

**JOHNS-MANVILLE RESEARCH
AND ENGINEERING CENTER**

Report No. 425-T-857

Date August 12, 1963



Title: AUSTRALIAN BLUE GRADE 3F FIBER FOR USE IN PIPE

SUMMARY

At the request of K. J. Whalen, a sample of Australian blue fiber grade 3F, has been evaluated for use in pipe by fiber analyses and by sag cake testing.

Fiber analyses showed that the Australian blue, grade 3F, is an improvement over Australian blue, grade 1, received in 1949. The Australian blue, grade 3F, is similar to Cape S blue by fiber analyses.

Sag cake testing showed that there is no significant difference in formation and strength properties between the Australian grade 3F, and the Australian grade 1. Compared with a Cape S blue received from the fiber lab, the Australian grade 3F showed slower filtration time, but the same sag and strength. Compared with a Cape S blue received from I building, the Australian grade 3F showed the same filtration time and sag but lower strength. When using the Australian blue fibers, the sag cake density tends to be higher than when using the Cape S blue fibers.

Based on these results, the Australian blue fiber, grade 3F, appears to be satisfactory for use in pipe. Plant trials are recommended before acceptance or rejection of this source.

Contents: Summary and Appendix.

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APPENDIX

Table 1. Fiber Analyses - (S. J. Barnosky's letter to S. M. Quint 8/6/63)

	Q.S. 16oz. (oz.)			Air Analysis (%)			McNett (%)			Buoyancy		Tappi Elutriation		Surface area (cm ² /gm)				
	2M	4M	10M PAN	Fiber	Dust	Rock	+4M	+14M	+35M	+200M	-200M	1hr	3hr		(cc)	(sec)	(%)	Crude Grit
Australian Blue	10.9	3.1	1.6	0.4	90.2	3.8	6.0	65.7	2.4	1.7	2.5	27.7	700	660	10	60.8	0.6	3600
Grade 3F Rec'd 7/63																		
Australian Blue	0.6	3.9	5.9	5.6	59.8	27.5	12.7	70.8*	5.0	2.2	2.9	19.1	160	160	3	55.4	13.8	**
No. 1, 1949																		
Cape S Blue	7.0	4.0	3.4	1.6	92.8	3.3	3.9	45.9	18.3	8.1	7.9	19.8	1070	1040	33	58.4	0.6	3600
Fiber lab																		
Fe # 2556																		

* high +4 mesh due to rock

** unable to record

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Table 2. Sag Cake Data

[illegible]

Test method JM 425:11

Composition: 20% fiber, as above -- all lx entoleteder
30% New Jersey silica 5/57
50% National 3/63

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