spec., Same Page, Dated 2/17/71	LIBRARY

MGR. Q. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	LAB.			DATE ISSUED	6/14/71

F. POST CO. 1263 8157

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.5

CANCELLED

D. Blends Used For Coupling Stock

M-755 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Reeves R-25	3	300	30.0	23.1
Jeffrey 4-T	6	600	60.0	46.2
	10	1000	100.0	77

M-836 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	9.0
Jeffrey 4T	4	400	40.0	30.1
Reeves R-25	4	400	40.0	30.1
	10	1000	100.0	77

M-821 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
Jeffrey 4-T or Pacific Asbestos	1	100	10.0	7.7
Cassiar CT or AX	2	200	20.0	15.0
Reeves R-25	3	300	30.0	23.1
	10	1000	100.0	81

M-829 (Denison)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1½	150	10.7	8.6
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	7½	750	53.6	41.3
	14	1400	100.0	77

MTC 002604

*NOTE AT ALL PLANTS

Up to 5% scrap added to M-Blends will not be included in reporting the weight willowed. (continued on next page)

X— INDICATES CHANGE —REASON:	Standard Fiber Blends - 1971	PLEASE RETURN TO
AUTHORITY FOR CHANGE	J. E. Hesse's letters dated 12/17/70	J-M RESEARCH
SUPERSEDES:	Same Spec., Same Page, Dated 9/8/70	LIBRARY

MGR G O C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED 2/17/71

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.5

CANCELLED

M-811 (Marrero)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	2	200	14.3	11.0
Jeffrey 4-T	2	200	14.3	11.0
Advocate A-25	8	800	57.1	42.3
	14	1400	100.0	76

*NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T, or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

NOTE AT ALL PLANTS

Up to 5.0% of scrap may be added to all M-Blends up to a maximum of 50 lbs. per batch. This amount of scrap is not to be included in reporting the weight willowed.

At the pipe machines, the fiber blend is to be used at the blend point value, disregarding the scrap content.

MTC 002605

X- INDICATES CHANGE	-REASON:	Revised Fiber Blends for Denison Plant	PLEASE RETURN TO
AUTHORITY FOR CHANGE		J. E. Hesse's letter of 8/27/70	J-M RESEARCH
SUPERSEDES:		Supersedes None, New Spec.	LIBRARY (MM)

MGR. C. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	REG. LAB.			DATE ISSUED	9/8/70

F POST CO 1304-3 8/67

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	M,SP,I,R,D,W&R
		SPEC NO.	425-1
		PAGE NO.	2.5.1

X M-849 (Stockton and Long Beach)

CANCELLED per ltr attached 4/18/73

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	2	200	20.0	18.0
Reeves R-25	3	300	30.0	23.1
Jeffrey 4-T	4	400	40.0	30.8
	10	1000	100.0	80

*NOTE AT ALL PLANTS

Up to 5% scrap added to M-Blends will not be included in reporting the weight willowed. Any scrap addition over 5% must be reported. It is also to be included in calculation of the blend point value, with scrap having 0 value.

MTC 002606

PLEASE RETURN TO J-M RESEARCH LIBRARY

X– INDICATES CHANGE –REASON:	Standard Fiber Blends - 1972
AUTHORITY FOR CHANGE	K. J. Whalen's letters to Plant Managers dated 12/14/71 and 12/16/71
SUPERSEDES:	Same Spec., different page, dated 6/14/71

MGR. G.O.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT FIN.	REG				DATE ISSUED	2/25/72

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2,6

CANCELLED 3/24/89

Scrap Addition to Fiber Blend

1. All scrap added must be reported.

2. Scrap may be added up to 20% of the virgin fiber without deviation.

3. Calculate the blend point value by dividing the blend points by the pounds of virgin fiber.

   Pounds of scrap added are not to be considered in this calulation.

   For example:

BLEND M950

Fiber	Point Value	Lbs/Batch	Blend Points	Lbs/Batch
S Blue	80	110	8.8	110
4T30 Green	74	600	44.4	600
Cassiar AK	90	200	18.0	200
Amosite	35	100	3.5	100
			74.7	
Total Virgin Fiber		1010		1010
Scrap		0		150
Total Blend Pounds		1010		1160
Blend Point Value		74		74

(74.7 ÷ 1010 lbs)

MTC 002607

X– INDICATES CHANGE	–REASON:	Revise scrap usage reporting
AUTHORITY FOR CHANGE		Correction
SUPERSEDES:		Same spec., same page, dated 1-6-75

PLEASE RETURN TO J-M RESEARCH INFORMATION CENTER

MGR. G. O. C	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT. ENG.	QC LAB.			DATE ISSUED	2-11-75

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.6

X Any scrap addition must be reported. Scrap is to be included in calculation of the blend point value, with scrap having 0 (zero) value. Scrap may be added up to 20% without deviation. Indicate scrap percent usage as a blend number suffix as M-830-6.7 (6.7% scrap).

Example:

M-830 Blend

FIBER	LBS	%	*BLEND POINT VALUE
Blue (@ 80 pts.)	100	7.1	5.7
Reeves R-25 (@ 77 pst.)	200	14.3	11.0
Jeffrey 4-T (@ 77 pts.)	400	28.6	22.0
Advocate A-25 (@ 74 pts.)	700	50.0	37.0
	1400	100.0	76
X M-830-6.7 Blend			
Blend above (@ 76 pts.)	1400	93.3	70.9
Reported scrap (@ 0 pts.)	100	6.7	0
	1500	100.0	71

Any usage of scrap greater than 20% must be approved by deviation.
X All scrap usage must be reported.

*NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T, or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

MTC 002608

X- INDICATES CHANGE	—REASON:	Revise scrap usage reporting
AUTHORITY FOR CHANGE		W. A. Sells wire of 1-3-75
SUPERSEDES:		Same spec., same page, dated 2-25-72

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED	1-6-75

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.6

(continued from previous page)

Example:

M-830 Blend

FIBER	LBS	%	*BLEND POINT VALUE
Blue (@ 80 pts.)	100	7.1	5.7
Reeves R-25 (@ 77 pst.)	200	14.3	11.0
Jeffrey 4-T (@ 77 pts.)	400	28.6	22.0
Advocate A-25 (@ 74 pts.)	700	50.0	37.0
Unreported Scrap	70	--	--
	1400	100.0	76
Blend above (@ 76 pts.)	1400	93.3	70.9
Reported scrap (@ 0 pts.)	100	6.7	0
	1500	100.0	71

Any usage of scrap greater than 5% must be approved by deviation.

*NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T, or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

X- INDICATES CHANGE	-REASON:	Standard Fiber Blends - 1972
AUTHORITY FOR CHANGE	K. J. Whalen's letters to Plant Managers dated 12/14/71 and 12/16/71	
SUPERSEDES:	Same Spec., Same Page, dated 2/17/71	

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RED.				DATE ISSUED 2/25/72

CANCELLED

(continued from previous page)

Any scrap additon over 5% must be reported. It is also to be included in calculation of the blend point value, with scrap having 0 value.

Example:

M-830 Blend

FIBER	LBS	%	*BLEND POINT VALUE
Blue (@ 80 pts.)	100	7.1	5.7
Reeves R-25 (@ 77 pst.)	200	14.3	11.0
Jeffrey 4-T (@ 77 pts.)	400	28.6	22.0
Advocate A-25 (@ 74 pts.)	700	50.0	37.0
Unreported Scrap	70	--	--
	1400	100.0	76
Blend above (@ 76 pts.)	1400	93.3	70.9
Reported scrap (@ 0 pts.)	100	6.7	0
	1500	100.0	71

Any usage of scrap greater than 5% must be approved by deviation.

*NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T, or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

Johns-Manville MANUFACTURING SPECIFICATION JM-260-2-A	PRODUCT: TRANSITE PIPE FIBER BLENDS	DIVISION	PIPE
		SPEC. NO.	TR-425-1
		PAGE NO.	3

CANCELLED 3/16/81

I. POINT VALUE - FIBER (Continued)

C. Scrap Addition to Fiber Blend

1. All scrap added must be reported.

2. a) Scrap may be added up to 20% of the virgin fiber, without deviation.
   b) Up to 30% scrap in 13' Non-Pressure Products may be used without deviation.

3. Scrap addition may be from 0% to 200% in increments of 20%. Scrap usage standard is 140%, in 10' Non-Pressure Products.

   Virgin fiber level will be expressed as a percentage of the total batch weight.

   Formula (Non-Pressure Furnish):

   $$\% \text{ Virgin Fiber} = \frac{(\text{Virgin Fiber}) \times 100}{\text{Total Batch Weight}}$$

   % Scrap in Total Batch = % Fiber x Desired % Scrap Addition

   % Cement and Silica = 100 Minus (% Fiber + % Scrap in Total Batch)

Thus: Blend H19-100-9.0% Virgin Fiber) (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9 -120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

MTC 002611

X - INDICATES CHANGE	Review		
AUTHORITY FOR CHANGE	Q/A Manager		
SUPERSEDES:	Same Spec, Pages 4&5, Dated 11/11/77	DATE ISSUED:	1/19/81

D. Used in Products

Water Pipe - 6" 200 & 8" through 16", all classes
Irrigation & USBR Pipe - 6" R80 & 8" through 16", all classes CANCELLED 11/19/81
Sewer Pipe - 14" & 16", all classes
Storm Drain Pipe - 14" & 16"
X Storm Drain Pipe, CL III R-T - 12" and 15"
Coupling Stock - 3" through 16"

Blend No.	M-1051		M-1054		M-1032		M-1040		M-1047	
	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%
Blue	1	10	2	18.2	2	16.7	2	20	1	10
Jeffrey	6	60					4	40	4	40
Advocate			9	81.8	7	58.3				
Cassiar AK							1	10	1	10
Cassiar CT	2	20			3	25.0	2	20	2	20
Cassiar CZ	1	10					1	10	1	10
Calaveras 4T									1	10
Plant	Waukegan		Green Cove		Denison		Long Beach		Stockton	

E. Used in Products

Water Pipe - 18" through 36", all classes
USBR Pipe - 18" through 36", all classes
"T" Transmission Pipe - 18" through 36", all classes
Sewer Pipe - 18" through 36", all classes
Storm Drain Pipe - 18" through 36"
Air Duct Vent Pipe - 18" through 36"
X Storm Drain Pipe, CL III R-T - 18, 21 and 24"
Coupling Stock - 18" through 36"

Blend No.	M-1053		M-1032		M-1040	
	Bags	%	Bags	%	Bags	%
Blue	2	16.7	2	16.7	2	20
Jeffrey	7	58.3			4	40
Advocate			7	58.3		
Cassiar AK					1	10
Cassiar CT	3	25.0	3	25.0	2	20
Cassiar CZ					1	10
Calaveras 4T						
Plant	Waukegan		Denison		Long Beach Stockton	

CANCELLED 11/19/81

X— INDICATES CHANGE —REASON: Add Storm Drain R-T, Delete On-Farm

AUTHORITY FOR CHANGE: Product Proposal 425-235

SUPERSEDES: Same Spec, Page 3, Dated 3/23/78

MTC 002612

MGR. Q. C.	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 10/1/79

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	3

D. Used in Products

CANCELLED 10/1/79

Water Pipe - 6" 200 & 8" through 16", all classes
Irrigation & USBR Pipe - 6" R80 & 3" through 16", all classes
Sewer Pipe - 14" & 16", all classes
Storm Drain Pipe - 14" & 16"
On-Farm Irrigation Pipe - 12" through 16"
Coupling Stock - 3" through 16"

Blend No.	M-1051		M-1054		M-1032		M-1040		M-1047	
	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%
Blue	1	10	2	18.2	2	16.7	2	20	1	10
Jeffrey	6	60					4	40	4	40
Advocate			9	81.8	7	58.3				
Cassiar AK							1	10	1	10
Cassiar CT	2	20			3	25.0	2	20	2	20
Cassiar CZ	1	10					1	10	1	10
Calaveras 4T									1	10
Plant	Waukegan		Green Cove		Denison		Long Beach		Stockton	

E. Used in Products

Water Pipe - 18" through 36", all classes
USBR Pipe - 18" through 36", all classes
"T" Transmission Pipe - 18" through 36", all classes
Sewer Pipe - 18" through 36", all classes
Storm Drain Pipe - 18" through 36"
Air Duct Vent Pipe - 18" through 36"
On-Farm Irrigation Pipe - 18" and 21"
Coupling Stock - 18" through 36"

Blend No.	M-1053		M-1032		M-1040	
	Bags	%	Bags	%	Bags	%
Blue	2	16.7	2	16.7	2	20
Jeffrey	7	58.3			4	40
Advocate			7	58.3		
Cassiar AK					1	10
Cassiar CT	3	25.0	3	25.0	2	20
Cassiar CZ					1	10
Calaveras 4T						
Plant	Waukegan		Denison		Long Beach Stockton	

X- INDICATES CHANGE — REASON: Change Manville Plant Blends

AUTHORITY FOR CHANGE: C. B. Allen

SUPERSEDES: Same Spec, Page 3, Dated 11/21/77

MGR. Q. C.	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 3/23/79

MTC 002613

Denver DHQ
Pipe Division

January 18, 1973

A. C. Daley - HQ
F. H. Hardenstein - HQ
W. H. Graham - REC
Librarian - HQ
Librarian - REC
I. P. Gardner - Toronto
F. Henry - Manville
G. E. Delong - Green Cove
C. Allen - Waukegan
D. French - Denison
W. Ford - Long Beach
W. E. Volwiler - Stockton
C. G. Bryant - Manville
B. E. Liming - Green Cove
E. C. Bandovich - Waukegan
A. M. Curry - Denison
H. F. Kahlen - Long Beach
B. L. Thacher - Stockton
File (1)
File (2)

MANUFACTURING SPECIFICATION: 425-1
(TRANSITE Pipe Fiber Blends)

As per K. J. Whalen's letter of 11/17/72, the enclosed pages of the above specification reflect the Standard Fiber Blends for 1973.

Add the following pages to your file and cancel prior issues, plus page 2.5.1.

	Mfg. Spec.	Pages	Dated
Add	425-1	2,2.1,2.2,2.3 2.4,2.5,3	1/10/73
Cancel	425-1	2.5.1	2/25/72

F. H. Hardenstein/J. J. Kriso JKriso

/cc
enc.

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.1

X M-827 (Denison) CANCELLED

X	FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
X	Blue	1	100	7.1	5.7
X	Reeves R-25	2	200	14.2	11.0
X	Advocate A-25	11	1100	78.7	58.0
X		14	1400	100.0	75

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

*NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", All Classes.
USBR Pipe - 6" R 18 & 8" thru 16", All Classes.
'T' Transmission - 8" thru 16" All Classes and 6" T 90.
Sewer Pipe - 10" thru 16", All Classes.
Type Irrigation Pipe - 10" thru 16", All Classes.
Underdrain and Storm Drain Pipe - 10" thru 16".
Gas Vent & Air Duct - Vent Pipe - 10" thru 16".
On-Farm Irrigation Pipe - 12" thru 16"
Coupling Stock - 3" thru 16" (The Plants are to use one of their assigned blends which has a minimum of 10% of Blue Fiber for sizes 6"-16" Water & Sewer Couplings. Use M-801 at Long Beach).

M-814 (Waukegan and Manville) MTC 002615

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Reeves R-25	5	500	41.7	32.1
Jeffrey 4-T	6	600	50.0	38.5
	12	1200	100.0	77

X- INDICATES CHANGE	-REASON:	Revised Fiber Blends for Denison Plant	PLEASE RETURN TO
AUTHORITY FOR CHANGE		J. E. Hesse's letter of 8/27/70	J-M RESEARCH
SUPERSEDES:		Same Spec., Same Page, Dated 8/11/70.	LIBRARY (MM)

MGR. G. O. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED 9/8/70

M812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

* NOTE: Sample blend point value calculations using 77 for Raeves R-25, Jeffrey 4-T, or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", all classes
USBR Pipe - 6" R18 & 8" thru 16", all classes

"T" Transmission Pipe - 8" thru 16" all classes and 6" T90
Sewer Pipe - 10" thru 16", all classes
Type Irrigation Pipe - 10" thru 16", all classes
Underdrain and Storm Drain Pipe - 10" thru 16"
Gas Vent & Air Duct - Vent Pipe - 10" thru 16"
On-Farm Irrigation Pipe - 12" thru 16"
Coupling Stock - 3" thru 16" (The Plants are to use one of their assigned blends which has a minimum of 10% of Blue Fiber for sizes 6"-16" Water & Sewer Couplings. Use M-801 at Long Beach).

