

Manville Pkg. & Fric. Mtls. Plant
March 24, 1970

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MANUFACTURING SPECIFICATIONS
CANCELLATIONS - DEPT. 160

As woven Friction Materials are no longer being produced at Manville Plant, the following specifications are no longer active:

<u>Spec. No.</u>	<u>Title</u>	<u>Page</u>	<u>Date</u>
✓ RR-455	Sheeted F-1025 Compound	1	10/12/60
✓ SOL-11	BRP-8916 Resin Solution (formerly BR-14916)	1	8/24/66
✓ RR-436	Resin Treated and Coated Cloth for 600 CR (Endless) F&C Facings	1 & 2	12/7/60
✓ RR-435 m	Paradura Treated and Friction Coated Asbestos Cloth (for 600 F&C Brake Lining)	1 & 2	7/25/66 & 2/20/69

COMPOUND & CEMENT SECTION

✓ F-1025 Cement	1	10/17/67
✓ F-1025 Mill Procedure	1	3/18/68
✓ F-1020 Mill Procedure	1 & 2	6/7/68 & 6/21/68

Please cancel and remove from your files.

E. S. BOGART

/JG

cc: D. Condren - Box 37

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT:	PLANT & DIV.	MPF 160 120
	Paradura Treated and Friction Coated Asbestos Cloth (For 600 F & C Brake Lining)	SPEC NO.	RR 435 PK 124
		PAGE NO.	1

X FORMULA:

<u>Spec. No.</u>	<u>Material</u>	<u>Approx. %</u>
M.S. TX-42	CQB-2708 Wire Inserted Cloth 49-1/8" Wide	
M.S. SOL-6	Paradura Solution	
M.S.	F-1020-1 Compound	51.0
		100.0%

MANUFACTURING INSTRUCTIONS:

1. Dry Cloth thoroughly by passing thru cell drier (35 - 40 psi steam, medium speed). If a roll loses more than 3/4%, re-dry through cell drier.
2. Impregnate cloth with Paradura Solution by passing once through Devine Machine. Lower temperature should be kept above a minimum 200°F.
3. Dry impregnated cloth by passing through cell drier (35 - 40 psi steam, medium speed). Re-run 2 rolls through cell drier; if loss exceeds 1 lb. per roll on 2 roll sample, re-run balance of rolls in lot.
4. Dry impregnated cloth in dry house for a minimum of 48 hours at 210°F.

NOTE: Paradura pickup should be 10% - 14%

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5. Compound Warm Up

- (a) Use a cool mill - (Below 42°F.)
- (b) Break down enough compound (approx. 150 lbs.) to cover center roll on calender with a 3/16" coating.
- (c) Warm up approx. 150 lbs. of compound and drop in pan.
- (d) Warm up another 150 lbs.
- (e) Start calendering
- (f) Continue to warm up rubber so that 150 lbs. of rubber is on the calender and 150 lbs. is on the warm up mill.

X INDICATES CHANGE — REASON: Retyping to eliminate #189 Cloth and to show cool warm mill.

AUTHORITY FOR CHANGE Up-dated

SUPERSEDES: Page 1 of same specification issued 11/9/56

DIR. Q.C.	MGR. Q.C.	SUPR. /Q.C.	PROD. SUPT.	PLNT. FIN.	RES. /HAG	DATE ISSUED	7/25/66
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TEXTILES

DEPT.

Yarn Codes

TX-0.1

PAGE NO.

MANVILLE

PLANT

#1

YARN CODES

1. Grade:

The first one or two digits give the grade of yarn as follows:

Number	Grade	Asbestos Content
10	Commercial Grade	75 - 80% (to but not incl.)
12	Underwriter's Grade	80 - 85% "
Navy	Grade A	85 - 90% "
5	Grade AA	90 - 95% "
2	Grade AAA	95 - 98% "
S	Grade AAAA	98 - 100% "

2. Weight:

The last two digits give the cut (weight) of yarn in hundreds of yards per pound.

