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NEWARK PLANT
PIGMENT COLOR RESEARCH REPORT

Final Report

ROSINATED LITHOL RUBINE B TONER, DARK MASSTONE
SEMI-WORKS TRIAL OF K-2040.

Period Covered:

NOVEMBER, 1944.

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NEWARK PLANT

PIGMENT COLOR RESEARCH REPORT

Final Report

ROSINATED LITHOL RUBINE B TONER, DARK MASSTONE,
SEMI-WORKS TRIAL OF K-2040.

NOVEMBER, 1944.

SUBMITTED BY: E. J. HESS *E. J. Hess*

DATE SUBMITTED: 6-30-48

APPROVED BY: J. O. MORRISON *J. O. Morrison*
Aug 23, 1948

DATE ISSUED: 10/6/48

INTRODUCTION:

Original research study on dark, blue "Duol" Carmine toner was based on the supposed threat to RT-443-D business resulting from the development of Virginia Red, CR-6510, by Standard Ultramarine. This pigment was said to give better money value in blends with Molybdate Orange and RT-427-D than RT-443-D. The first laboratory development, K-1669, was similar to the early direct laking RT-443-D formulation, K-1552, except for the substitution of approximately 20 mol % of Tobias Acid for the Para toluidine meta sulfonic acid in the diazo. (see KN-42-82).

Subsequently, a new product, K-2040, similar to K-1669, based on K-2039, the "all lime" formula for RT-443-D, was developed in the laboratory in early 1944. (See KN-44-49).

A semi-works mol batch of K-2040 was made in November, 1944, to supply material for evaluation.

SUMMARY & CONCLUSIONS:

For the semi-works trial batch a formula similar to K-2040, except for a 10% cut in the rosin, was selected. The rosin decrease was used in an attempt to obtain improved hiding (K-2040 was on the defensive versus Virginia Red in this respect).

No difficulty was encountered with the process and the batch, lot 7688, ground out light in masstones, close in strength and slightly blue in tint versus K-2040. The rosin decrease is the probable reason for the lighter masstone.

Alkyd grinds showed that although a very slight improvement in opacity was obtained, the objection to the pigment expressed in PLM-4 (DRS 7-6-44) is still valid, i.e., that in blends the advantage of the dark masstone is far outweighed by the necessity for a higher pigmentation to obtain the desired opacity.

As the increased transparency eliminates K-2040 as a substitute for Virginia Red it was submitted to Sales early in 1945 to be presented to the trade as a companion color to RT-443-D.

Development work on this pigment has been discontinued.

PATENT SITUATION

There is no patent restriction in the manufacture of K-2040. It is not believed that this study has resulted in any patentable development.

GLOSSARY

RT-443-D - A calcium salt of the coupling of para toluidine meta sulfonic acid diazo and beta hydroxy naphthoic acid. An approximate 25% of calcium rosinate is also present.

K-1669 &
K-2040 Similar to RT-443-D except approximately 20 mol % of Tobias Acid (Beta naphthylamine-1-sulfonic acid) has been substituted for part of the PTMSA.

K-1552 &
K-2039 Similar to RT-443-D.

Virginia
Red A calcium salt of the coupling of ortho-chlor-meta-toluidine-para-sulfonic acid diazo and beta hydroxy naphthoic acid.

RT-427-D A coupling of para-chlor-ortho-nitraniline diazo and beta naphthol.

Molybdate
Orange A molybdated lead chromate pigment.

EXPERIMENTAL DETAILS: DSN-48-9