M-814 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Raeves R-25	5	500	41.7	32.1
Jeffrey 4-T	6	600	50.0	38.5
	12	1200	100.0	77

M-807 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Jeffrey 4-T	2	200	16.7	12.9
Cassiar CT, AS or AX	6	600	50.0	37.5
	12	1200	100.0	80

MTC 002616

X- INDICATES CHANGE -REASON: Show Minimum of 10% Blue Fiber in Sizes 6"-16" Couplings.

AUTHORITY FOR CHANGE: Correction

SUPERSEDES: Same Spec., Same Page, Dated 3/2/70

MGR. G. O. C	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED 8/11/70

MANUFACTURING SPECIFICATION	TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	2.1

M812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

* NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T, or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", all classes
USBR Pipe - 6" R18 & 8" thru 16", all classes

"T" Transmission Pipe - 8" thru 16" all classes and 6" T90
Sewer Pipe - 10" thru 16", all classes
Type Irrigation Pipe - 10" thru 16", all classes
Underdrain and Storm Drain Pipe - 10" thru 16"
Gas Vent & Air Duct - Vent Pipe - 10" thru 16"
On-Farm Irrigation Pipe - 12" thru 16"
Coupling Stock - 3" thru 16" (Plants are to use one of their assigned blends which has a minimum of 10% of Blue fiber. Use M-801 at Long Beach).

M-814 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Reeves R-25	5	500	41.7	32.1
Jeffrey 4-T	6	600	50.0	38.5
	12	1200	100.0	77

M-807 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Jeffrey 4-T	2	200	16.7	12.9
Cassiar CT, AS or AX	6	600	50.0	37.5
	12	1200	100.0	80

X- INDICATES CHANGE -REASON: Show use of blend M-801 for 3"-16" coupling stock at Long Beach.

AUTHORITY FOR CHANGE: J. E. Hesse's wire of 2/20/70.

SUPERSEDES: Same Spec., Same Page, Dated 2/2/70

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	REG				DATE ISSUED 3/2/70

M812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

* NOTE: Sample blend point value calculations using 77 for Reeves R-25, Jeffrey 4-T, or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", all classes
USBR Pipe - 6" R18 & 8" thru 16", all classes

"T" Transmission Pipe - 8" thru 16" all classes and 6" T90
Sewer Pipe - 10" thru 16", all classes
Type Irrigation Pipe - 10" thru 16", all classes
Underdrain and Storm Drain Pipe - 10" thru 16"
Gas Vent & Air Duct - Vent Pipe - 10" thru 16"
On-Farm Irrigation Pipe - 12" thru 16"
Coupling Stock - 3" thru 16"

M-814 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Reeves R-25	5	500	41.7	32.1
Jeffrey 4-T	6	600	50.0	38.5
	12	1200	100.0	77

M-807 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Jeffrey 4-T	2	200	16.7	12.9
Cassiar CT, AS or AX	6	600	50.0	37.5
	12	1200	100.0	80

2. POINT VALUE - STANDARD BLENDS (CONTINUED)

M-770 (Marrero)

Fiber	Bags	Lbs	%	* Blend Point Value
Blue	2	200	16.7	13
Reeves R-25	1	100	8.3	6
Advocate A-25	9	900	75.0	56
	12	1200	100.0	75

X M-739 (Green Cove)

Fiber	Bags	Lbs.	%	* Blend Point Value
Blue	1	100	10.0	8
Jeffrey 4-T	3	300	30.0	23
Advocate A-25	6	600	60.0	44
	10	1000	100.0	75

* Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", all Classes
USBR Pipe - 6" R18 & 8" thru 16", all Classes
"R" Irrigation Pipe (GCS Only) 8", all Classes
"T" Transmission Pipe - 12" thru 16", all Classes
Sewer Pipe - 10" thru 16", all classes
Type Irrigation Pipe - 10" thru 16", all Classes
Underdrain and Storm Drain Pipe - 10" thru 16"
Gas Vent & Air Duct - Vent Pipe - 10" thru 16"
On-Farm Irrigation Pipe - 12" thru 16"
Coupling Stock - 3" thru 16"

M-754 (Manville)

Fiber	Bags	Lbs.	%	* Blend Point Value
Blue	1	100	10.0	8
Reeves R-25	2	200	20.0	15
Jeffrey 4-T	7	700	70.0	54
	10	1000	100.0	77

2. POINT VALUE - STANDARD BLENDS (Cont'd)

M-770 (MARRERO)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	16.7	13
Reeves R-25	1	100	8.3	6
Advocate	9	900	75.0	56
A-25	12	1200	100.0	75

M-771 (GREEN COVE)

FIBER	BAGS	LBS	%	* BLEND POINT VALUE
Blue	2	200	16.7	13
Jeffrey 4-T	5	500	25.0	19
Advocate	5	700	58.3	45
A-25	12	1200	100.0	75

* Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

B. Used In Products

Water Pipe - 6" 200 & 8" thru 16", All Classes
DSBR Pipe - 6" R18 & 8" thru 16", all Classes
"R" Irrigation Pipe (GCS Only) 8", All Classes
"T" Transmission Pipe - 12" thru 16", All Classes
Sewer Pipe - 10" thru 16", All Classes
Type Irrigation Pipe - 10" thru 16", All Classes
Underdrain and Storm Drain Pipe - 10" thru 16"
Gas Vent & Air Duct - Vent Pipe - 10" thru 16"
On-Farm- Irrigation Pipe - 12" thru 16"
Coupling Stock - 3" thru 16"

M-754 (MANVILLE)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	10.0	8
Reeves R-25	2	200	20.0	15
Jeffrey 4-T	7	700	70.0	54
	10	1000	100.0	77

MTC 002620

2. POINT VALUE - STANDARD BLENDS (Cont'd)

A. 13" Machine Products and Pressure Products on 10' Machine (cont'd)

Pipe Sizes 3" Through 16" Tube (Cont'd)

M-718 (Manville, Waukegan, Stockton and Long Beach)

Fiber	Lbs.	%	*Blend Point Value
Blue	100=	10.0	8
Jeffrey 4	900	90.0	67
	1000	100.0	75

Pipe Sizes - All Swing Mandrels
(For Cost Purposes 18"-36")

M-729 Blend

Fiber	Lbs.	%	*Blend Point Value
Blue	200	17.4	14
Advocate A25	950	82.6	56
	1150	100.0	70

M-728 Blend

Fiber	Lbs.	%	*Blend Point Value
Blue	200	17.4	14
Jeffrey 4	950	82.6	62
	1150	100.0	76

NOTES: Up to 5.0% of scrap may be added to all M-Blends up to a maximum of 50 lbs. per batch. Any plant making pipe on Swing Mandrels smaller than 18" will still use M-628 or M-729 Blends.

X— INDICATES CHANGE —REASON:	Reduction in Blue Fiber Usage
AUTHORITY FOR CHANGE	J. L. Hesse's Letter 3-30-67
SUPERSEDES:	Same Spec., Pages 2.1, 2.2, dated 10-26-66

MGR. Q.C.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES.			DATE ISSUED 4-13-67

2. POINT VALUE - STANDARD BLENDS (Cont'd)

A. 13' Machine Products and Pressure Products on 10' Machine (Cont'd)

Pipe Sizes 3" Through 8" Tube (Cont'd)

M-718 (Manville, Waukegan, Stockton and Long Beach)

Fiber	Lbs.	%	*Blend Point Value
Blue	100	10.0	8
Jeffrey 4	900	90.0	67
	1000	100.0	75

Pipe Sizes 10" Through 18" Tube

M-714 (All Plants)

Fiber	Lbs.	%	*Blend Point Value
Jeffrey 4	600	60.0	45
Blue	150	15.0	12
Advocate A25	250	25.0	17
	1000	100.0	74

M-716 (Marrero, Green Cove and Denison)

Fiber	Lbs.	%	*Blend Point Value
Blue	150	15.0	12
Advocate A25	850	85.0	58
	1000	100.0	70

MTC 002622

Up to 5.0% of scrap may be added to a maximum of 50 lbs. per batch.

NOTE: Any plant making pipe on Swing Mandrels smaller than 18" will use M 666 Blend.

At Marrero Only: Willow 15 lbs. of soda ash with each batch of fiber.

In addition to the basic M670 Blend for Tube Mandrel Products, the following Blend Numbers are assigned to keep a balanced usage of available fibers.

X

Manville and Marrero Plants

Blend M697

Fiber	Lbs.	%
Blue	100	10.0
Advocate A25	200	20.0
C & G 4 - B1	150	15.0
Jeffrey 4	550	55.0
	1000	100.0

Blend M698

Fiber	Lbs.	%
C & G 3	100	10.0
Advocate A25	200	20.0
C & G 4 - B1	150	15.0
Jeffrey 4	550	55.0
	1000	100.0

MTC 002623

PLEASE RETURN TO
J-M RESEARCH
LIBRARY (MM)

X— INDICATES CHANGE —REASON: Instructions in Use of Available Fibers

AUTHORITY FOR CHANGE: J. B. McCarty's Letter of 12-28-64

SUPERSEDES: None, New Page

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED 1-12-65

Form 333-2-A Pd. in U.S.A.

2. POINT VALUE - STANDARD BLENDS (Cont'd)

M-749 (MARRERO, GREEN COVE, DENISON, STOCKTON, AND LONG BEACH)

FIBER	LBS	%	*BLENDS POINT VALUE
Blue	100	7.2	6
Reeves R-25	300	21.4	16
Advocate A-25	1000	71.4	53
	1400	100.0	75

*Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

C. Used in Products

Water Pipe - 18" thru 36", All Classes
USBR Pipe - 18" thru 36", All Classes
"T" Transmission Pipe - 18" thru 36", All Classes
Sewer Pipe - 18" thru 36", All Classes
Air Duct-Vent Pipe - 18" thru 36"
Coupling Stock - 18" thru 36"

M-750 (MANVILLE, WAUKEGAN, STOCKTON AND LONG BEACH)

FIBER	LBS	%	*BLENDS POINT VALUE
Blue	200	13.3	11
Reeves R-25	400	26.7	21
Jeffrey 4-T	900	60.0	44
	1500	100.0	78

M-751 (DENISON, GRREN COVE AND MARRERO)

FIBER	LBS	%	*BLEND POINT VALUE
Blue	200	13.3	11
Reeves	400	26.7	21
Advocate A-25	900	60.0	44
	1500	100.0	76

*Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

Note: Up to 5.0% of scrap may be added to all M-Blends up to a maximum of 50 lbs. per batch.

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	2.2

CANCELLED 11/11/77

Scrap Addition to Fiber Blend

1. All scrap added must be reported.

X 2. a) Scrap may be added up to 20% of the virgin fiber, without deviation.
b) Up to 30% scrap in 13' Non-Pressure Products may be used, without deviation.

3. Calculate the blend point value by dividing the blend points by the pounds of virgin fiber.

Pounds of scrap added are not to be considered in this calulation.

For example:

BLEND M950

Fiber	Point Value	Lbs/Batch	Blend Points	Lbs/Batch
S Blue	80	110	8.8	110
4T30 Green	74	600	44.4	600
Cassiar AK	90	200	18.0	200
Amosite	35	100	3.5	100
			74.7	
Total Virgin Fiber		1010		1010
Scrap		0		150
Total Blend Pounds		1010		1160
Blend Point Value		74		74

(74.7 ÷ 1010 lbs)

X– INDICATES CHANGE	–REASON: Add Statement ("b")	
AUTHORITY FOR CHANGE	WHQ Approval	MTC 002625
SUPERSEDES:	Same Spec., Same Page, dated 2/24/77	

MGR. Q. C.	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES. LAB.				DATE ISSUED 4-25-77

FORM CO 126-3 8/67

CANCEL 4/25/77

Scrap Addition to Fiber Blend

1. All scrap added must be reported.

2. Scrap may be added up to 20% of the virgin fiber without deviation.

3. Calculate the blend point value by dividing the blend points by the pounds of virgin fiber.

   Pounds of scrap added are not to be considered in this calulation.

   For example:

BLEND M950

Fiber	Point Value	Lbs/Batch	Blend Points	Lbs/Batch
S Blue	80	110	8.8	110
4T30 Green	74	600	44.4	600
Cassiar AK	90	200	18.0	200
Amosite	35	100	3.5	100
			74.7	
Total Virgin Fiber		1010		1010
Scrap		0		150
Total Blend Pounds		1010		1160
Blend Point Value		74		74

(74.7 ÷ 1010 lbs)

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends CANCELLED 7/24/77	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.2

M-863 (Long Beach and Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	9.1	7.3
Jeffrey 4-T	10	1000	90.9	70.0
	11	1100	100.0	77

M-865 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	6	600	42.9	33.0
Advocate A-25	7	700	50.0	37.0
	14	1400	100.0	76

M-718 (Manville)

FIBER	BAGS	LBS.	%	* BLEND POINT VALUE
Blue	1	100	10.0	8.0
Jeffrey 4-T	9	900	90.0	69.3
	10	1000	100.0	77

MTC 002627

X— INDICATES CHANGE — REASON: Standard Fiber Blends - 1973

AUTHORITY FOR CHANGE: K. J. Whalen's letter to Plant Managers dated 11/17/72

SUPERSEDES: Same Spec., Same Page, dated 2/25/72

MGR. Q Q C	MGR. Q C.	SUPR Q.C.	PROD. SUPT.	PLNT. FIN.	R & D LAB			DATE ISSUED 1/10/73

FORM CO 1813 8097

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.2

X M-847 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Cassiar CP or AK	1	100	8.3	7.5
Reeves R-25	4	400	33.3	25.6
Jeffrey 4-T	6	600	50.0	38.5
	12	1200	100.0	78

X M-850 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Cassiar CP or AK	2	200	14.3	12.9
Cassiar CT, AS, AX	1	100	7.1	5.3
Reeves R-25	4	400	28.6	22.0
Jeffrey 4-T	6	600	42.9	33.0
	14	1400	100.0	79

M-830 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Reeves R-25	2	200	14.3	11.0
Jeffrey 4-T	4	400	28.6	22.0
Advocate A-25	7	700	50.0	37.0
	14	1400	100.0	76

X— INDICATES CHANGE —REASON:	Standard Fiber Blends - 1972
AUTHORITY FOR CHANGE	K. J. Whalen's letters to Plant Manager dated 12/14/72 and 12/16/71
SUPERSEDES:	Same Spec., Same Page, Dated 2/17/71

MGR. C Q C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT FIN.	RES. LAB.				DATE ISSUED 2/25/72

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.2

CANCELLED

X M-838 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Reeves R-25	3	300	25.0	19.2
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Jeffrey 4-T	4	400	33.3	25.6
Cassiar CT, AS or AX	1	100	8.3	6.2
	12	1200	100.0	80

M-820 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Cassiar CP or AK	2	200	14.3	12.9
Jeffrey 4-T or Pacific Asbestos	3	300	21.4	16.6
Cassiar CT or AX	4	400	28.6	21.4
Reeves R-25	4	400	28.6	22.0
	14	1400	100.0	79

X M-830 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Reeves R-25	2	200	14.3	11.0
Jeffrey 4-T	4	400	28.6	22.0
Advocate A-25	7	700	50.0	37.0
	14	1400	100.0	76

MTC 002629

X- INDICATES CHANGE	-REASON:	Standard Fiber Blends - 1971	PLEASE RETURN TO
AUTHORITY FOR CHANGE		J. E. Hesse's letters dated 12/17/70	J-M RESEARCH
SUPERSEDES:		Same Spec., Same Page, Dated 9/8/70	LIBRARY

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED 2/17/71

FORM CO 186-3 80187

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.2

CANCELLED

M-807 (Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	8.3	6.7
Cassiar CP or AK	3	300	25.0	22.5
Jeffrey 4-T	2	200	16.7	12.9
Cassiar CT, AS or AX	6	600	50.0	37.5
	12	1200	100.0	80

M-820 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Cassiar CP or AK	2	200	14.3	12.9
Jeffrey 4-T or Pacific Asbestos	3	300	21.4	16.6
Cassiar CT or AX	4	400	28.6	21.4
Reeves R-25	4	400	28.6	22.0
	14	1400	100.0	79

M-810 (Marrero)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Reeves R-25	2	200	20.0	15.4
Jeffrey 4-T	2	200	20.0	15.4
Advocate A-25	5	500	50.0	37.0
	10	1000	100.0	76

X M-827 (Denison)

X	FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
X	Blue	1	100	7.1	5.7
X	Reeves R-25	2	200	14.2	11.0
X	Advocate A-25	11	1100	78.7	58.0
X		14	1400	100.0	75

MTC 002630

X- INDICATES CHANGE	-REASON:	Revised Fiber Blends for Denison Plant	PLEASE RETURN TO
AUTHORITY FOR CHANGE		J. E. Hesse's letter of 8/27/70	J-M RESEARCH
SUPERSEDES:		Same Spec., Same Page, Dated 4/30/70.	LIBRARY (MM)

MGR. Q. Q C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES.			DATE ISSUED	9/8/70

* POST CO 1863 8087

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	2.2

X M-820 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Cassiar CP or AK	2	200	14.3	12.9
Jeffrey 4-T or Pacific Asbestos	3	300	21.4	16.6
Cassiar CT or AX	4	400	28.6	21.4
Reeves R-25	4	400	28.6	22.0
	14	1400	100.0	79.

