

Cross References:

VC-5269
Floor and Deck Enamels
Varnishes
G-110

C-1

Dr. R. B. Davis, Flint
Mr. C. D. Neff, Everett
Mr. H. F. Bodin, Fort Madison
Mr. P. J. Griffin, So. San Fran.
Mr. J. B. Bullitt, Lab.
Mr. J. W. Iliff, Lab.
Mr. C. R. E. Merkle, Lab.
Mr. H. G. Stauffer, Lab.
Mr. C. W. Clark, Chicago
Mr. D. G. Kennedy, Plant
Dr. A. J. Hemmer, Plant
Mr. S. Graves, Lab.
Mr. H. F. Ether, Lab.

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Philadelphia Laboratory
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MEMORANDUM REPORT #M-37

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VC-5269 INTERIOR FLOOR AND DECK VEHICLE

During the war, VC-5269, Interior Floor and Deck Vehicle, a 25 gallon oil length varnish was formulated with G-110 Gum Substitute, and bodied Pittsburgh Plate Glass Selected #200 Oil. Since the stocks of G-110 have been depleted it has become necessary to develop a replacement formula at the same cost and quality as the original formula.

The varnishes evaluated in the course of this work, their gum composition, cost and film properties, as well as the properties of the pigmented products made from these vehicles are shown in the attached chart.

The varnish which most closely compared with the G-110 varnish control used G-328, Amberol BS-1/G-43, ester gum = 1/1, having equal cost and slightly better initial film properties than the control. The VC-5269 analog using G-55, "Pentalyn G" had approximately equal initial film properties but a higher cost than the control.

As G-113, Velsicol AD-6-3, a heat reactive hydrocarbon gum had the same cost as G-110 and was claimed to have good properties, it was included in our study; but, it produced varnishes which were inferior in film properties, particularly color, hardness and water resistance. Furthermore, a blend of G-328 in a 1/1 ratio did not improve the Velsicol AD-6-3 varnish sufficiently to bring it into line with the other vehicles evaluated.

When evaluated in pigmented products by Mr. B. L. Mansi the G-328/G-43 vehicle showed better hardness than any of the vehicles tested with other properties equal to the control. The G-55 vehicle showed comparable film properties to the control in the initial tests; but when applied to a floor, it showed less dirt collection and better gloss retention after several days traffic than the other products which were comparable to each other.

VC-5269 has been revised to the G-328, "Amberol BS-1"/G-43, ester gum = 1/1 formulation as covered by Release Letter #596-J.

Further details may be found in the following references:

Book #2893
#2999
#3041
#2936

Pages 175-187
161-184
3-8
114

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H. A. Wray

H. A. WRAY

HAW/mhl

VC-5269 - INTERIOR FLOOR AND DECK VEHICLE
GUMS EVALUATED AND FILM PROPERTIES

Varnish Code	Gum Code	Name	OVER NIGHT DRY				Water Resis.	Initial Tack Free	Color
			Cost/gal.	Hard-ness	Flex.	Adhes.			
PVCP-55807	G-110	Gum Substitute	\$0.86	9.0	8.5	8.5	7.8	8 hrs.	Dark
PVCP-55813	G-328/G-43=1/1	Amberol BS-1/ ester gum	0.86	9.5	9.0	9.5	7.5	8 hrs.	Light
PVCP-55809	G-55	Pentalyn G	0.88	8.5	7.5	9.0	7.0	7 hrs.	Light
PVCP-55808	G-55/G-43=1/1	Pentalyn G/ester gum	0.84	6.5	8.0	9.0	7.3	8 hrs.	Light
PVCP-55810	G-113	Velsicol AD-6-3	0.86	5.0	7.5	10.0	6.0	7 hrs.	Dark
PVCP-55812	G-328/G-113= 1/1	Amberol BS-1/ Velsicol AD-6-3	0.88	8.0	8.0	9.0	7.3	7 hrs.	Dark
PVK-P-55817	G-107/G-43/ G-40=5/5/9	Amberol M-93/ester gum/Rosin	0.83	10.0	6.0	10.0	7.0	7 hrs.	Light

402-901 - DARK STONE - INTERIOR FLOOR AND DECK ENAMELS

Code	Varnish Code	Gum Code	Film Properties - Over Night Dry		
			Hard.	Adhes.	Gloss Alkali Resistance
P-402-P-59530	PVCP-55807	G-110	=Std.	=Std.	=Std.
P-402-P-59531	PVCP-55813	G-328/G-43= 1/1	=Std.	=Std.	=Std.
P-402-P-59543	PVCP-55809	G-55	=Std.	=Std.	=Std.
P-402-P-59532	PVCP-55817	G-107/G-43/ G-40	=Std.	=Std.	Poor