Example:

- (a) 509 Yarn would be Grade AA (90-95% Asbestos) which is 9 cut or 900 yards per pound.
- (b) 1012 Yarn would be Commercial Grade 75-80% Asbestos 12 cut.

3. Plied Yarn Without Wire:

Any number listed after a diagonal (1) indicates the number of plies. Single strand yarn will not have any symbol.

Example:

1014/2 would be 2 strands of 75-80% Asbestos Yarn, 14 cut plied together.*

*Note: To obtain finished weight of plied yarn without wire.

- (a) Determine weight in grains per yard of single yarn by dividing yards per pound value into 7000.

$$\frac{7000}{1400} = 5 \text{ grains/yd.}$$

- (b) Multiply single yarn weight by number of plies.

$$2 \text{ plies} \times 5 \text{ grains/yd.} = 10 \text{ grains/yd.}$$

X- INDICATES CHANGE - REASON: ~~New Specification~~

AUTHORITY -
FOR CHANGE

~~Additional Information.~~

FILE-HOLDERS

Ind. Eng.

Wkg.

SUPR.
QUAL.
CONTROLPROD.
SUPT.PLANT
FINANCE
OFFICERESEARCH
LAB.MGR.
QUAL.
CONTROLDIR.
QUAL.
CONTR.

SUPSEDES: None. Enter in index and file in numerical order.

DATE ISSUED

FEB 9 1952

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT.	PLANT & DIV.	MVL-110
	CLOTH CODES	SPEC NO.	4613-1
		PAGE NO.	1 of 3

I. GENERAL DESCRIPTION:

This specification is for the purpose of showing how cloth is coded at Manville Factory.

II. EXPLANATION:

This order of explanation is from left to right.

CANCELLED
by ltr 2/21/86

1. When using 2 letters:

- (a) 1st letter indicates type of warp and fill yarn. (Table #1)
- (b) 2nd letter indicates ply of warp and fill yarn. (Table #2)
- (c) See examples.

2. When using 3 letters:

- (a) 1st letter indicates type of warp yarn. (Table #1)
- (b) 2nd letter indicates ply of warp and fill yarn. (Table #2)
- (c) 3rd letter indicates type of fill yarn. (Table #1)
- (d) See examples.

3. First 1 or 2 numbers:

- (a) The first one or two numbers indicates the Reed Code. (Table #3)
- (b) In the Reed Code the numbers listed before the diagonal indicates the number of reeds and the numbers listed after the diagonal indicates the number of ends per dent.
- (c) See examples.

4. Last 2 numbers:

- (a) The last 2 numbers indicate the number of picks per inch.
- (b) See examples.

5. Underwriters Code:

- (a) Cloth to Underwriter's Specification add an X after the letters and numbers.
- (b) See examples.

III. TABLES:

TABLE #1 (1st and 3rd letter)

CODE	YARN	CODE	YARN
A	1004	N	512
B	1006	O	514
C	1008	P	516
D	1010	Q	518
E	1012	R	520
F	1014	S	204
G	1016	T	206
H	1018	U	208
I	1220	V	210
J	504	W	212
K	506	X	214
L	508	Y	216
M	510	Z	220

X- INDICATES
CHANGE -REASON:

Updating

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FOR CHANGE

D. S. Fischer

SUPERSEDES:

Page 1, same specification (TX-0:2) issued 3/30/61

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Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT.	PLANT & DIV.	MVL-110
	CLOTH CODES	SPEC NO.	4613-1
		PAGE NO.	2 of 3

III. TABLES: (Cont'd)

TABLE #2 (2nd letter)