M-810 (Marrero)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Reeves R-25	2	200	20.0	15.4
Jeffrey 4-T	2	200	20.0	15.4
Advocate A-25	5	500	50.0	37.0
	10	1000	100.0	76

M-809 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1½	150	10.7	8.6
Reeves R-25	4	400	28.6	22.0
Jeffrey 4-T	6	600	42.8	33.0
Advocate A-25	2½	250	17.9	13.2
	14	1400	100.0	77

M-812 (Green Cove)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

X M-801 (Special Blend For Coupling Stock at Long Beach)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
Jeffrey 4-T or Pacific Asbestos	3	300	30.0	23.1
Cassiar CT or AX	3	300	30.0	22.5
	10	1000	100.0	81.

X- INDICATES CHANGE —REASON: Revised Fiber Blends for Stockton Plant.

AUTHORITY FOR CHANGE: J. E. Hesse's letter of 4/21/70.

SUPERSEDES: Same Spec., Same Page, Dated 2/2/70.

MGR. Q. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	REG. LAB			DATE ISSUED	4/30/70

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	2.2

M-800 (Stockton)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Cassiar CP or AK	2	200	14.3	12.9
Jeffrey 4-T or Pacific Asbestos	3	300	21.5	16.6
Cassiar CT or AX	8	800	57.1	42.8
	14	1400	100.0	78

M-810 (Marrero)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Raeves R-25	2	200	20.0	15.4
Jeffrey 4-T	2	200	20.0	15.4
Advocate A-25	5	500	50.0	37.0
	10	1000	100.0	76

M-809 (Denison)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1½	150	10.7	8.6
Raeves R-25	4	400	28.6	22.0
Jeffrey 4-T	6	600	42.8	33.0
Advocate A-25	2½	250	17.9	13.4
	14	1400	100.0	77

M-812 (Green Cove)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	7.1	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

* NOTE: Sample blend point value calculations using 77 for Raeves R-25, Jeffrey 4-T, or Pacific Asbestos; 90 for Cassiar CP or AK; and 75 for Cassiar CT, AS or AX.

X- INDICATES CHANGE	-REASON:	Fiber blends effective January 19, 1970
AUTHORITY FOR CHANGE		J. E. Hesse's letters to Plant Managers
SUPERSEDES:		Same Spec., Same Page, Dated 10/6/69

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	LAB.				DATE ISSUED 2/2/70

2. Point Value - Standard Blends (Continued)

M-755 (Waukegan)

Fiber	Bags	Lbs.	%	* Blend Point Value
Blue	1	100	10.0	8
Reeves R-25	3	300	30.0	23
Jeffrey 4-T	6	600	60.0	46
	10	1000	100.0	77

M-772 (Long Beach)

Fiber	Bags	Lbs	%	* Blend Point Value
Blue	1	100	10.0	8
Reeves R-25	2	200	20.0	15
Advocate A-25	7	700	70.0	52
	10	1000	100.0	75

M773 (Stockton)

Fiber	Bags	Lbs	%	* Blend Point Value
Blue	1	100	10.0	8
Reeves R-25	3	300	30.0	23
Jeffrey 4-T	2	200	20.0	15
Advocate A-25	4	400	40.0	30
	10	1000	100.0	76

M-774 (Denison & Marrero)

Fiber	Bags	Lbs	%	* Blend Point Value
Blue	1	100	10.0	8
Reeves R-25	2	200	20.0	15
Jeffrey 4-T	1	100	10.0	8
Advocate A-25	6	600	60.0	44
	10	1000	100.0	75

X M-739 (Green Cove)

Fiber	Bags	Lbs.	%	* Blend Point Value
Blue	1	100	10.0	8
Jeffrey 4-T	3	300	30.0	23
Advocate A-25	6	600	60.0	44
	10	1000	100.0	75

* Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

X– INDICATES CHANGE –REASON: Reduce Usage of Blue Fiber at Green Cove

AUTHORITY FOR CHANGE: J. E. Hesse's wire of 10/2/69

SUPERSEDES: Same Spec., Same Page dated 1/7/69

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.		DATE ISSUED 10/6/69

2. POINT VALUE - STANDARD BLENDS (Cont'd)

M-755 (WAUKEGAN)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	10.0	8
Reeves R-25	3	300	30.0	23
Jeffrey 4-T	6	600	60.0	46
	10	100	100.0	77

M-772 (LONG BEACH)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	10.0	8
Reeves R-25	2	200	20.0	15
Advocate	7	700	70.0	52
A-25	10	1000	100.0	75

M-775 (STOCKTON)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	10.0	8
Reeves R-25	3	300	30.0	23
Jeffrey 4-T	2	200	20.0	15
Advocate	4	400	40.0	30
A-25	10	1000	100.0	76

M-774 (DENISON & MARRERO)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	1	100	10.0	8
Reeves R-25	2	200	20.0	15
Jeffrey 4-T	1	100	10.0	8
Advocate	6	600	60.0	44
A-25	10	1000	100.0	75

M-771 (GREEN COVE)

FIBER	BAGS	LBS	%	*BLEND POINT VALUE
Blue	2	200	16.7	13
Jeffrey 4-T	3	300	25.0	19
Advocate	7	700	58.3	43
A-25	12	1200	100.0	75

MTC 002634

* Sample blend point value calculations using an average point value of 77 for Reeves R-25 and Jeffrey 4-T.

2. POINT VALUE - STANDARD BLENDS (Cont'd)

A. 13' Machine Products and Pressure Products on 10' Machine (Cont'd)

Pipe Sizes 10" Through 18" tube (Cont'd)

M-717 (Manville, Waukegan, Stockton and Long Beach)

Fiber	Lbs.	%	*Blend Point Value
Blue	150	15.0	12
Jeffrey 4	850	85.0	64
	1000	100.0	76

Pipe Sizes - All Swing Mandrels
(For Cost Purposes 18"-36")

M-722 Blend

Fiber	Lbs.	%	*Blend Point Value
Blue	200	20.0	16
Advocate A25	800	80.0	54
	1000	100.0	70

M-666 Blend

Fiber	Lbs.	%	*Blend Point Value
Blue	200	20.0	16
Jeffrey 4	800	80.0	60
	1000	100.0	76

NOTES: Up to 5.0% of scrap may be added to all M-Blends up to a maximum of 50 lbs. per batch. Any plant making pipe on Swing Mandrels smaller than 18" will still use M-666 or M-722 Blends.

Waukegan and Danigon Plants

Blend M699

Fiber	Lbs.	%
Blue	100	10.0
Advocate A25	200	20.0
Lake 4T3	150	15.0
Jeffrey 4	550	55.0
	1000	100.0

Blend M700

Fiber	Lbs.	%
C & G 3	100	10.0
Advocate A25	200	20.0
Lake 4T3	150	15.0
Jeffrey 4	550	55.0
	1000	100.0

Long Beach and Stockton Plants

Blend M701

Fiber	Lbs.	%
Blue	100	10.0
Advocate A25	200	20.0
BC4T	200	20.0
Jeffrey 4	500	50.0
	1000	100.0

X— INDICATES CHANGE —REASON: Instructions in Use of Available Fibers

AUTHORITY FOR CHANGE: J. B. McCarty's Letter 12-28-64

SUPERSEDES: None, New Page

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED JAN 12 1965

Form 333-2-A Pid. in U.S.A.

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends CANCELLED 2/24/77	PLANT & DIV.	M,SP,J,L,W&R ER
		SPEC NO.	425-1
		PAGE NO.	2.3

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.0	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

C. Used In Products

Water Pipe - 18" thru 36", All Classes.
("R") USBR Pipe - 18" thru 36", All Classes.
("T") USBR & Transmission Pipe - 18" thru 36", All Classes.
Sewer Pipe - 18" thru 36", All Classes.
Air Duct-Vent Pipe - 18" thru 36".
Storm Drain - 18" thru 42".
On-Farm Irrigation - 18" and above.

M-870 (Waukegan)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	2	200	14.3	11.0
Jeffrey 4-T	10	1000	71.4	55.0
	14	1400	100.0	77

M-867 (Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Jeffrey 4-T	12	1200	85.7	66.0
	14	1400	100.0	77

MTC 002637

PLEASE RETURN TO [illegible]

X— INDICATES CHANGE —REASON:	Standard Fiber Blends - 1973
AUTHORITY FOR CHANGE.	K. J. Whalen's letter 11/17/72
SUPERSEDES:	Same Spec., Same Page, Dated 4/5/72

MGR. Q. C. C	MGR. Q. C.	SUPR. Q. C.	FOOD SUPT.	PLNT. FIN.	R... LAB				DATE ISSUED 1/10/73

7 POST CO 1258 8/67

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	M,SP,J,D,W&R TR
		SPEC NO.	425-1
		PAGE NO.	2.3

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.0	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

C. Used In Products

Water Pipe - 18" thru 36", All Classes.
X ("R") USBR Pipe - 18" thru 36", All Classes.
X ("T") USBR & Transmission Pipe - 18" thru 36", All Classes.
Sewer Pipe - 18" thru 36", All Classes.
Air Duct-Vent Pipe - 18" thru 36".
Storm Drain - 18" thru 42".
On-Farm Irrigation - 18" and above.

M-815 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	5	500	35.7	27.5
Jeffrey 4-T	7	700	50.0	38.5
	14	1400	100.0	77

X- INDICATES CHANGE	-REASON: Delete Type Irrigation Pipe
AUTHORITY FOR CHANGE	K. J. Whalen's letter 8/6/71 & K. P. Sutton's Marketing Bulletin PM 72-12
SUPERSEDES:	Same Spec., Same Page, Dated 2/25/72

MGR. G. Q. C	DEP. G. C.	SUPV. G. C.	PROD. SUPT.	PLNT. ENG.				DATE ISSUED	4/5/72

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT TRANSITE Pipe Fiber Blends	PLANT & DIV.	M,SP,J,D,W&R TR
		SPEC NO.	425-1
		PAGE NO.	2.3

CANCELLED

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.0	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

C. Used In Products

Water Pipe - 18" thru 36", All Classes.
USBR Pipe - 18" thru 36", All Classes.
'T' Transmission Pipe - 18" thru 36", All Classes.
Sewer Pipe - 18" thru 36", All Classes.
Air Duct-Vent Pipe - 18" thru 36".
Storm Drain - 18" thru 42".
On-Farm Irrigation - 18" and above.

M-815 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	5	500	35.7	27.5
Jeffrey 4-T	7	700	50.0	38.5
	14	1400	100.0	77

X- INDICATES CHANGE	-REASON:	Standard Fiber Blends -1972
AUTHORITY FOR CHANGE	K. J. Whalen's letters to Plant Managers dated 12/14/71 and 12/16/71	
SUPERSEDES:	Same Spec., Same Page, Dated 6/14/71	

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED 2/25/72

CANCELLED

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.0	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

M-801 (Special Blend For Coupling Stock at Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
Jeffrey 4-T or Pacific Asbestos	3	300	30.0	23.1
Cassiar CT or AX	3	300	30.0	22.5
	10	1000	100.0	81

C. Used In Products

Water Pipe - 18" thru 36", All Classes.
USBR Pipe - 18" thru 36", All Classes.
'T' Transmission Pipe - 18" thru 36", All Classes.
Sewer Pipe - 18" thru 36", All Classes.
Air Duct-Vent Pipe - 18" thru 36".
X Storm Drain - 18" thru 42".
On-Farm Irrigation - 18" and above.

MTC 002640

M-815 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	5	500	35.7	27.5
Jeffrey 4-T	7	700	50.0	38.5
	14	1400	100.0	77

X— INDICATES CHANGE —REASON: Add 18" and Above Storm Drain and On-Farm

PLEASE RETURN TO J-M RESEARCH LIBRARY

AUTHORITY FOR CHANGE: Correction

SUPERSEDES: Same Spec., Same Page, Dated 2/17/71

MGR. G. Q. C	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES. LAB.				DATE ISSUED 6/14/71

F POST CO 1283 8107

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	425-1
		PAGE NO.	2.3

CANCELLED

M-812 (Green Cove)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	7.0	5.7
Jeffrey 4-T	5	500	35.7	27.5
Advocate A-25	8	800	57.2	42.3
	14	1400	100.0	76

M-801 (Special Blend For Coupling Stock at Long Beach)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	1	100	10.0	8.0
Cassiar CP or AK	3	300	30.0	27.0
Jeffrey 4-T or Pacific Asbestos	3	300	30.0	23.1
Cassiar CT or AX	3	300	30.0	22.5
	10	1000	100.0	81

C. Used In Products

Water Pipe - 18" thru 36", All Classes.
USBR Pipe - 18" thru 36", All Classes.
'T' Transmission Pipe - 18" thru 36", All Classes.
Sewer Pipe - 18" thru 36", All Classes.
Air Duct-Vent Pipe - 18" thru 36".

MTC 002641

M-815 (Waukegan and Manville)

FIBER	BAGS	LBS.	%	*BLEND POINT VALUE
Blue	2	200	14.3	11.4
Reeves R-25	5	500	35.7	27.5
Jeffrey 4-T	7	700	50.0	38.5
	14	1400	100.0	77

X- INDICATES CHANGE -REASON:	Atandard Fiber Blends - 1971	PLEASE RETURN TO
AUTHORITY FOR CHANGE	J. E. Hesse's letters dated 12/17/70	J-M RESEARCH
SUPERSEDES:	Same Spec., Same Page, Dated 9/8/70	LIBRARY

MGR. G.Q.C	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	REG.			DATE ISSUED 2/17/71

FORM CO 126-2 80187

C. Used in Products

Water Pipe - 6" 200 & 8" through 16", all classes
Irrigation & USBR Pipe - 6" R80 & 8" through 16", all classes
Sewer Pipe - 14" & 16", all classes
Storm Drain Pipe - 14" & 16"
On-Farm Irrigation Pipe - 12" through 16"
Coupling Stock - 3" through 16"

CANCELLED 3/23/78

Blend No.	M-1043		M-1051		M-1054		M-1032		M-1040		M-1047	
	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%	Bags	%
Blue	2	16.7	1	10	2	18.2	2	16.7	2	20	1	10
Jeffrey	5	41.7	6	60					4	40	4	40
Advocate	5	41.7			9	81.8	7	58.3				
Cassiar AK									1	10	1	10
Cassiar CT			2	20			3	25.0	2	20	2	20
Cassiar CZ			1	10					1	10	1	10
Calaveras 4T											1	10
Plant	Manville		Waukegan		Green Cove		Denison		Long Beach		Stockton	

D. Used in Products

Water Pipe - 18" through 36", all classes
USBR Pipe - 18" through 36", all classes
"T" Transmission Pipe - 18" through 36", all classes
Sewer Pipe - 18" through 36", all classes
Storm Drain Pipe - 18" through 36"
Air Duct Vent Pipe - 18" through 36"
On-Farm Irrigation Pipe - 18" and 21"
Coupling Stock - 18" through 36"

Blend No.	M-771		M-1053		M-1032		M-1040	
	Bags	%	Bags	%	Bags	%	Bags	%
Blue	2	16.7	2	16.7	2	16.7	2	20
Jeffrey	3	25.0	7	58.3			4	40
Advocate	7	58.3			7	58.3		
Cassiar AK							1	10
Cassiar CT			3	25.0	3	25.0	2	20
Cassiar CZ							1	10
Calaveras 4T								
Plant	Manville		Waukegan		Denison		Long Beach Stockton	

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT. TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	3

CANCELLED

X D. 10' Machine Non-Pressure Products

Manville uses H-9 Blend
Waukegan used H-20 Blend
Denison used H-19 Blend
Long Beach will use H-26 Blend until inventory Cassiar CY is gone, then the standard Blend will be H-20.

