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June 4, 1946

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MEMORANDUM REPORT #M-58

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"DULUX" HEAT RESISTING GRAY 28-443 ~~NOT~~ FOR CIRCULATION

This memorandum will report the results of formulating work to remove soya bean oil "DULUX" resin from 28-443 8-H Heat Resisting Gray paint sold to The Texas Company.

Heat Resisting Gray 28-443 is a semi-gloss product based on 33 Line mill bases let down with RC-193, 62% soya bean oil "DULUX" resin. It is designed to withstand temperatures up to 500°F.

The following resins were tested as replacements for the RC-193:

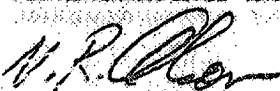
RC-141 - 62% Linseed Oil Resin
RC-203 - 52% Linseed Oil Resin
PRC-P-36983 - 63% Linseed Oil Pentaerythritol Resin

The latter resin provided the best balance for gloss, hardness and drying time. The RC-141 returned definitely poorer hardness, while RC-203 provided poorer gloss. All the substitute resins were equally badly discolored in the five hour at 500°F. heat resistance test and retained excellent adhesion.

The formula based on PRC-P-36983 was assigned the code 28-679. This product dried very slightly slower than 28-443, had equal gloss, slightly better hardness after overnight drying and equal heat resistance. In connection with the above reformulation, the pigmentation was revised to use the preferred grade of titanium dioxide pigment.

The formulations discussed above can be found in Notebook 3006, pages 88, 89, 130, 131.

PHILADELPHIA LABORATORY



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