

MEMORANDUM

BB- Mr. Hixon
 BBR- Mr. Frazier
 BBR- Mr. Wood
 BE- Dr. Schnizer
 BBQ- Mr. Homan
 MB- Mr. Clay
 MK- Mr. Marsh
 MS- Mr. Colvin
 MJ- Mr. Miller
 MP- Mr. Suva
 PB- Mr. Reber
 PK- Mr. Davis
 PS- Mr. Burris
 PJ- Mr. Dickinson
 PBL- Mr. Clark
 PKL- Mr. Price
 PSL- Mr. Kirklin
 PJL- Mr. Sutton

Pacific Division

Mr. McClung
 Mr. Fitzpatrick
 Mr. McAnulty
 Mr. Keyser
 Mr. Koopmann
 Mr. Costa

Reply to _____ Date 2/23/77 From BBH To _____
 Subject ACCELERATED WEATHERING OF COATING ASPHALTS

Accelerated weather testing of unfilled and filled
 asphalts representing the coatings being used by the
 various mills during mid-1976 have been completed.
 The tests were run of 30 to 33 mil coatings applied
 to aluminum panels. The weathering took place in a
 Model DMCR Weather-Ometer according to ASTM D 529-62,
 Cycle A.

<u>Unfilled</u>			<u>Stabilized</u>		
<u>Mill</u>	<u>Sample</u>	<u>Cycles to Failure</u>	<u>Mill</u>	<u>Sample</u>	<u>Cycles to Failure</u>
FK	July	47	FK	July	110
FB	4/2	47	FB	4/2	103
FB	3/5	47	FJ	March	103
FJ	3/10	47	FB	3/5	89
FJ	March	47	FJ	3/10	82
FS	July	45	FS	July	82
FJ	3/23	39	FJ	3/23	62
FM	3/19	35	FW	3/30	56
FW	3/22	34	FW	3/22	47
FW	3/30	34	FW	5/2	47
FW	5/2	34	FM	3/19	47
FM	4/14	29	FM	4/14	32
F0	3/25	19	F0	3/25	26
F0	3/31	17	F0	3/31	26

MEMORANDUM

Reply to _____ Date _____ From _____ To _____
Subject _____ - 2 -

As is usually the case, FK's coatings (averaging filled and unfilled) rank the highest. FB and FS coatings are nearly as durable. With the exception of one out of three coatings tested, FJ also falls into this top category.

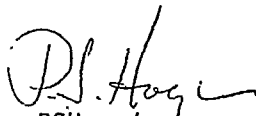
Among the Pacific Division coatings, the samples from Wilmington averaged slightly better durability than those from Martinez. The samples from F0 showed quite early failure.

Stain test results indicated that the most resistant coatings were from FK and FS followed by FB and one each of the coatings from FJ and FM. The least stain resistant was a phosphoric acid catalysed coating from FM.

NOTE: Many of the unfilled coatings in this series were sampled at their respective plants when shingles were being produced which were also sampled and sent to Shreveport for exposure on the test decks.

This is an attempt to correlate the durability of shingles with the weatherability of the particular asphalt coating used in their construction. Cross-referenced records are being kept to make this comparison possible.

) Reference: BBH Book #236, pp 30 & 31


PSHoyer/rp

ASPHALT COATING DURABILITY - CYCLES TO FAILURE IN AWT

Trans Section		S.P. °F.	Pen 0.1 mm	Unfilled		53% Filled	
				Sample	Cycles	Sample	Cycles
4.3	Portland 3/31 Shell Average Filler	224	18	890-1 -2	17 17 17	891	26
						Limestone	
3.8	Norwood 3/5 Exxon/Shell Venez. Average Filler	224.5	19	892-1 -2	47 47 47	893	89
						FBW Dust	
3.8	Norwood 4/2 Exxon/Shell Venez. Average Filler	227	18	894-1 -2	47 47 47	895	103
						FBW Dust	
3.8	Martinez 4/14 Shell Persian #10 Average Filler	222	15	896-1 -2	29 29 29	897	32
						Mart. Filler	
4.5	Martinez 3/19 Shell Phos. Acid Cat. Average Filler	224	18	898-1 -2	35 35 35	899	47
						Mart. Filler	
3.0	Charleston, July Exxon Venezuelan Average Filler	222	18.5	900-1 -2	47 47 47	901	110
						FKW Dust	
3.5	Shreveport, July East Texas, Ark. Average Filler	225	15	902-1 -2	45 45 45	903	82
						Glenwood	
4.0	Perth Amboy 3/10 Trumbull Average Filler	233	18.5	876-1 -2	47 47 47	877	82
						GAF B 65	
4.0	Perth Amboy 3/23 Trumbull Average Filler	--	--	878-1 -2	37 41 39	879	62
						GAF B 65	
3.8	Perth Amboy, March Trumbull Average Filler	226	18	880-1 -2	47 47 47	881	103
						GAF B 65	

Asphalt Coating Durability - Cycles to Failure in AWT

2.

Texas Strip		S.P. °F.	Pen 0.1 mm	Unfilled		53% Filled	
				Sample	Cycles	Sample	Cycles
4.0	Wilmington 3/22 Union Oil Average Filler	235	15	882-1 -2	34 34 34	883	47
						3M Filler	
4.0	Wilmington 3/30 Union Oil Average Filler	233	16	884-1 -2	34 34 34	885	56
						3M Filler	
4.0	Wilmington 5/2 Union Oil Average Filler	237	14	886-1 -2	34 34 34	887	47
						3M Filler	
-	Portland 3/25 Shell Average Filler	218	20	888-1 -2	19 19 19	889	26
						Limestone	

P.S. Hoye
PSHoye/rp
2/23/77
)