Stockton's standard Blend is H-25 until Cassiar CY is gone, then switch to H-19 until Advocate A-25 is depleted, then H-20 becomes the standard Blend.

X Fiber	H-9 Blends lbs	H-9 Blends %	H-19 Blend lbs	H-19 Blend %	H-20 Blend lbs	H-20 Blend %	H-25 Blend lbs	H-25 Blend %	H-26 Blend lbs	H-26 Blend %
Reeves R-25					500	100.0	200	40.0	100	20.0
Jeffrey 4-T	500	100.0							200	40.0
Advocate A-25			500	100.0			200	40.0		
Cassiar AY or CY							100	20.0	200	40.0
TOTAL	500	100.0	500	100.0	500	100.0	500	100.0	500	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

Virgin fiber level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber Blendless Scrap}) \times 100}{\text{Total Batch Weight}}$$

% Cement and Silica - 100 Minus (% Fiber + % Scrap in Total Batch)

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

Thus: Blend H9-100 -9.0 (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9 -120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

MTC 002643

PLEASE RETURN TO J-M RESEARCH LIBRARY

X- INDICATES CHANGE —REASON:	Standard Fiber Blends - 1971
AUTHORITY FOR CHANGE	J. E. Hesse letters to Plant Managers dated 12/17/70
SUPERSEDES:	Same Spec., Same Page, Dated 2/2/70

MGR. G. O. C	MGR. O. C.	SUPR. O. C.	PROD. SUPT.	PLNT. FIN.				DATE ISSUED 2/17/71

POST CO. 186-3 80187

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	3

X D. 10' Machine Non-Pressure Products

Manville, Long Beach and Stockton use H-9 Blend
Waukegan uses H-20 Blend
Denison uses H-19 Blend

X

Fiber	H-9 Blends lbs	H-9 Blends %	H-19 Blend lbs	H-19 Blend %	H-20 Blend lbs	H-20 Blend %
Reeves R-25					500	100.0
Jeffrey 4-T	500	100.0				
Advocate A-25			500	100.0		
TOTAL	500	100.0	500	100.0	500	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

Virgin fiber level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber Blendless Scrap}) \times 100}{\text{Total Batch Weight}}$$

% Cement and Silica = 100 Minus (% Fiber + % Scrap in Total Batch)

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

Thus: Blend H9-100 -9.0 (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9 -120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

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X- INDICATES CHANGE	-REASON:	Standard Fiber Blends - 1972
AUTHORITY FOR CHANGE		K. J. Whalen's letters to Plant Managers dated 12/14/71 and 12/16/71
SUPERSEDES:		Same Spec., Same Page, Dated 2/17/71

MGR. G. Q. C	MGR. I. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. FIN.	RES.				DATE ISSUED	2/25/72

MTC 002644

X D. 10' Machine Non-Pressure Products

Waukegan, Manville, Long Beach and Stockton use H-9 Blend
Denison uses H-19 Blend

Fiber	H-9 Blends lbs	%	H-19 Blend lbs	%
Jeffrey 4-T	500	100.0		
Advocate A-25			500	100.0
TOTAL	500	100.0	500	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

Virgin fiber level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber Blendless Scrap}) \times 100}{\text{Total Batch Weight}}$$

% Cement and Silica = 100 Minus (% Fiber + % Scrap in Total Batch)

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

Thus: Blend H9-100 -9.0 (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9 -120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends CANCELLED	PLANT & DIV.	Pipe
		SPEC NO.	425-1
		PAGE NO.	3

D. 10' Machine Non-Pressure Products

Waukegan, Manville, Long Beach and Stockton use H-9 Blend
Denison uses H-19 Blend

	H-9 Blends		H-19 Bland	
Fiber	lbs	%	lbs	%
Jeffrey 4-T	500	100.0		
Advocate A-25			500	100.0
TOTAL	500	100.0	500	100.0

X Scrap addition may be from 0% to 180% in increments of 20%. 100% added scrap is cost standard.

Virgin fiber level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber Blendless Scrap}) \times 100}{\text{Total Batch Weight}}$$

% Cement and Silica - 100 Minus (% Fiber + % Scrap in Total Batch)

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

Thus: Bland H9-100 -9.0 (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9 -120-9 Bland (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

MTC 002646

X- INDICATES CHANGE	REASON: Permit 180% maximum scrap addition
AUTHORITY FOR CHANGE	Research Approval
SUPERSEDES:	Same Spec., Same Page, Dated 1-10-73

MGR. Q. A. C.	MGR. Q. C.	SUPR. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.			DATE ISSUED	5-17-74

D. 10' Machine Non-Pressure Products

Waukegan, Manville, Long Beach and Stockton use H-9 Blend
Denison uses H-19 Blend

Fiber	H-9 Blends lbs	H-9 Blends %	H-19 Blend lbs	H-19 Blend %
Jeffrey 4-T	500	100.0		
Advocate A-25			500	100.0
TOTAL	500	100.0	500	100.0

X Scrap addition may be from 0% to 200% in increments of 20%. Scrap usage standard is 140%.

Virgin fiber level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

X Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{\text{(Virgin Fiber)} \times 100}{\text{Total Batch Weight, excluding scrap}}$$

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

% Cement and Silica = 100 Minus (% Fiber + % Scrap in Total Batch)

Thus: Blend H9-100 -9.0 (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9 -120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

MTC 002647

D. 10' Machine Non-Pressure Products

CANCELLED 3/24/77

Waukegan, Manville, Long Beach and Stockton use H-9 Blend
Denison uses H-19 Blend

Fiber	H-9 Blends lbs	%	H-19 Blend lbs	%
Jeffrey 4-T	500	100.0		
Advocate A-25			500	100.0
TOTAL	500	100.0	500	100.0

Scrap addition may be from 0% to 200% in increments of 20%. Scrap usage standard is 140%.

Virgin fiber level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

X % Virgin Fiber = $\frac{\text{(Virgin Fiber) x 100}}{\text{Total Batch Weight}}$

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

% Cement and Silica = 100 Minus (% Fiber + % Scrap in Total Batch)

Thus: Bland H9-100 -9.0 (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9 -120-9 Bland (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

MTC 002648

X- INDICATES CHANGE —REASON: Correction - % fiber of total batch weight, includes scrap

AUTHORITY FOR CHANGE: none

SUPERSEDES: Same spec., same page, dated 1/6/75

MGR. G. O. C	MGR. G. C.	SUPR. G. C.	PROD. SUPT.	PLNT. PSN.	MGR. LAB.				DATE ISSUED 1/30/75

Used in Products

10' Non-Pressure

CANCELLED 11/11/77

Blend No.	H-9		H-52		H-39		H-48	
	Bags	%	Bags	%	Bags	%	Bags	%
Amosite			1	20	1	20		
Cassiar CT					1	20	1	20
Cassiar CZ			1	20			1	20
Jeffrey	5	100			3	60		
Advocate			3	60				
Calaveras 4T							2	40
Calaveras 5K							1	20
Scrap			Per Local Practice					
Plant	Manville		Denison		Long Beach		Stockton	

Scrap addition may be from 0% to 200% in increments of 20%. Scrap usage standard is 140%.

Virgin fiber level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Virgin Fiber}) \times 100}{\text{Total Batch Weight}}$$

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

% Cement and Silica = 100 Minus (% Fiber + % Scrap in Total Batch)

Thus: Blend H9-100 -9.0 (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9 -120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

Johns-Manville MANUFACTURING SPECIFICATION JM-260-2-A	PRODUCT: TRANSITE Pipe Fiber Blends	DIVISION	PIPE
		SPEC. NO.	TR-425-1
		PAGE NO.	1

CANCELLED
Leg etc 11/28/83

I. POINT VALUE - FIBER

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fiber when used in the manufacture of Asbestos Cement Pipe.

Jeffrey is classified to a 3-point spread system. Color coding consists of four vertical stripes on two sides of each unit, so that each bag is marked with two bars on side or end.

The following 4 Grade Jeffrey fibers are to be bag color coded and used at the following point values:

Jeffrey 4T & SP4T and

Bag Color	Grade	Use at PV	Bag Color	Grade	Use at PV
Brick	87	89	Mauve	69	71
Gray	84	86	Yellow	66	68
White	81	83	Blue	63	65
Brown	78	80	Red	60	62
Black	75	77			
--	72	74	(No Color Code Required on Bag)		

Advocate A-25 fiber is supplied in 72 grade only to be used at an assigned point of value of 74. These 72 grade bags of A-25 are not color coded.

The following fibers are to be used at the assigned point values:

Blue Fiber	Lbs/Bag	Assigned Point Value
"S Pomfret or Koegas, KCB/R3 Kurman, W1, Etc.	110	80
2S	110	80
K35-3/30	110	80
S65	110	80
WMS-6	110	75
ML6	110	80
Jeffrey		
4T30	110	(as above)
SP5R28	110	55
Cassiar		
CP or AK	100	95
CT	100	79
CZ	100	43
Calaveras		
4T	100	68
5K	100	55

X

X - INDICATES CHANGE	X - Pt. Value was 90	MTC 002650
AUTHORITY FOR CHANGE	C.B. Allen and A.C. Daley	
SUPERSEDES:	Same Spec., Same Page, Dated 7/23/81	DATE ISSUED: 8/20/81

I. POINT VALUE - FIBER (Continued)

A. Fiber Blend Point Value Calculation

EXAMPLE:

Fiber Blue	Fiber Point Value	Bags	Lbs.	%	Blend Point Value
Cassiar CP or AK	80	1	110	10.1	8.1
Jeffrey 4T30	95	1	100	9.2	8.7
	74	8	880	80.7	59.7
			1090	100.0	76.5

B. Point Blends

Fiber Blue	Point Value	STOCKTON M-1400 13'-#2&#3 Non-Press	M-1401 13'-1,2,3,4 Press 13'-#4 Non-Press	H-72 10'- Non-Press	LONG BEACH M-1500 13'-FLEX #2&#3	M-1501 13'-ALL Other	DENISON M-1600 10'&13' Press	M-1601 13'- Non-Press	H-19 10' Non-Press
2S, ML6, S65	80	110	220		110	220	330	220	
K35, or S CAPE	75	110	110		110	110			
WMS-6	95	200	200	200	300	200			
CASSIAR									
AK	95	200	200	200	300	200			
CZ	43				100				
CALAVERAS									
4T68	68	100	100	100					
JEFFREY									
4T30	74	660	550	220	440	550	1100	1100	550
SP5R28	55	110	110		110			220	
		1290	1290	520	1170	1080	1430	1320	550

X

X- INDICATES CHANGE — X - Point value was 90

MTC 002651

AUTHORITY FOR CHANGE: C.B. Allen & A.C. Daley

SUPERSEDES: Same Spec, Page 2, Dated 7/23/81

DATE ISSUED: 8/20/81

Manville Internal Correspondence

To: J. Helmick - R-26
G. Krobetzky - R-21

Date: November 28, 1983

From: J. Kriso - 3-11

Copies: D. Fischer - 3-11

Subject: LETTER OF CANCELLATION
TRANSITE PIPE FINISHED PRODUCT
& MANUFACTURING SPECS

Remove the following series of specifications from your active files. Retention shall be in accordance with systems 9295.

Spec Series	Category	Pages
TR-4251-16, etc.	Finished Product	All
TR-4252-1, etc.	Finished Product	All
TR-4253-2, etc.	Finished Product	All
TR-4254-19, etc.	Finished Product	All
TR-4255-1, etc.	Finished Product	All
TR-425-0, etc.	Manufacturing	All

JJK:lms

Johns-Manville MANUFACTURING SPECIFICATION JM-260-2-A	PRODUCT: TRANSITE PIPE FIBER BLENDS	DIVISION	PIPE
		SPEC. NO.	TR-425-1
		PAGE NO.	3

I. POINT VALUE - FIBER (continued)

C. Scrap Addition to Fiber Blend

X1

1.0 13 Foot Products & 10 Foot Pressure Pipe

1.1 All scrap added must be reported.

1.2 a) Scrap may be added up to 20% of the virgin fiber, without deviation.
b) Up to 30% scrap in 13' Non-Pressure Products may be used without deviation.

2.0 10 Foot Non-Pressure Pipe

2.1 Scrap addition may be from 0% to 200% in increments of 20%. Scrap usage standard is 140%, in 10' Non-Pressure Products.

3.0 All Couplings
Maximum Scrap: 50 pounds

4.0 Virgin Fiber
Virgin fiber level will be expressed as a percentage of the total batch weight.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Virgin Fiber}) \times 100}{\text{Total Batch Weight}}$$

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

% Cement and Silica = 100 Minus (% Fiber + % Scrap in Total Batch)

Thus: Blend H19-100-9.0% Virgin Fiber) (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9-120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

MTC 002653

X- INDICATES CHANGE	X1 - Clarify		
AUTHORITY FOR CHANGE	C. B. Allen		
SUPERSEDES:	Same Spec, Page 3, Dated 1/19/8[illegible]	DATE ISSUED:	3/16/81

III. ASSIGNED BLEND POINT VALUE

Effective 10/9/64 and until further notice the point value of each standard operating blend at each plant location will have to be determined based on the assigned point value for the fibers on hand.

IV. FIBER USAGE LEVEL

1.0 Pipe

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at levels from 90 to 105%, with 100% as the Division standard. Should the Quality Control data over a sufficient period of time, clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

While the Material Standards Fiber Level for each product is 100%, the Plant Manager has the prerogative of using any fiber level between 90 and 105% of the 100% standard. Operations outside of the 90-105% usage level is permissible only after receipt of written approval of the deviation. (NOTE: A cautious approach should be taken to the use of fiber levels below 100%, with recognition of the need to comply with Finished Product Specifications and Division reject standards.)

2.0 CPLG

The fiber level for couplings is not subject to variation. Operating levels to be at 100% only.

X

3.0 TEMP-TITE CASING

The fiber level for TRANSITE pipe used as casing for TEMP-TITE may be run below the minimum 90% fiber level provided the pipe meet the minimum crush requirements.

PROCEDURE FOR DETERMINING NOMINAL % FIBER BLEND:

For your convenience, the nominal % fiber blend at the 100% fiber level is listed for all products in Manufacturing Specification 425-2. Additionally, the 95 and 105% fiber levels are also shown for water pipe.

Product Fiber Levels not listed in the tables may be obtained by either of two ways:

1. Calculated directly from Manufacturing Specification 425-2, Pipe Machine Furnishes.

   EX. The 100% fiber level for 10" 150 pipe to be produced with a fiber blend with a point value of 77 is shown as 16.9%.

   The 90% fiber level is 90/100 x 16.9 = 15.2%

   The 97% fiber level is 97/100 x 16.9 = 16.4%

2. Obtained using Fiber Point Tables in Manufacturing Specification 425-1, pages 6 thru 18 and the percent of fiber blend pages 19 thru 21.

X

   EX. The fiber points on page 8 for 10" 150 pipe at the 90% fiber level is 11.7. On page 22 the percentage fiber blend for a 77 point value blend is 15.2%.

   The fiber points on page 8 for 10" 150 pipe at the 97% Fiber Level is 97/100 of the 13.0 shown for the 100% Level, or 12.6. On page 22, the percentage fiber blend for a 77 point value blend is 16.4%.

