

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

LIBRARY COPY

NEWARK PLANT
PIGMENT COLOR RESEARCH REPORT

WATER DISPERSIBLE HANSA YELLOW LAKE YL-556-D:
SEMI-WORKS TRIAL OF K-2245 and K-2246.

Period Covered: December 1945 - January 1946.

FILE:

DATE: 7/11/46

22 F. 4

KN-46-38

Serial No. KN46-38

Copy No. 1

Copy to:

- #1 - Numerical File
- 2 - Research Office (221.4)
- 3 - Library File (221.4)
- 4 - #10 Building File
- 5 - Imperial Chemical Industries, Ltd.
- 6 - " " " "
- 7 - " " " "
- 8 - W. F. Spengeman

NEWARK PLANT

PIGMENT COLOR RESEARCH REPORT

Final Report

Title: WATER DISPERSIBLE HANSA YELLOW LAKE YL-556-D;
SEMI-WORKS TRIAL OF K-2245 and K-2246.

Period Covered: December 1945 - January 1946.

SUBMITTED BY: M. G. Taber

DATE SUBMITTED: 7/2/46

APPROVED BY: J. O. *[Signature]*

DATE ISSUED : 7/11/46

7/9/46

N40005.01

DUP050150470

INTRODUCTION

K-2246, a highly water dispersible lake, and K-2245, the toner from which the lake is made, were formulated in the Organic Laboratory as replacements for YL-556-D, K-2191 and its toner, K-2049. K-2245 differs from its predecessor, K-2047, in having a dispersing agent, Opd.#8, present in the coupling; also no accessory agent is used. Lakes from K-2245 pulp are better dispersed than these from K-2049, as shown by greater strength by brushout evaluation.

This report covers the semi-works trial of K-2246 (lake) and K-2245 (toner).

SUMMARY AND CONCLUSIONS

Of the three batches of toner made in the semi-works lot 8579, following the K-2245 formula exactly, was so highly dispersed that it could not be filtered with greater than gravity pressure without bleeding badly; in addition, the press cake was very soupy and hard to handle.

Lots 8584 and 8614 were made with 40% less Opd.#8. These lots did not bleed during filtration using mild pump pressure and their press cakes were firm. Lot 8584 was slightly washed according to the K-2245 formula, Lot 8614 was not washed. Lakes from 8584 and 8614 were stronger than that from 8579 dried at the same temperature and about equal to each other.

Portions of the lakes made from toner lots 8579, 8584 and 8614 were dried at different temperatures - 140°, 160° and 180°F. Pigment dried at 140°F. was strongest but required 8 - 9 days for complete drying. At 160°F. the drying time was cut to 3 - 4 days, while at 180°F. only 2 days time was required. The lake from unwashed toner lot 8614, when dried at 160°, was slightly stronger than K-2246. For plant trial of K-2246, 160°F. was selected as the optimum temperature.

DISCUSSION OF RESULTS

See Chart. Also refer to DSN 46-11

Lot # of Toner	Compound #8 %	Degree of Washing	Notes	Lot # of Temp. of Lake Drying	Time of Drying Days	Brushout vs K-2246.	
						30/70 XT	4/96 XT
8579	3.5	slight (10 min.)	Bled during filtration when pump was used. Press Cake, scummy	8580 140°	9	s light, vs green	7% strong, vs green
				8581 160°	4	s light, vs green	3-4 % strong, vs green
8584	2.0	slight	Filtration OK Press cake OK	8585 140°	8	s light, vs green	10-12% strong, vs green
				8586 160°	3	light, vs green	7% strong, vs green
8614	2.0	none	Filtration OK Press cake OK	8638 160°	3	vs light, vvs int.	4-5% strong, green, intense
				8639 180°	51 hrs.	vs light	equal strength, s green, intense

N40005.02

DUP050150472