CODE	WARP	FILL	CODE	WARP	FILL
				YARN METAL	YARN METAL
A	1	1	N	1 - 1	1 - 1
B	1	2	O	2 - 1	1 - 1
C	1	3	P	2 - 1	2 - 1
D	2	1	Q	2 - 2	1 - 1
E	2	2	R	2 - 2	2 - 1
F	2	3	S	2 - 2	2 - 2
G	3	1	T	3	4
H	3	2	U	2	4
I	3	3	V	2 - 2	3 - 2
J	4	1	W	2 - 1	2 - 2
K	4	2	X	3 - 2	3 - 2
L	4	3	Y	2 - 2	2 - 4
M	4	4	Z	3 - 2	2 - 2

TABLE #3

CODE	REED	CODE	REED	CODE	REED	CODE	REED
1	1/1	28	8/2	55	15/3	81	1/5
2	2/1	29	9/2	56	16/3	82	2/5
3	3/1	30	10/2	57	17/3	83	3/5
4	4/1	31	11/2	58	18/3	84	4/5
5	5/1	32	12/2	59	19/3	85	5/5
6	6/1	33	13/2	60	20/3	86	6/5
7	7/1	34	14/2	61	1/4	87	7/5
8	8/1	35	15/2	62	2/4	88	8/5
9	9/1	36	16/2	63	3/4	89	9/5
10	10/1	37	17/2	64	4/4	90	10/5
11	11/1	38	18/2	65	5/4	91	11/5
12	12/1	39	19/2	66	6/4	92	12/5
13	13/1	40	20/2	67	7/4	93	13/5
14	14/1	41	1/3	68	8/4	94	14/5
15	15/1	42	2/3	69	9/4	95	15/5
16	16/1	43	3/3	70	10/4	96	16/5
17	17/1	44	4/3	71	11/4	97	17/5
18	18/1	45	5/3	72	12/4	98	18/5
19	19/1	46	6/3	73	13/4	99	19/5
20	20/1	47	7/3	74	14/4	100	20/5
21	1/2	48	8/3	75	15/4	101	1/6
22	2/2	49	9/3	76	16/4	102	2/6
23	3/2	50	10/3	77	17/4	103	3/6
24	4/2	51	11/3	78	18/4	104	4/6
25	5/2	52	12/3	79	19/4	105	5/6
26	6/2	53	13/3	80	20/4	106	6/6
27	7/2	54	14/3				

X- INDICATES
CHANGE -REASON:

Updating

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Page 2 same specification (TX-0:2) issued 3/30/61

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PLNT.
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4/25/75

Johns-Manville MANUFACTURING SPECIFICATION	PRODUCT	PLANT & DIV.	MVL-110
	CLOTH CODES	SPEC NO.	4613-1
		PAGE NO.	3 of 3

IV. EXAMPLES:

(a) DE-2909

D = 1010 warp and fill yarn (Table #1)
 E = 2 ply warp and 2 ply fill (Table #2)
 29 = 9 reed, 2 ends per dent (Table #3)
 09 = 9 picks per inch.

(b) CQB-2810

C = 1008 warp yarn (Table #1)
 Q = Warp 2 plies of yarn and 2 plies of wire - in fill 1 ply of yarn and 1 ply of wire
 B = 1006 fill yarn (Table #1)
 28 = 8 reed, 2 ends (Table #3)
 10 = 10 picks per inch.

(c) Underwriters'

Cloth to Underwriters' Specification, add "X" after letters and numbers.

Example - DE-3010X

D = 1210 warp and fill yarn (Table #1)*
 E = 2 ply warp and 2 ply fill (Table #2)
 30 = 10 reeds, 2 ends (Table #3)
 10 = 10 picks per inch
 X = Underwriters' Grade Yarn*

* NOTE: The letter "D" calls for 1010 yarn, however, the letter "X" changes the yarn to 1210 yarn which is the same yarn weight but of Underwriters' Grade.

Form 333 in U.S.A.

INDICATES X- CHANGE		-REASON: Updating		PLEASE RETURN TO JM RESEARCH INFORMATION CENTER	
AUTHORITY FOR CHANGE		D. S. Fischer			
SUPERSEDES		Page 1 of 1 Same specification (TX-0:2) issued 3/30/61			
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