X- INDICATES CHANGE	REASON: Page Reference Corrections								
AUTHORITY FOR CHANGE	Q/A Manager								
SUPERSEDES:	Same Spec, Page 7 Dated 1/27/78								
MGR. Q.A.C.	MGR. Q.C.	SUPV. Q.C.	PROD. SUPV.	PLANT ENG.	MGR. LAB.				DATE ISSUED 1/19/81

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	PIPE
		SPEC NO.	TP- 425-1
		PAGE NO.	6

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specification)

I. WATER PIPE

		FIBER LEVEL			
		90	95	100	105
Class 100	3"	11.5	12.2	12.8	13.4
	4" (13')	12.8	13.5	14.2	14.9
	4" (10')	11.8	12.5	13.1	13.8
	5"	10.3	10.8	11.4	12.0
	6" (13')	11.0	11.6	12.2	12.8
	6" (10')	10.2	10.8	11.4	12.0
	8"	11.2	11.8	12.5	13.1
	10"-14"	11.5	12.2	12.8	13.5
	16"	11.7	12.4	13.0	13.7
	18"-20"	11.9	12.5	13.2	13.9
	24"-36"	12.3	12.9	13.6	14.3
Class 150	3"	11.4	12.0	12.6	13.2
	4" (13')	12.6	13.3	14.0	14.7
	4" (10')	11.9	12.5	13.2	13.9
	5"	11.3	12.0	12.6	13.2
	6"	12.0	12.6	13.3	14.0
	8"	12.6	13.3	14.0	14.7
	10"	11.7	12.4	13.0	13.7
	12"-14"	12.1	12.7	13.4	14.1
	16"	12.5	13.2	13.9	14.6
	18"-36"	12.1	12.7	13.4	14.1
Class 200	3"	10.6	11.2	11.8	12.4
	4"	11.3	11.9	12.5	13.1
	6"	12.3	12.9	13.6	14.3
	6" (Dwg. TP1-1.3F)	13.1	13.9	14.6	15.3
	8"	13.2	14.0	14.7	15.5
	8" (Dwg. TP1-1.3F)	13.7	14.4	15.2	16.0
	10"	12.4	13.1	13.8	14.5
	12"	12.8	13.5	14.2	14.9
	14"-16"	13.3	14.1	14.8	15.5
	18"-36"	12.0	12.6	13.3	14.0

MECH. JOINT ADAPTORS - fiber points on all sizes are same as for pipe

X- INDICATES CHANGE	-REASON: Review									
AUTHORITY FOR CHANGE	Q/A Manager									
SUPERSEDES:	Same Spec, Page 8, Dated 11/11/77									
MGR. A. Q. C	MGR. Q. C.	SUPV. Q. C.	PROD. SUPT.	PLNT. ENG.	MGR. LAB.				DATE ISSUED	1/19/81

FIBER POINTS

not %

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specifications)

II. Irrigation Pipe:

"T" Irrigation Pipe

Type 5 Irrigation	FIBER LEVEL			
1. PIPE AND M.E.E.	90	95	100	105
8" (10')	8.5	8.9	9.4	9.9
8" (13')	9.2	9.7	10.2	10.7
10" - 16"	9.2	9.7	10.2	10.7
	FIBER LEVEL			
2. MOA	90	95	100	105
8"	10.0	10.5	11.1	11.6
10" - 16"	9.9	10.5	11.0	11.5

Well Casing Pipe

A. M.E.E. Well Casing Pipe
   1. Class T-45 -- Fiber Points same as T/R-45, 13' pipe
   2. Class T-70 -- " " " " T/R-70, " "

B. P.E. Well Casing Pipe (except 16")
   Fiber points are the same as Classes 2400 and 3300 Sewer, 13' pipe

X C. 16" P.E. Well Casing at Denison (TS-3037)
   Fiber points 12.1. Any case minimums usage is 16.5%.

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specifications)

II. T/R Transmission/Irrigation

A. T/R-30

1. PIPE AND M.E.E.	FIBER LEVEL 90	95	100	105
8" - 12"	10.1	10.6	11.2	11.8
14"	10.7	11.3	11.9	12.5
15"	11.4	12.1	12.7	13.3
16"	11.2	11.8	12.5	13.1
18" - 21"	12.0	12.6	13.3	14.0
24" - 33"	12.1	12.7	13.4	14.1
36"	12.2	12.8	13.5	14.2

2. MDA	FIBER LEVEL 90	95	100	105
8"	10.0	10.5	11.1	11.6
10" - 16"	9.9	10.5	11.0	11.5
18"	12.1	12.7	13.4	14.1
20"	11.9	12.5	13.2	13.9
21"	11.9	12.5	13.2	13.9
24" - 27"	11.5	12.2	12.8	13.4
30"	11.4	12.1	12.7	13.3
33"	11.5	12.2	12.8	13.4
36"	11.4	12.1	12.7	13.3

X

NOTE: M. J. ADAPTORS - Fiber Points of ALL sizes are same as Pipe and M.E.E.

X— INDICATES CHANGE	—REASON: Consolidate
AUTHORITY FOR CHANGE	Q/A Manager
SUPERSEDES:	Same Spec, Page 10, Dated 11/11/77

MGR. Q. C.	MGR. Q. C.	SUPT. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	9

STANDARD FIBER POINTS
(Divisional Standards to Meet Product Specifications)

II. T/R Transmission/Irrigation

B. T/R-35

1. PIPE AND M.E.E.	FIBER LEVEL 90	95	100	105
8"	11.8	12.5	13.1	13.8
10" - 12"	11.2	11.8	12.5	13.1
14"	12.2	12.9	13.6	14.3
15"	12.0	12.6	13.3	14.0
16"	12.3	13.0	13.7	14.4
18"	13.1	13.9	14.6	15.3
20"	12.8	13.5	14.2	14.9
21"	13.1	13.9	14.6	15.3
24" - 36"	13.5	14.3	15.0	15.7

2. MDA	FIBER LEVEL 90	95	100	105
8"	12.3	13.0	13.7	14.4
10" - 12"	9.9	10.5	11.0	11.5
14"	10.6	11.1	11.7	12.3
15"	9.9	10.5	11.0	11.5
16"	10.8	11.4	12.0	12.6
18" -	11.3	12.0	12.6	13.2
20"	10.6	11.1	11.7	12.3
21"	9.9	10.5	11.0	11.5
24" -	9.9	10.5	11.0	11.5
27"	11.0	11.6	12.2	12.8
30"	11.2	11.8	12.5	13.1
33"	12.4	13.1	13.8	14.5
36"	11.3	12.0	12.6	13.2

NOTE:

M. J. ADAPTORS - Fiber Points of ALL sizes are same as Pipe and M.E.E.

X

X— INDICATES CHANGE — REASON: Consolidate

AUTHORITY FOR CHANGE — Q/A Manager

SUPERSEDES: Same Spec, Page 11, Dated 11/11/77

MGR. Q. & C.	MGR. Q. C.	SUPT. Q. C.	PROD. SUPT.	PLANT ENG.	RES. LAB.				DATE ISSUED	1/19/81

F POST CO 1849 8109

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	10

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specifications)

II. T/R Transmission/Irrigation

C. T/R-40

1. PIPE AND M.E.E.	FIBER LEVEL 90	95	100	105
6"	10.7	11.3	11.9	12.5
8"	11.8	12.5	13.1	13.8
10"	11.3	12.0	12.6	13.2
12"	12.2	12.8	13.5	14.2
14"	13.5	14.3	15.0	15.7
15"	13.7	14.4	15.2	16.0
16"	14.0	14.8	15.6	16.4
18"	11.3	12.0	12.6	13.2
20"	11.4	12.1	12.7	13.3
21"	11.2	11.8	12.5	13.1
24"	12.0	12.6	13.3	14.0
27"	11.6	12.3	12.9	13.5
30"	12.1	12.7	13.4	14.1
33"	11.8	12.5	13.1	13.8
36"	12.1	12.7	13.4	14.1

2. MDA	FIBER LEVEL 90	95	100	105
6"	11.8	12.5	13.1	13.8
8"	9.9	10.5	11.0	11.5
10"	10.6	11.2	11.8	12.4
12"	10.7	11.3	11.9	12.5
14"	12.4	13.1	13.8	14.5
15"	9.9	10.5	11.0	11.5
16"	12.8	13.5	14.2	14.9
18"	10.9	11.5	12.1	12.7
20"	10.8	11.4	12.0	12.6
21"	10.6	11.1	11.7	12.3
24"	11.2	11.8	12.5	13.1
27"	10.7	11.3	11.9	12.5
30"	11.1	11.7	12.3	12.9

X— INDICATES CHANGE —REASON: Consolidate

AUTHORITY FOR CHANGE: Q/A Manager

SUPERSEDES: Same Spec, Page 12, Dated 11/11/77

MGR. Q. C.	MGR. Q. C.	SUPV. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

MTC 002661

II. T/R Transmission/Irrigation

C. T/R-40

2. MOA	FIBER LEVEL 90	95	100	105
33"	10.8	11.4	12.0	12.6
36"	11.2	11.8	12.5	13.1

3. M. J. ADAPTORS	90	95	100	105
6"	11.7	12.4	13.0	13.7
8"	12.0	12.6	13.3	14.0

FIBER POINTS OF ALL Other Sizes are Same as Pipe

D. T/R-45

1. PIPE AND M.E.E.	FIBER LEVEL 90	95	100	105
6"	12.6	13.3	14.0	14.7
8"	12.5	13.2	13.9	14.6
10"	10.4	11.0	11.6	12.2
12"	11.1	11.7	12.3	13.0
14"	12.6	13.3	14.0	14.7
15"	12.2	12.8	13.5	14.2
16"	12.6	13.3	14.0	14.7
18"	12.8	13.5	14.2	14.9
20"	12.9	13.6	14.3	15.0
21"	13.0	13.7	14.4	15.1
24" - 27"	13.0	13.8	14.5	15.2
30"	13.1	13.9	14.6	15.3
33"	13.0	13.8	14.5	15.2
36"	13.1	13.9	14.6	15.3

2. MOA	FIBER LEVEL 90	95	100	105
6"	11.2	11.8	12.4	13.0
8"	10.6	11.1	11.7	12.3
10"	9.9	10.5	11.0	11.5

APPROV... Q. A. ...

X- INDICATES CHANGE — REASON: Consolidate

AUTHORITY FOR CHANGE: Q/A Manager

SUPERSEDES: Same Spec, Page 13, Dated 11/11/77

RSD. E. E. C	RSD. E. C.	SUPR. E. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specifications)

II. T/R Transmission/Irrigation

D. T/R-45	FIBER LEVEL			
2. MDA	90	95	100	105
12"	9.9	10.5	11.0	11.5
14"	10.7	11.3	11.9	12.5
15"	9.9	10.5	11.0	11.5
16"	10.3	10.9	11.5	12.1
18" - 20"	12.6	13.3	14.0	14.7
21"	12.2	12.9	13.6	14.3
24"	13.0	13.8	14.5	15.2
27"	12.3	13.0	13.7	14.4
30"	12.9	13.6	14.3	15.0
33"	12.4	13.1	13.8	14.5
36"	13.0	13.8	14.5	15.2

NOTE:

M. J. ADAPTORS - Fiber Points of ALL Sizes are Same as Pipe

E. T/R-50	FIBER LEVEL			
1. PIPE AND M.E.E.	90	95	100	105
6"	12.1	12.7	13.4	14.1
8"	11.2	11.8	12.5	13.1
10" - 14"	12.2	12.9	13.6	14.3
15"	13.0	13.7	14.4	15.1

X- INDICATES CHANGE — REASON: Consolidate

AUTHORITY FOR CHANGE — Q/A Manager.

SUPERSEDES: Same Spec, Page 14., Dated 11/21/77

DOC. & Q. C.	DOC. & Q. C.	SUPV. & Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	13

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specifications)

II. T/R Transmission/Irrigation

E. T/R-50	FIBER LEVEL			
1. PIPE AND M.E.E.	90	95	100	105
16"	13.0	13.8	14.5	15.2
18"	13.2	14.0	14.7	15.5
20" - 21"	13.4	14.2	14.9	15.6
24" - 36"	13.5	14.3	15.0	15.7

	FIBER LEVEL			
2. MDA	90	95	100	105
6"	12.7	13.4	14.1	14.8
8"	11.9	12.5	13.2	13.9
10"	11.2	11.8	12.4	13.0
12"	10.8	10.9	11.5	12.1
14"	12.2	12.8	13.5	14.2
15"	9.9	10.5	11.0	11.5
16"	11.8	12.5	13.1	13.8
18"	11.9	12.5	13.2	13.9
20"	9.9	10.5	11.0	11.5
21"	9.9	10.5	11.0	11.5
24"	9.9	10.5	11.0	11.5
27"	11.8	12.5	13.1	13.8
30"	12.6	13.3	14.0	14.7
33"	13.2	14.0	14.7	15.5
36"	12.8	13.5	14.2	14.9

NOTE:

M. J. ADAPTORS - Fiber Points of ALL Sizes are Same as Pipe and M.E.E.

X— INDICATES CHANGE —REASON: Consolidate

AUTHORITY FOR CHANGE: Q/A Manager

SUPERSEDES: Same Spec, Page 15, Dated 11/11/77

RQD. Q. A. C	RQD. Q. C.	SUPT. Q. C.	PROD. DEPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specifications)

II. T/R Transmission/Irrigation

F. T/R-60

1. PIPE AND M.E.E.	FIBER LEVEL 90	95	100	105
6"	10.6	11.2	11.8	12.4
8"	11.2	11.8	12.5	13.1
10"	11.2	11.8	12.4	13.0
12"	11.8	12.5	13.1	13.8
14"	12.1	12.7	13.4	14.1
15" - 16"	12.6	13.3	14.0	14.7
18" - 36"	13.5	14.3	15.0	15.7

2. MOA	FIBER LEVEL 90	95	100	105
6"	11.2	11.8	12.4	13.0
8"	10.3	10.9	11.5	12.1
10"	12.6	13.3	14.0	14.7
12"	13.1	13.9	14.6	15.3
14"	13.3	14.1	14.8	15.5
15"	9.9	10.5	11.0	11.5
16"	10.8	11.4	12.0	12.6
18"	13.0	13.8	14.5	15.2
20"	12.8	13.5	14.2	14.9
21"	12.9	13.6	14.3	15.0
24"	12.8	13.5	14.2	14.9
27"	12.4	13.1	13.8	14.5
30"	12.3	13.0	13.7	14.4
33"	12.4	13.1	13.8	14.5
36"	12.3	13.0	13.7	14.4

NOTE:
M. J. ADAPTORS Fiber Points of ALL Sizes are Same as Pipe and M.E.E.

X- INDICATES CHANGE —REASON: Consolidate

AUTHORITY FOR CHANGE: Q/R. Manager

SUPERSEDES: Same Spec, Page 16, Dated 11/11/77

DGR. Q.A.C.	DGR. Q.C.	SUPT. Q.C.	PROD. SUPT.	PLNT. ENG.	PER. LAB.				DATE ISSUED 1/19/81

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE FIBER BLENDS	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	15

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specifications)

II. T/R Transmission/Irrigation

G. T/R-70

	FIBER LEVEL			
1. PIPE AND M.E.E.	90	95	100	105
6"	12.5	13.2	13.9	14.6
8"	13.5	14.3	15.0	15.7
10"	13.4	14.2	14.9	15.6
12- 36"	13.5	14.3	15.0	15.7

	FIBER LEVEL			
2. MDA	90	95	100	105
6"	13.0	13.8	14.5	15.2
8"	12.5	13.2	13.9	14.6
10"	11.7	12.4	13.0	13.7
12"	12.2	12.8	13.5	14.2
14"	12.9	13.6	14.3	15.0
15"	10.6	11.1	11.7	12.3
16"	13.0	13.8	14.5	15.2
18"	12.8	13.5	14.5	14.9
20"	12.8	13.5	14.5	14.9
21"	13.3	14.1	14.8	15.5
24"	12.8	13.5	14.5	14.9
27"	13.0	13.8	14.5	15.2
30"	13.0	13.8	14.5	15.2
33"	13.0	13.8	14.5	15.2
36"	12.8	13.5	14.2	14.9

APPROVED
Q. A. DEPT.

