

E. I. DU PONT DE NEMOURS & COMPANY
KREBS PIGMENTS DEPARTMENT
256 VANDERPOOL STREET
NEWARK, NEW JERSEY

NEWARK PLANT
PIGMENT COLOR RESEARCH REPORT

Final Report

5N-49-7

Title: REACTIVITY OF RT-551-D, SEMI-WORKS AND PLT. DEVELOPMENT
90% RT-588-D (5-nitro-2-amino-anisole → NASD)
10% RT-571-D (5-nitro-2-amino-anisole → BON, Manganese)

Period Covered: JANUARY 1947 to AUGUST 1948

Charge: A-IC-40

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NEWARK PLANT

PIGMENT COLOR RESEARCH REPORT

Final Report

Title: REACTIVITY OF RT-551-D, SEMI-WORKS AND PLT. DEVELOPMENT
90% RT-558-D (5-nitro-2-amino-anisole → NASD)
10% RT-571-D (5-nitro-2-amino-anisole → BON, Manganese)

Period Covered: JANUARY 1947 to AUGUST 1948.

Charge: A-10-40

SUBMITTED BY: A. D. MILLS

DATE SUBMITTED: 1-28-49

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A. A. BRIZZOLARA 11/4/49

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INTRODUCTION:

It was found in the laboratory that when 10 parts of RT-571-D (5-nitro-2-amino-anisole → BON, manganese) are added to 90 parts of RT-588-D (5-nitro-2-amino-anisole → NASD) in a dry blend, the reactivity of the latter is greatly reduced and the thixotropy practically eliminated. Following the laboratory development of RT-571-D, the semi-works study was undertaken making it necessary to dry blend semi-works and later plant RT-571-D with plant RT-588-D to prepare RT-551-D. The plant development of RT-551-D is covered herein.

SUMMARY AND CONCLUSIONS:

1. 18 mixes of RT-551-D were made for a total of over 32,000 pounds of which all was satisfactory material. Only 2 mixes were not standard color but these were readily rebled with additional RT-588-D and RT-571-D to give satisfactory material.
2. Lot 85527 was set up as standard lot for RT-551-D(D).
3. RT-551-D(D), SD-85527 was accepted by the Sales Division about the 1st of August, 1948.
4. Production assumed supervision of the manufacture of RT-551-D(D) on August 5, 1948.
5. The pertinent data for RT-551-D(D) is as follows:
 - a. Oil Absorption - 46.3% of veh./100% of pigment.
 - b. Specific Gravity - 1.42 g./cc.
 - c. Dry Fineness - 11.8% retained on 325 mesh screen.
 - d. Moisture - 1.7% 6-17-48

STANDARDIZATION:

RT-551-D is standardized by GE-2458 alkyd grind for masstone, 10/90 extension and the enamel is tested for stability in a 120°F oven for 1 day. Comparison is made with standard.

RT-588-D is standardized for masstone and 10/90 extension in GE-2458 and compared to RT-588-D standard.

RT-571-D is standardized by dry blending with RT-588-D in the ratio 10/90 and grinding in GE-2458. Masstone and 10/90 extension are compared to RT-551-D standard. In addition the masstone enamel is tested for stability in a 120°F oven for 1 day and compared to RT-551-D standard.

EXPERIMENTAL DETAILS:

The following experiments include individual testing of RT-588-D and RT-571-D lots as well as RT-551-D blends.

NB 1245-9, 10, 11, 12, 13, 15, 16, 23, 26, 37, 40, 43, 45, 46, 47, 55
NB 1264-19, 20, 21, 24, 29, 30, 32, 34, 37, 38, 40, 41, 42, 43, 44,
45, 46, 50, 51, 52, 53, 57, 58, 60, 61, 62
NB 1302-3

REFERENCES:

KN-49-6 - Reactivity of RT-551-D, Laboratory Development.

KN-49-8 - Laboratory Development of RT-571-D.

KN-49-9 - Semi-Works " " "

KN-49-10- Plant " " "

DSN-49-9- Reactivity of RT-551-D, SW & Plt. Development.

DSN-49-10- Semi-Works Development of RT-571-D.

DSN-49-11- Plant " " "