

September 5, 1945

752 LINE REVISIONS

This report will summarize briefly the various changes that have been made in the Phthalic Anhydride Free 752 Line enamels since the original development under release letter 683.

The first change came under release letter T-7. This covered the elimination of castor oil and complete removal of phthalic anhydride. The castor oil was in the High Bake White, 752-5468. This product was removed from the line and replaced by 752-7035, Natural. The original formulas used 707 and 754 line tinting enamels which contained alkyd resin introduced in the roll stock. An entire new line of bases and enamels was set up which was phthalic anhydride free. The gum used in the line was Amberol, G-104, and the oil was H-141, Blown Linseed.

The next revision was the removal of Amberol, G-104/G-105 as covered by release letter T-13, Beckacite, G-89, being used as the gum. All colors and the tinting white were based on RC-718/G-78/VG-7004 and H-141. The G-78 was introduced to improve the hardness. A gum free white was also set up. This was necessary inasmuch as Beckacite showed too much discoloration. The gum free white was limited to low bakes because of low gloss at the higher temperature.

Several isolated cases of gassing with the low bake white were encountered. Investigation at that time seemed to indicate that only the gum free white was subject to gassing. Accordingly, this formula was revised substituting H-120 for H-141. This revision was covered by release letter T-17. The colors and the tinting white were retained on the gum containing formula.

During the early part of 1945 a number of complaints were received on gassing, not only of the Low Bake White (on the old formula) but also on the colors. These complaints were sufficiently numerous to justify our taking immediate action to revise the entire 752 line to eliminate H-141. H-120 Blown Castor Oil was used as a replacement. The detailed composition and limitations of the line on the revised basis are covered in release letter T-20.

The restrictions on Castor Oil prompted consideration of a possible substitute. Blown Soya Bean Oil, H-193 appeared the most logical but as this was also restricted, the problem was referred to the Philadelphia Laboratory for review with Wilmington.

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Toledo 12, Ohio
September 5, 1945

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We are attaching a copy of a memorandum covering the various changes in the Phthalic Anhydride Free 752 Line formulas. This supplements Mr. McGinnis' report covering the original development under Release Letter 683.

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