X- INDICATES CHANGE	-REASON: Consolidate
AUTHORITY FOR CHANGE	Q/A Manager
SUPERSEDES:	Same Spec, Page 17, Dated 11/11/77

ENGR. C. S. C.	ENGR. S. C.	SUPVR. S. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

MTC 002666

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specifications)

II. T/R Transmission/Irrigation

H. T/R-80

	FIBER LEVEL			
1. PIPE AND M.E.E.	90	95	100	105
6"	12.2	12.8	13.5	14.2
8"	13.0	13.7	14.4	15.1
10"	12.5	13.2	13.9	14.6
12"	13.0	13.8	14.5	15.2
14" - 20"	13.5	14.3	15.0	15.7
21"	13.7	14.4	15.2	16.0
24" - 36"	13.5	14.3	15.0	15.7

J. T/R-90

	FIBER LEVEL			
1. PIPE AND M.E.E.	90	95	100	105
6" - 36"	13.5	14.3	15.0	15.7

	FIBER LEVEL			
2. M.O.A. (S.P.I.)	90	95	100	105
18"	12.2	12.8	13.5	14.2
20"	11.9	12.5	13.2	13.9
21"	12.2	12.9	13.6	14.3
24"	12.0	12.6	13.3	14.0
27"	12.2	12.9	13.6	14.3
30"	11.9	12.5	13.2	13.9
33"	12.4	13.1	13.8	14.5
36"	11.8	12.5	13.1	13.8

STANDARD FIBER POINTS

(Divisional Standards to Meet Product Specification)

III. SEWER PIPE

SIZE AND CLASS	FIBER LEVEL 90	95	100	105
Class 1500				
6" (13') (10') (5')	8.6	9.0	9.5	10.0
8" (13') (10')	8.5	8.9	9.4	9.9
10"-16"	8.1	8.6	9.0	9.5
Class 2400				
4" (10') (5')	8.5	8.9	9.4	9.9
5" (10') (5')	8.5	8.9	9.4	9.9
6" (13') (10') (5')	8.5	8.9	9.4	9.9
8" (13') (10')	9.7	10.3	10.8	11.3
10"-24"	10.2	10.7	11.3	11.9
Class 3300				
4"-5" (10') (5')	8.5	8.9	9.4	9.9
6" (13') (10') (5')	8.5	8.9	9.4	9.9
8"	9.7	10.3	10.8	11.3
10"-30"	10.2	10.7	11.3	11.9
Class 4000/5000				
10"-36"	10.2	10.7	11.3	11.9

The H-Blend is optional for 4" and 5" Class 2400 (10') (5') and for 6" and 8" Classes 1500, 2400, and 3300.

HIFLEX PIPE				
8" 2400 HF (13')	10.3	10.8	11.4	12.0
8" 3300 HF (13')	9.7	10.3	10.8	11.3

APPROVED Q. A. DEPT.

X- INDICATES CHANGE — REASON:	Review
AUTHORITY FOR CHANGE	- Q/A Manager
SUPERSEDES:	- Same Spec., Page 19, Dated 11/11/77

MKTG. & Q.C.	MFG. Q.C.	SUPT. Q.C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

STANDARD FIBER POINTS

V. STORM DRAIN PIPE (The H-Blend is optional for all classes of 6" & 8" produced on 10 Foot Machines)

Size and Class	Fiber Level 90	95	100	105
Class II				
12	8.2	8.6	9.1	9.6
14	8.5	8.9	9.4	9.9
15	8.6	9.1	9.6	10.1
16	8.8	9.3	9.8	10.3
18	9.3	9.8	10.3	10.8
20	10.3	10.9	11.5	12.1
21	10.5	11.1	11.7	12.3
24	9.4	9.9	10.4	10.9
27,39,42	10.3	10.9	11.5	12.1
30	9.6	10.2	10.7	11.2
33	10.4	11.0	11.6	12.2
36	9.2	9.7	10.2	10.7
Class III				
6	7.2	7.6	8.0	8.4
8 (10'&13')	8.5	8.9	9.4	9.9
10	9.2	9.7	10.2	10.7
12	8.2	8.6	9.1	9.6
14	10.1	10.6	11.2	11.8
15	10.3	10.9	11.5	12.1
16	10.5	11.1	11.7	12.3
18	9.6	10.2	10.7	11.2
20	10.3	10.9	11.5	12.1
21	10.5	11.1	11.7	12.3
24	10.3	10.9	11.5	12.1
27	9.2	9.7	10.2	10.7
30-42	10.3	10.9	11.5	12.1
2500D				
6	7.7	8.1	8.5	8.9
8	8.5	8.9	9.4	9.9
10	8.7	9.2	9.7	10.2
12	11.0	11.6	12.2	12.8
14	8.7	9.2	9.7	10.2
15	9.8	10.4	10.9	11.4
16	10.4	11.0	11.6	12.2
18	9.5	10.0	10.5	11.0
20	10.8	11.4	12.0	12.6
21	11.2	11.8	12.5	13.1
24	10.3	10.8	11.4	12.0
27	11.7	12.4	13.0	13.7
30-42	10.3	10.9	11.5	12.1

Size and Class	Fiber Level 90	95	100	105
Class IV				
6	10.3	10.9	11.5	12.1
8	8.6	9.1	9.6	10.1
10	10.4	11.0	11.6	12.2
12	9.4	9.9	10.4	10.9
14	10.5	11.1	11.7	12.3
15	9.4	9.9	10.4	10.9
16	10.3	10.9	11.5	12.1
18	9.4	9.9	10.4	10.9
20	10.3	10.9	11.5	12.1
21	10.6	11.2	11.8	12.4
24-42	10.3	10.9	11.5	12.1
Class V				
8	10.3	10.9	11.5	12.1
10	9.5	10.0	10.5	11.0
12	9.6	10.2	10.7	11.2
14	9.2	9.7	10.2	10.7
15	9.6	10.2	10.7	11.2
16	10.3	10.9	11.5	12.1
18	11.8	12.5	13.1	13.8
20,27	10.3	10.9	11.5	12.1
42	10.3	10.9	11.5	12.1
CL2400				
6	8.6	9.1	9.6	10.1
8	8.7	9.2	9.7	10.2
10	8.7	9.2	9.7	10.2
CL3300				
6	8.6	9.1	9.6	10.1
8	8.7	9.2	9.7	10.2
10	8.7	9.2	9.7	10.2
CL4000/5000				
10	8.7	9.2	9.7	10.2
Class III RING-TITE				
12	8.2	8.6	9.1	9.6
15	10.3	10.9	11.5	12.1
18	9.6	10.2	10.7	11.2
21	10.5	11.1	11.7	12.3
24	10.3	10.9	11.5	12.1

AUTHORITY FOR CHANGE: Consolidate C/A Manager

SUPERSEDES: Same Spec Page 20, Dated 7/28/80

DGR. E. & C.	DGR. E. C.	SUPT. E. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	19

Table I — NOMINAL PERCENT FIBER BLEND - COST STANDARDS

FIBER POINTS	BLEND POINT VALUE 60	61	62	63	64	65	66	67	68	69	70
8.0	13.3	13.1	12.9	12.7	12.5	12.3	12.1	11.9	11.8	11.6	11.4
8.2	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.1	11.9	11.7
8.4	13.9	13.7	13.5	13.3	13.1	12.9	12.7	12.5	12.3	12.2	12.0
8.6	14.3	14.1	13.9	13.6	13.4	13.2	13.0	12.8	12.6	12.5	12.3
8.8	14.7	14.5	14.3	14.0	13.7	13.5	13.3	13.1	13.0	12.8	12.6
9.0	15.0	14.8	14.5	14.3	14.1	13.9	13.7	13.5	13.3	13.1	12.9
9.2	15.3	15.1	14.9	14.7	14.5	14.2	14.0	13.8	13.6	13.3	13.1
9.4	15.7	15.5	15.3	15.0	14.7	14.5	14.3	14.1	13.9	13.6	13.4
9.6	16.0	15.7	15.4	15.2	15.0	14.8	14.5	14.3	14.1	13.9	13.7
9.8	16.3	16.0	15.8	15.6	15.3	15.1	14.8	14.6	14.4	14.2	14.0
10.0	16.7	16.4	16.1	15.9	15.6	15.4	15.1	14.9	14.7	14.5	14.3
10.2	17.0	16.7	16.4	16.2	15.9	15.7	15.4	15.2	15.0	14.8	14.6
10.4	17.3	17.0	16.7	16.5	16.2	16.0	15.7	15.5	15.3	15.1	14.9
10.6	17.6	17.3	17.0	16.8	16.5	16.3	16.0	15.8	15.6	15.4	15.2
10.8	18.0	17.7	17.4	17.1	16.8	16.6	16.3	16.1	15.9	15.6	15.4
11.0	18.3	18.0	17.7	17.4	17.1	16.9	16.7	16.4	16.2	15.9	15.7
11.2	18.6	18.3	18.0	17.8	17.5	17.2	17.0	16.7	16.5	16.2	16.0
11.4	19.0	18.7	18.4	18.1	17.8	17.5	17.2	17.0	16.7	16.5	16.3
11.6	19.3	19.0	18.7	18.4	18.1	17.8	17.5	17.3	17.0	16.8	16.6
11.8	19.6	19.3	19.0	18.7	18.4	18.1	17.8	17.6	17.4	17.1	16.9
12.0	20.0	19.7	19.3	19.0	18.7	18.4	18.2	17.9	17.6	17.4	17.1
12.2	20.3	20.0	19.7	19.3	19.0	18.7	18.5	18.2	18.0	17.7	17.4
12.4	20.6	20.3	20.0	19.7	19.4	19.0	18.7	18.5	18.2	18.0	17.7
12.6	21.0	20.6	20.3	20.0	19.7	19.4	19.1	18.8	18.5	18.3	18.0
12.8	21.4	20.9	20.6	20.3	20.0	19.7	19.4	19.1	18.9	18.6	18.3
13.0	21.7	21.3	20.9	20.6	20.3	20.0	19.7	19.4	19.1	18.9	18.6
13.2	22.0	21.7	21.3	20.9	20.6	20.3	20.0	19.7	19.5	19.1	18.9
13.4	22.3	22.0	21.6	21.3	20.9	20.6	20.3	20.0	19.7	19.4	19.1
13.6	22.6	22.3	22.0	21.6	21.3	20.9	20.6	20.3	20.0	19.7	19.4
13.8	23.0	22.7	22.3	21.9	21.6	21.2	20.9	20.6	20.3	20.0	19.7
14.0	23.3	23.0	22.6	22.2	21.9	21.5	21.2	20.9	20.6	20.3	20.0
14.2	23.7	23.3	22.9	22.5	22.2	21.8	21.5	21.2	20.9	20.6	20.3
14.4	24.0	23.6	23.2	22.8	22.5	22.1	21.8	21.5	21.2	20.9	20.6
14.6	24.4	23.9	23.5	23.1	22.8	22.4	22.1	21.8	21.5	21.2	20.9
14.8	24.7	24.3	23.8	23.4	23.1	22.7	22.4	22.1	21.7	21.4	21.2
15.0	25.0	24.6	24.2	23.8	23.4	23.0	22.7	22.4	22.0	21.7	21.4
15.2	25.3	24.9	24.5	24.1	23.7	23.4	23.0	22.7	22.3	22.0	21.7
15.4	25.6	25.2	24.8	24.4	24.0	23.7	23.3	23.0	22.6	22.3	22.0
15.6	25.9	25.6	25.1	24.7	24.3	24.0	23.6	23.3	22.9	22.6	22.3
15.8	26.3	26.0	25.5	25.0	24.7	24.3	23.9	23.6	23.2	22.9	22.6
16.0	26.7	26.3	25.8	25.4	25.0	24.6	24.3	23.9	23.6	23.2	22.9

X— INDICATES CHANGE — REASON: Consolidate

AUTHORITY FOR CHANGE: Q/A Manager

SUPERSEDES: Same Spec, Page 21, Dated 11/11/77

MGR. Q. C.	SUPT. Q. C.	SUPT. PROD. DEPT.	PLANT ENG.	PROD. LAB.				DATE ISSUED 1/19/81

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	20

Table I (Continued) NOMINAL PERCENT FIBER BLEND - COST STANDARDS

Fiber Points	71	72	73	74	75	76	77	78	79	80	81	82
8.0	11.3	11.1	11.0	10.8	10.7	10.5	10.4	10.2	10.1	10.0	9.9	9.8
8.2	11.5	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0
8.4	11.8	11.7	11.5	11.4	11.2	11.1	10.9	10.8	10.6	10.5	10.4	10.2
8.6	12.1	11.9	11.8	11.6	11.5	11.3	11.2	11.0	10.9	10.7	10.6	10.5
8.8	12.4	12.2	12.0	11.9	11.7	11.6	11.4	11.3	11.1	11.0	10.9	10.7
9.0	12.7	12.5	12.4	12.2	12.0	11.9	11.7	11.5	11.4	11.2	11.1	11.0
9.2	13.0	12.8	12.6	12.4	12.3	12.1	11.9	11.8	11.6	11.5	11.4	11.2
9.4	13.2	13.1	12.9	12.7	12.5	12.4	12.2	12.1	11.9	11.7	11.6	11.5
9.6	13.5	13.3	13.2	13.0	12.8	12.6	12.5	12.3	12.2	12.0	11.8	11.7
9.8	13.8	13.6	13.4	13.3	13.1	12.9	12.7	12.6	12.4	12.3	12.1	12.0
10.0	14.1	13.9	13.7	13.5	13.3	13.2	13.0	12.8	12.7	12.5	12.3	12.2
10.2	14.4	14.2	14.0	13.8	13.6	13.4	13.3	13.1	12.9	12.8	12.6	12.5
10.4	14.7	14.4	14.2	14.1	13.9	13.7	13.5	13.3	13.2	13.0	12.8	12.7
10.6	14.9	14.7	14.5	14.3	14.2	14.0	13.8	13.6	13.4	13.2	13.1	12.9
10.8	15.2	15.0	14.8	14.6	14.4	14.2	14.0	13.8	13.7	13.5	13.3	13.2
11.0	15.5	15.3	15.1	14.9	14.7	14.5	14.3	14.1	13.9	13.8	13.6	13.4
11.2	15.8	15.6	15.3	15.1	14.9	14.7	14.5	14.3	14.2	14.0	13.8	13.6
11.4	16.1	15.8	15.6	15.4	15.2	15.0	14.8	14.6	14.4	14.2	14.1	13.9
11.6	16.3	16.1	15.9	15.7	15.5	15.3	15.1	14.9	14.7	14.5	14.3	14.2
11.8	16.6	16.3	16.1	15.9	15.7	15.5	15.3	15.1	14.9	14.7	14.6	14.4
12.0	16.9	16.7	16.4	16.2	16.0	15.8	15.6	15.4	15.2	15.0	14.8	14.6
12.2	17.2	17.0	16.7	16.5	16.3	16.1	15.9	15.6	15.4	15.3	15.1	14.9
12.4	17.5	17.2	17.0	16.8	16.5	16.3	16.1	15.9	15.7	15.5	15.3	15.1
12.6	17.8	17.5	17.2	17.0	16.8	16.6	16.4	16.2	16.0	15.8	15.6	15.4
12.8	18.0	17.8	17.5	17.3	17.1	16.8	16.6	16.4	16.2	16.0	15.8	15.6
13.0	18.3	18.1	17.8	17.6	17.3	17.1	16.9	16.7	16.5	16.3	16.1	15.9
13.2	18.6	18.3	18.1	17.8	17.6	17.4	17.1	16.9	16.7	16.5	16.3	16.1
13.4	18.9	18.6	18.4	18.1	17.9	17.6	17.4	17.2	17.0	16.8	16.5	16.3
13.6	19.2	18.9	18.6	18.4	18.1	17.9	17.7	17.4	17.2	17.0	16.8	16.6
13.8	19.4	19.2	18.9	18.7	18.4	18.2	17.9	17.7	17.5	17.3	17.1	16.9
14.0	19.7	19.4	19.2	18.9	18.7	18.4	18.2	18.0	17.7	17.5	17.3	17.1
14.2	20.0	19.7	19.5	19.2	18.9	18.7	18.4	18.2	18.0	17.7	17.5	17.3
14.4	20.3	20.0	19.7	19.5	19.2	19.0	18.7	18.5	18.2	18.0	17.8	17.6
14.6	20.5	20.3	20.0	19.7	19.5	19.2	19.0	18.7	18.5	18.3	18.0	17.8
14.8	20.8	20.5	20.3	20.0	19.7	19.5	19.2	19.0	18.7	18.5	18.3	18.0
15.0	21.1	20.8	20.5	20.3	20.0	19.7	19.5	19.2	19.0	18.7	18.5	18.3
15.2	21.4	21.1	20.8	20.5	20.3	20.0	19.7	19.5	19.2	19.0	18.7	18.5
15.4	21.7	21.4	21.1	20.8	20.5	20.3	20.0	19.7	19.5	19.2	19.0	18.7
15.6	22.0	21.7	21.4	21.1	20.8	20.6	20.3	20.0	19.7	19.5	19.2	19.0
15.8	22.3	22.0	21.7	21.4	21.1	20.8	20.5	20.3	20.0	19.7	19.5	19.2
16.0	22.6	22.2	21.9	21.6	21.3	21.1	20.8	20.5	20.3	20.0	19.7	19.5

X— INDICATES CHANGE —REASON:	Consolidate
AUTHORITY FOR CHANGE	Q/A Manager
SUPERSEDES:	Same Spec, Page 22, Dated 11/11/77

MGR. Q. A. C	MGR. Q. C.	SUPV. Q. C.	PROD. DEPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

Table I (Continued) NOMINAL PERCENT FIBER BLEND - COST STANDARDS

Fiber Points	83	84	85	86	87	88	89	90
8.0	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9
8.2	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1
8.4	10.1	10.0	9.9	9.8	9.7	9.5	9.4	9.3
8.6	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6
8.8	10.6	10.5	10.3	10.2	10.1	10.0	9.9	9.8
9.0	10.8	10.7	10.6	10.5	10.4	10.2	10.1	10.0
9.2	11.1	11.0	10.8	10.7	10.6	10.5	10.3	10.2
9.4	11.3	11.2	11.0	10.9	10.8	10.7	10.6	10.4
9.6	11.5	11.4	11.3	11.1	11.0	10.9	10.8	10.6
9.8	11.8	11.7	11.5	11.4	11.3	11.1	11.0	10.9
10.0	12.0	11.9	11.8	11.6	11.5	11.4	11.2	11.1
10.2	12.3	12.2	12.0	11.9	11.7	11.6	11.5	11.4
10.4	12.5	12.4	12.2	12.1	12.0	11.8	11.7	11.6
10.6	12.8	12.6	12.5	12.3	12.2	12.0	11.9	11.8
10.8	13.0	12.8	12.7	12.6	12.4	12.3	12.1	12.0
11.0	13.2	13.1	13.0	12.8	12.6	12.5	12.4	12.2
11.2	13.5	13.3	13.2	13.0	12.9	12.6	12.6	12.4
11.4	13.7	13.6	13.4	13.3	13.1	13.0	12.8	12.7
11.6	14.0	13.8	13.6	13.5	13.3	13.2	13.0	12.9
11.8	14.2	14.0	13.9	13.7	13.5	13.4	13.2	13.1
12.0	14.4	14.3	14.1	14.0	13.8	13.6	13.5	13.4
12.2	14.7	14.5	14.3	14.2	14.0	13.9	13.7	13.6
12.4	14.9	14.8	14.6	14.4	14.2	14.1	13.9	13.8
12.6	15.2	15.0	14.8	14.6	14.5	14.3	14.2	14.0
12.8	15.4	15.2	15.0	14.9	14.7	14.5	14.4	14.2
13.0	15.7	15.5	15.3	15.1	14.9	14.8	14.6	14.5
13.2	15.9	15.7	15.5	15.3	15.2	15.0	14.8	14.7
13.4	16.1	15.9	15.7	15.6	15.4	15.2	15.0	14.9
13.6	16.4	16.2	16.0	15.8	15.6	15.5	15.3	15.1
13.8	16.6	16.4	16.2	16.0	15.8	15.7	15.5	15.3
14.0	16.9	16.7	16.5	16.3	16.1	15.9	15.7	15.5
14.2	17.1	16.9	16.7	16.5	16.3	16.1	16.0	15.8
14.4	17.4	17.2	17.0	16.8	16.6	16.4	16.2	16.0
14.6	17.6	17.4	17.2	17.0	16.8	16.6	16.4	16.2
14.8	17.8	17.6	17.4	17.2	17.0	16.8	16.6	16.5
15.0	18.1	17.9	17.7	17.5	17.3	17.1	16.9	16.7
15.2	18.3	18.1	17.9	17.7	17.5	17.3	17.1	16.9
15.4	18.5	18.3	18.1	17.9	17.7	17.5	17.3	17.1
15.6	18.8	18.6	18.4	18.2	17.9	17.7	17.5	17.3
15.8	19.0	18.8	18.6	18.4	18.2	18.0	17.8	17.5
16.0	19.3	19.1	18.8	18.6	18.4	18.2	18.0	17.8

X— INDICATES CHANGE —REASON:	Consolidate
AUTHORITY FOR CHANGE	Q/A Manager
SUPERSEDES:	Same Spec, Page 23, Dated 11/11/77

MGR. Q. C.	MGR. Q. C.	SUPV. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 1/19/81

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE PIPE SODIUM SILICATE TREATMENT OF FIBER	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1A
		PAGE NO.	

RAW MATERIAL:

Sodium Silicate, Purchase Specification TR 3002.

The Silicate of Soda treatment of asbestos fiber consists of a common dilution system and a separate spray system at each willow.

In the dilution system, 37½% silicate of soda is pumped into a mixing tank with service water in the proportion of 3.85 gallons of water to one gallon of silicate to obtain a 10% solution of silicate. This is checked periodically with a hydrometer, a reading of 1.082 sp. gr. indicating a 10% solution, or 0.9 lb. silicate per gallon of solution.

In the spray system, with the willow feed screw running and with fiber at the screw discharge, a spray pump automatically starts to spray the 10% solution into the top of the willow through an atomizer. Prior to starting the spray system, the fiber feed rate should be determined and the spray pump rate set accordingly.

Example

If fiber feed rate is 2000 lb./hr.,

1. 1% treatment = 20 lbs. soda/hr.
   and $\frac{20\#\ \text{soda}}{0.9\#/\text{gal.}}$ = 22.2 gal. of solution/hr.

2. 0.6% treatment = 0.6 x 22.2 = 13.3 gal. of solution/hr.

The spray nozzles are periodically flushed with water to prevent them from becoming plugged with silicate crystals.

X— INDICATES CHANGE	—REASON: Review and reissue
AUTHORITY FOR CHANGE	Q/A Manager
SUPERSEDES:	Same spec., same page, dated 5/10/66

MGR. G. Q. C.	MGR. Q. C.	SUPT. Q. C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.				DATE ISSUED 12/6/77

NOTICE OF DEVIATION

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: "Transite" Pipe	PLANT & DIV.	Denison-Pipe
		SPEC NO.	TR-425-1
		DEV. NO.	6-82 (3)

DATE OF DEVIATION: 11/18/82	PAGES NO:	2		
TIME OF DEVIATION: 8:00 A.M.	DATE OF ISSUE	8/20/81		

TYPE OF DEVIATION: ☐ EMERGENCY ☒ AUTHORIZED CHANGE ☐ PLANT SIZE TRIAL

REASON: To use available fiber.

AUTHORITY: Roger Brunson

STATE: 1. THAT PORTION OF SPECIFICATION FROM WHICH YOU PROPOSE TO DEVIATE.
2. WHAT YOU PROPOSE TO DO INSTEAD.
3. DATE THIS NOTICE OF DEVIATION WILL BE CANCELLED.

1.) Approved blend for "Transite" Pipe.

2.) Use the following blend for 10' Non-Pressure.

Blend H20-

Fiber	Bags	Lbs.
Blue	1	110
Advocate	4	440
Scrap	-	Per local practice.

3.) Until 2/18/83 or until specs are changed.

MTC 002674

Allan M Curry

SIGNED: A. M. Curry — QUALITY CONTROL SUPERVISOR

SIGNED: B. Ciaccio BC — PRODUCTION SUPERINTENDENT:

THIS NOTICE OF DEVIATION CANCELLED BY NOTICE OF RETURN DATED:

VSP	MGR	SUPR	PROD	PLNT	RES.			DATE

Form QC 48-1

Appendix K

NOTICE OF DEVIATION

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: "TRANSITE" PIPE	PLANT & DIV.	Denison-Pipe
		SPEC NO.	TR-425-1
		DEV. NO.	6-82 (4)

DATE OF DEVIATION: 2/18/83		PAGES NO:	2		
TIME OF DEVIATION: 8:00 A.M.		DATE OF ISSUE	8/20/81		

TYPE OF DEVIATION: ☐ EMERGENCY ☒ AUTHORIZED CHANGE ☐ PLANT SIZE TRIAL

REASON: To use available fiber.

AUTHORITY: Roger Brunson

STATE: 1. THAT PORTION OF SPECIFICATION FROM WHICH YOU PROPOSE TO DEVIATE.
2. WHAT YOU PROPOSE TO DO INSTEAD.
3. DATE THIS NOTICE OF DEVIATION WILL BE CANCELLED.

1.) Approved blend for "Transite" Pipe.

2.) Use the following blend for 10' Non-Pressure

Blend H20

Fiber	Bags	Lbs.
Blue	1	110
Advocate	4	440
Scrap	-	Per local Practice

3.) Until 5/18/83 or until specs are changed.

MTC 002675

SIGNED: A. M. Curry — QUALITY CONTROL SUPERVISOR

SIGNED: B. Ciaccio — PRODUCTION SUPERINTENDENT:

THIS NOTICE OF DEVIATION CANCELLED BY NOTICE OF RETURN DATED:

		SUPT.	PROD	PLNT	DEV				DATE

Form QC 432

NOTICE OF DEVIATION

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: "TRANSITE" PIPE	PLANT & DIV.	Denison-Pipe
		SPEC NO.	TR-425-1
		DEV. NO.	16-82 (2)

DATE OF DEVIATION: 1/4/83	PAGES NO:	2		
TIME OF DEVIATION: 8:00 A.M.	DATE OF ISSUE	8/20/81		

TYPE OF DEVIATION: ☐ EMERGENCY ☒ AUTHORIZED CHANGE ☐ PLANT SIZE TRIAL

REASON: To use available fiber.

AUTHORITY: Roger Brunson

STATE: 1. THAT PORTION OF SPECIFICATION FROM WHICH YOU PROPOSE TO DEVIATE.
2. WHAT YOU PROPOSE TO DO INSTEAD.
3. DATE THIS NOTICE OF DEVIATION WILL BE CANCELLED.

1.) Approved blends for "Transite" Pipe.

2.) Use the following blend for 10' and 13' Water "Transite" Pipe, couplings, and 13' Non-pressure products.

Blend M1612

Fiber	Percent	Bags	Lbs.
Blue	27.3%	3	330
Advocate	72.7%	8	880
			1210

3.) Until 4/4/83 or until specs are changed.

MTC 002676

Alan M Curry

SIGNED: A. M. Curry
QUALITY CONTROL SUPERVISOR

B. Ciaccio

SIGNED: Bonnie Ciaccio
PRODUCTION SUPERINTENDENT:

THIS NOTICE OF DEVIATION CANCELLED BY NOTICE OF RETURN DATED:

MGR.	MGR.	SUPR.	PROD.	PLNT	RES.			DATE

Form QC 48 8/

NOTICE OF DEVIATION

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: "Transite" Pipe Fiber Blends	PLANT & DIV.	Denison-Pipe
		SPEC NO.	TR-425-1
		DEV. NO.	25-81 (5)

DATE OF DEVIATION: 12/11/82	PAGES NO:	4		
TIME OF DEVIATION: 8:00 A.M.	DATE OF ISSUE	11/11/81		

TYPE OF DEVIATION: ☐ EMERGENCY ☒ AUTHORIZED CHANGE ☐ PLANT SIZE TRIAL

REASON: Use higher quality quartz silica.

AUTHORITY: C. B. Allen

STATE: 1. THAT PORTION OF SPECIFICATION FROM WHICH YOU PROPOSE TO DEVIATE.
2. WHAT YOU PROPOSE TO DO INSTEAD.
3. DATE THIS NOTICE OF DEVIATION WILL BE CANCELLED.

1.) Run fiber usage between 90 to 105%.

2.) Accept pipe produced down to 80% fiber level that met all other F.P.S.

3.) Until 3/11/83 or until specs are changed.

MTC 002677

SIGNED: Allan M Curry A. M. Curry
QUALITY CONTROL SUPERVISOR

SIGNED: B. Ciaccio
PRODUCTION SUPERINTENDENT:

Form QC 48 B

THIS NOTICE OF DEVIATION CANCELLED BY NOTICE OF RETURN DATED:

MGR	MGR	SUPR	PROD	PLNT	RES				DATE

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	4

III. ASSIGNED BLEND POINT VALUE

CANCELLED 3/16/81

Effective 10/9/64 and until further notice the point value of each standard operating blend at each plant location will have to be determined based on the assigned point value for the fibers on hand.

IV. FIBER USAGE LEVEL

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at Levels from 90 to 105%, with 100% as the Division standard. Should the Quality Control data over a sufficient period of time, clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

While the Material Standards Fiber Level for each product is 100%, the Plant Manager has the prerogative of using any fiber level between 90 and 105% of the 100% standard. Operations outside of the 90-105% usage level is permissible only after receipt of written approval of the deviation. (NOTE: A cautious approach should be taken to the use of fiber levels below 100%, with recognition of the need to comply with Finished Product Specifications and Division reject standards.)

The fiber level for couplings is not subject to variation. Operating levels should be at 100% only.

X- INDICATES CHANGE	-REASON:	Review							
AUTHORITY FOR CHANGE		Q/A Manager							
SUPERSEDES:		Same Spec, Page 6, Dated 11/11/77							
MGR. Q. Q. C	MGR. Q. C.	SUPV. Q. C.	PROD. DEPT.	PLNT. ENG.	MGR. LAB.				DATE ISSUED 1/19/81

CANCELLED
1/19/78

Scrap Addition to Fiber Blend

1. All scrap added must be reported.

2. a) Scrap may be added up to 20% of the virgin fiber, without deviation.
   b) Up to 30% scrap in 13' Non-Pressure Products may be used, without deviation.

3. Calculate the blend point value by dividing the blend points by the pounds of virgin fiber.

   Pounds of scrap added are not to be considered in this calulation.

   For example:

   BLEND M950

Fiber	Point Value	Lbs/Batch	Blend Points	Lbs/Batch
S Blue	80	110	8.8	110
4T30 Green	74	600	44.4	600
Cassiar AK	90	200	18.0	200
Amosite	35	100	3.5	100
			74.7	
Total Virgin Fiber		1010		1010
Scrap		0		150
Total Blend Pounds		1010		1160
Blend Point Value		74		74

(74.7 ÷ 1010 lbs)

CANCELLED

D. 10' Machine Non-Pressure Products

Manville and Waukegan use H-9 Blend
Denison and Marrero use H-19 Blend
Stockton uses H-22 Blend
Long Beach uses H-23 Blend until Cassiar CY is gone, then use H-9 Blend.

	H-9 Blends		H-19 Blend		H-22 Blend		H-23 Bland	
Fiber	lbs	%	lbs	%	lbs	%	lbs	%
Jeffrey 4-T	500	100.0					400	80.0
Advocate A-25			500	100.0	400	80.0		
Cassiar CY							100	20.0
Cassiar AY or CY					100	20.0		
TOTAL	500	100.0	500	100.0	500	100.0	500	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

Virgin fiber level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber Blendless Scrap}) \times 100}{\text{Total Batch Weight}}$$

% Cement and Silica - 100 Minus (% Fiber + % Scrap in Total Batch)

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

Thus: Blend H9-100 -9.0 (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9 -120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

MTC 002680

B. 10' Machine Non-Pressure Products

Fiber	Waukegan & Manville H-9 Blend Lbs.	%	Long Beach, Stockton, Denison & Marrero H-19 Blend Lbs.	%
Jeffrey 4	500	100.0	--	--
Advocat A-25	--	--	500	100.0
	500	100.0	500	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

Virgin Fiber Level will be expressed as a percentage of the toal batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber Blendless Scrap}) \times 100}{\text{Total Batch Weigh}}$$

% Cement and Silica - 100 Minus (% Fiber + % Scrap in Total Batch)

% Scrap in Total Batch = % Fiber x Derired % Scrap Addition

Thus: Blend H9-100 - 9.0 (100% Scrap and 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-9-120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

B. 10' Machine Non-Pressure Products

Fiber	H-8 Blend Lbs.	H-8 Blend %	H-9 Blend Lbs.	H-9 Blend %	H-19 Blend Lbs.	H-19 Blend %
Jeffrey 4	300	54.5	500	100.0	---	-----
Advocate A25	100	18.2	---	-----	500	100.0
Advocate A35	150	27.3	---	-----	---	-----
	550	100.0	500	100.0	500	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

Virgin Fiber Level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber Blend} - \text{Scrap}) \times 100}{\text{Total Batch Weigh}}$$

% Cement and Silica = 100 Minus (% Fiber + % Scrap in Total Batch)

% Scrap in Total Batch = % Fiber x Desired % Scrap Addition

Thus: Blend H1-100 - 9.0 (100% Scrap - 9.0% Virgin Fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-1-120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

B. 10' Machine Non-Pressure Products

Blend Formula H-8

Fiber	Lbs.	%
Jeffrey	300	54.5
Advocate A25	100	18.2
Advocate A35	150	27.3
	550	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

Virgin Fiber Level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formula (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber Blend-Scrap}) \times 100}{\text{Total Batch Weigh}}$$

% Cement and Silica = 100 minus (% Fiber + % scrap in total batch)

% Scrap in Total Batch = % Fiber x desired % scrap addition

Thus: Blend H1-100 - 9.0 (100% scrap = 9.0% virgin fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-1-120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

[illegible] TO [illegible] RCH [illegible] (MM)

X— INDICATES CHANGE —REASON: Depletion of Stock of Munro Fiber

AUTHORITY FOR CHANGE: J. B. McCarty's Letter of 7/27/64

SUPERSEDES: Same Spec., Same Page Dated 10/2/62, Devn. DHQ 18, 8/5/64

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT	PLNT. ENG.	RES. LAB.			DATE ISSUED: OCT 16 1964

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

B. 10' Machine Non-Pressure Products:

X

Blend Formula H-4

Fiber	Lbs.	%
Jeffrey	300	54.5
Munro	250	45.5
	550	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

Virgin Fiber Level will be expressed as a percentage of the total batch weight. See 425-2, pages 4 and 5 for cost standard.

Formulae (Non-Pressure Furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber Blend} - \text{Scrap}) \times 100}{\text{Total Batch Weight}}$$

% Cement and Silica = 100 minus (% fiber + % scrap in total batch)

% Scrap in Total Batch = % Fiber x desired % scrap addition.

Thus: Blend H1-100 - 9.0 (100% scrap - 9.0% virgin fiber)

% Fiber	% Scrap	% Binder	Total Batch %
9.0	9.0	82.0	100.0

H-1-120-9 Blend (120% Scrap - 9% Virgin Fiber)

9.0	10.8	80.2	100.0

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	A,C,J,W,D,M,X
		SPEC NO.	425-1
		PAGE NO.	

B. 10" Machine Non-Pressure Products

Blend Formula M-3

CANCELLED

Fiber	Lbs.	%
Blue	50	9.1
Jeffrey	200	36.4
Munro	300	54.5
	550	100.0

Scrap addition may be from 0% to 160% in increments of 20%. 100% added scrap is cost standard.

Virgin Fiber level will be expressed as a percentage of the total batch weight. See 425-2 Pages 4 & 5 for cost standard.

Formulae (non-pressure furnish):

$$\% \text{ Virgin Fiber} = \frac{(\text{Fiber blend-scrap}) \times 100}{\text{Total batch weight}}$$

% Cement & Silica = 100 minus (% fiber + % scrap in total batch)

% Scrap in total batch = % fiber X desired % scrap addition

Thus: Blend M1 - 100 - 9.0 (100% scrap - 9.0% virgin fiber)

% Fiber	% Scrap	% Binder	Total batch %
9.0	9.0	82.0	100.0
M-1-120-9 Blend (120% scrap - 9% virgin fiber)			
9.0	10.8	80.2	100.0

RETURN TO J-M RESEARCH FILE ROOM

X - INDICATES CHANGE — REASON:	General Revision to Include Point Values
AUTHORITY FOR CHANGE	W. L. Van Derbeek's Letter of 1-25-62
SUPERSEDES:	Same Spec., Issued 9-1-61

MTC 002685

DIV. Q.C.	MGR. Q.C.	SUPR. Q.C.	HEAD, S.T.	PLNT. Q.C.	[illegible]			DATE 2-1-62

Form 332 J-M U.S.A.

JOHNS-MANVILLE MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe Fiber Blends	PLANT & DIV.	PIPE
		SPEC NO.	TR-425-1
		PAGE NO.	4

III. ASSIGNED BLEND POINT VALUE

Effective 10/9/64 and until further notice the point value of each standard operating blend at each plant location will have to be determined based on the assigned point value for the fibers on hand.

CANCELLED
11/11/81

X IV. FIBER USAGE LEVEL

1.0 Pipe

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at levels from 90 to 105%, with 100% as the Division standard. Should the Quality Control data over a sufficient period of time, clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

While the Material Standards Fiber Level for each product is 100%, the Plant Manager has the prerogative of using any fiber level between 90 and 105% of the 100% standard. Operations outside of the 90-105% usage level is permissible only after receipt of written approval of the deviation. (NOTE: A cautious approach should be taken to the use of fiber levels below 100%, with recognition of the need to comply with Finished Product Specifications and Division reject standards.)

2.0 CPLG

The fiber level for couplings is not subject to variation. Operating levels to be at 100% only.

X- INDICATES CHANGE — REASON: X-Emphasize CPLG Fiber level

AUTHORITY FOR CHANGE: C.B. Allen & Q/A Manager

SUPERSEDES: Same Spec, Page 4, Dated 1/19/81

MGR. G.Q.C	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. MGR.	RES. LAB.				DATE ISSUED 3/16/81

MTC 002686

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT: TRANSITE Pipe [illegible] Blends	PLANT & DIV.	[illegible]
		SPEC NO.	[illegible]
		PAGE NO.	[illegible]

1. [illegible] VALUE [illegible]

The Point Value Test procedure has been adopted by the Pipe Division for comparing the strength giving properties of various grades of Asbestos Fibers when used in the manufacture of Asbestos-Cement Pipe.

Under a joint Asbestos Fiber Division - Pipe Division agreement, specific grades of fibers of known point value, have been allocated for use in TRANSITE Pipe. [illegible] is controlling the quality of these fibers by daily Point Value Tests and [illegible] Test Screen Tests. [illegible] Fiber vendors are also supplying fibers to [illegible] Test Specification.

Effective 1/1/62, fibers allocated for use in pipe will meet the following point value specifications.

Point Value

Fiber	Average	Range
Jeffrey 4D, 4T	60	55 - 65
Jeffrey 4T30	70	68 - 73
[illegible] -100	60	55 - 65
[illegible]	[illegible]	75 - 85

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X - INDICATES CHANGE --REASON: General Revision to Include Point Values

AUTHORITY FOR CHANGE: [illegible] letter of 1-25-62

SUPERSEDES: [illegible], issued 9-1-61

MTC 002687

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. [illegible]	PLNT. [illegible]			DATE [illegible]

III. ASSIGNED BLEND POINT VALUE

Effective 10/9/64 and until further notice the point value of each standard operating blend at each plant location will have to be determined based on the assigned point value for the fibers on hand.

IV. FIBER USAGE LEVEL

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at levels from 90 to 105%, with 100% as the Division standard. Should the Quality Control data over a sufficient period of time, clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

While the Material Standards Fiber Level for each product is 100%, the Plant Manager has the prerogative of using any fiber level between 90 and 105% of the 100% standard. Operations outside of the 90-105% usage level is permissible only after receipt of written approval of the deviation. (NOTE: A cautious approach should be taken to the use of fiber levels below 100%, with recognition of the need to comply with Finished Product Specifications and Division reject standards.)

The fiber level for couplings is not subject to variation. Operating levels should be at 100% only.

III. ASSIGNED BLEND POINT VALUE

Effective 10/9/64 and until further notice the point value of each standard operating blend at each plant location will have to be determined based on the assigned point value for the fibers on hand.

IV. FIBER USAGE LEVEL

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at four levels (90, 95, 100, and 105%) with 100% as the Division standard. Should the Quality Control data over a sufficient period of time, clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

Effective 10/22/62 and until further notice, the authorized fiber level at which the plants should operate are as follows:

	FIBER LEVEL - %			
Plants	90	95	100	105
Manville			X	
Stockton			X	
Denison			X	
Long Beach			X	
Marrero			X	
Waukegan			X	

X

X— INDICATES CHANGE —REASON:	Stockton Using 100% Fiber Level
AUTHORITY FOR CHANGE	Correction
SUPERSEDES:	Same Page, Same Spec., Dated 10-16-64

MGR. T.Q.C.	SUPT. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLANT MGR.	REG. ENG.			DATE ISSUED	12-7-65

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

III. ASSIGNED BLEND POINT VALUE

X Effective 10/9/64 and until further notice the point value of each standard operating blend at each plant location will have to be determined based on the assigned point value for the fibers on hand.

IV. FIBER USAGE LEVEL

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at four levels (90, 95, 100, and 105%) with 100% as the Division standard. Should the Quality Control data over a sufficient period of time, clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

Effective 10/22/62 and until further notice, the authorized fiber level at which the plants should operate are as follows:

	FIBER LEVEL - %			
Plants	90	95	100	105
Manville			X	
Stockton		X		
Denison			X	
Long Beach			X	
Marrero			X	
Waukegan			X	

X— INDICATES CHANGE	—REASON: Instructions in Use of 4 Grade Asbestos Fibers
AUTHORITY FOR CHANGE	J. B. McCarty's Letter of 9/1/64
SUPERSEDES:	Same Spec., Same Page Dated 10/10/63

MGR. G.Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. ENG.	RES. LAB.			DATE ISSUED 10-16-64

Form 3332-A Pld. in U.S.A.

III. ASSIGNED BLEND POINT VALUE:

Effective 1/7/63 and until further notice the point value of each standard operating blend is shown below for each plant location.

	STANDARD OPERATING BLENDS	
	M-623**	M-626**
Plant	3" -16"	18"-36"
Manville	59*	62
Stockton	66	—
Denison	66	—
Long Beach	66	67
Marrero	59	62
Waukegan	59*	62

*Actual usage may be 66 or 59 depending on fiber availability.
**Plants using Special 4T30 with 74 point value, use M-623 and M-626 blend point values of 69.

IV. FIBER USAGE LEVEL:

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at four levels (90, 95, 100 and 105%) with 100% as the Division standard. Should the Quality Control data over a sufficient period of time, clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

Effective 10/22/62 and until further notice, the authorized fiber level at which the plants should operate are as follows:

	FIBER LEVEL - %			
Plants	90	95	100	105
Manville			X	
Stockton		X		
Denison			X	
Long Beach			X	
Marrero			X	
Waukegan			X	

III. ASSIGNED BLEND POINT VALUE:

Effective 1/7/63 and until further notice the point value of each standard operating blend is shown below for each plant location.

Plant	STANDARD OPERATING BLENDS M-623** 3"-16"	M-626** 18"-36"
Manville	60*	64
Stockton	67	-
Denison	67	-
Long Beach	67	69
Marrero	60	64
Waukegan	60*	64

*Actual usage may be 67 or 60, depending on fiber availability.
**Plants using Special 4T30 with 74 point value, use M-623 and M-626 blend point values of 71.

IV. FIBER USAGE LEVEL:

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at four levels (90, 95, 100, and 105%) with 100% as the Division standard. Should the Quality Control data over a sufficient period of time, clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

Effective 10/22/62 and until further notice, the authorized fiber level at which the plants should operate, are as follows:

Plants	FIBER LEVEL - % 90	95	100	105
Manville			X	
Stockton		X		
Denison			X	
Long Beach			X	
Marrero			X	
Waukegan			X	

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X— INDICATES CHANGE —REASON: Lower Point Value of M-100 Fiber

AUTHORITY FOR CHANGE: J. B. McCarty's Letter of 4/18/63

SUPERSEDES: Same Spec., Same Page Dated 1/10/63

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PERT. FM.	RES. V.P.			DATE ISSUED 4/23/63

Form 3-54-2 Pd. In U.S.A.

III. ASSIGNED BLEND POINT VALUE:

Effective 1/[illegible]/63 and until further notice, the point value of each standard operating blend is shown below for each plant location.

Standard Operating Blends

	Plant	M-623 3"-16"	M-626 18"-36"
X	Manville	61*	65
X	Stockton	68	-
X	Denison	68	-
X	Long Beach	68	70
X	Marrero	61	65
X	Waukegan	61*	65

*Actual usage may be 68 or 61, depending on fiber availability.

IV. FIBER USAGE LEVEL:

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at four levels (90, 95, 100 and 105%) with 100% as the Division standard. Should the Quality Control data over a sufficient period of time, clearly indicate a significant change from standard, authorization for a change in fiber level will be considered

Effective 10/22/62 and until further notice, the authorized fiber level at which the plants should operate, are as follows:

Fiber Level - %

Plants	90	95	100	105
Manville			X	
Stockton		X		
Denison			X	
Long Beach			X	
Marrero			X	
Waukegan			X	

RETURN TO J-M RESEARCH FILE ROOM

X— INDICATES CHANGE —REASON:	Increase Point Value of M-100 Fiber
AUTHORITY FOR CHANGE	J. B. McCarty's Letter of 12/28/62
SUPERSEDES:	Same Spec., Same Page Dated 11/30 62

DIR.	MGR.					DATE ISSUED	1/30 63

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

III. ASSIGNED BLEND POINT VALUE:

Effective 10/1/62 and until further notice, the point value of each standard operating blend is shown below for each plant location.

Standard Operating Blends

Plant	M-623 3"-16"	M-626 18"-36"
Manville	60	64
Stockton	67	-
Denison	67	-
X Long Beach	67	68
Marrero	60	64
Waukegan	60	64

IV. FIBER USAGE LEVEL:

Analysis of routine Quality Control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at four levels (90, 95, 100 and 105%) with 100% as the Division standard. Should the quality control data over a sufficient period of time clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

Effective 10/22/62 and until further notice, the authorized fiber level, at which the plants should operate are as follows:

	Fiber Level - %			
Plants	90	95	100	105
Manville			X	
Stockton		X		
Denison			X	
Long Beach			X	
Marrero			X	
Waukegan			X	

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Prd. in U.S.A.

X— INDICATES CHANGE —REASON:	Long Beach Changed to 4T30 Fiber
AUTHORITY FOR CHANGE	Division Fiber Allotment
SUPERSEDES:	Same Spec., Same Page Dated 10/3/62

Form 333-2

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT. FIN.	REG. ENG.			DATE ISSUED	11/30/62

III. ASSIGNED BLEND POINT VALUE:

Effective 10/1/62 and until further notice, the point value of each standard operating blend is shown below for each plant location.

Std. Operating Blends

X

Plant	M-623 3"-16"	M-626 18"-36"
Manville	60	64
Stockton	67	68
Denison	67	68
Long Beach	60	64
Marrero	60	64
Waukegan	60	64

IV. FIBER USAGE LEVEL:

Analysis of routine quality control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage levels. To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment, etc. also have an effect on ultimate recovery, the fiber usage standards have been established at four levels (90, 95, 100 and 105%) with 100% as the Division standard. Should the quality control data over a sufficient period of time clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

X

Effective 10/22/62 and until further notice, the authorized fiber level, at which the plants should operate are as follows:

	Fiber level - %			
Plants	90	95	100	105
Manville			X	
Stockton		X		
Denison			X	
Long Beach			X	
Marrero			X	
Waukegan			X	

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Form 333-2

X— INDICATES CHANGE —REASON:	Silicate Fiber Treatment Blend Change
AUTHORITY FOR CHANGE	J. B. McCarty's letter of 9/24/62
SUPERSEDES:	Same Spec., Same Page Dated 3/2/62

MTC 002695

DIR. Q.C.	MGR. Q.C.	SUPR. Q.C.	PROD. SUPT.	PLNT PRN.	DATE ISSUED 10/3/62

III. Assigned Blend Point Value

Effective 2/1/62 and until further notice, the point value of each standard operating blend is shown below for each plant location:

Std. Operating Blends

Plant	M-625 3"-8"	M-626 10"-16"	M-627 18"-36"
Manville	67	68	69
Stockton	67	68	69
Denison	63	64	65
Long Beach	63	64	65
Marrero	63	64	65
Waukegan	63	64	65

IV. Fiber Usage Level

Analysis of routi e quality control data has established that a significant relationship exists between hydrostatic and flexure test losses and fiber usage level . To permit a tighter control of inspection and test rejects, fiber usage is to be allocated in accordance with the calculated unit stress at routine test loads. However, since we recognize that other variables, such as cement, machine conditions, equipment etc., also have an effect on ultimate recovery, the fiber usage standards have been established at four levels (90, 95, 100 and 105%) with 100% as the Division standard. Should the quality control data over a sufficient period of time clearly indicate a significant change from standard, authorization for a change in fiber level will be considered.

Effective 2/1/62 and until further notice, the authorized fiber level, at which the plants should operate are as follows:

Fiber Level - %

Plants	90	95	100	105
Manville			X	
Stockton		X		
Denison			X	
Long Beach			X	
Marrero			X	
Waukegan			X	