



E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
WILMINGTON, DELAWARE 19898

CHEMICALS, DYES AND PIGMENTS DEPARTMENT

*CB Bartholomew / Plaw
for info.*

August 7, 1980

TO: ~~P. A. WRIEDE, C&P - JACKSON LAB~~
J. S. THACHRAH
W. GAAL

FROM: R. E. NICKERSON

Thanks!

Morgan
Shurrier

NEW PRODUCT REQUEST
OPPORTUNITY DESCRIPTION

A. Background

Our customers for inorganic pigments are under increasing pressure from OSHA regulations to reduce the exposure of their workers to lead and chromium. A logical and practical approach to eliminate the dust from Chrome Yellow and Moly Orange pigments, is to produce water wet products which will be suitable in those systems where water can be tolerated. This is the situation in water-based inks which are used particularly on packaging - board, carton, boxes, etc.

B. Description of Need

● Product Description

- Water slurries of Molybdate Orange YE735D
Chrome Yellow Medium Y469D
Chrome Yellow Primrose Y758D
- 70% solids minimum - prefer 80% - the higher the better.
- Fluid, Pourable Pumpable (similar to Titanium Slurries).
- Reasonable Physical Stability - must not set up.
- Specifications for use in ink - same as for the parent Toner product except for strength.

K. H. Dietz - C&P - Jackson Lab
H. W. Ling - " - Chestnut Run
N. J. Kane - " - "
D. Gray - " - Newark
R. E. Peavy - " - "
D. E. Cregar - " - "
S. W. Severance, III - C&P - B-17249
G. M. Pfeiffer
D. W. Hoppenjans
R. A. Repetto
J. F. Kane

- Packaging

Experimental sample of Moly Orange YE735D is heavy - 23#/gal - suggest 20 gal (460#) in 30 gal, 20 guage steel drum with a 2 coat Epoxy Phenolic liner. This drum is called CDP-1-31A and is a standard container now stocked at the Newark plant.

- Deficiencies of Existing Du Pont Products

DUST - OSHA regulations on maximum concentration of lead and chromium in respirable air have created a need for dust-free products and/or handling systems. Our customers must comply or reformulate. Du Pont does not have suitable replacement products for printing ink and the replacements are more expensive for the customers.

- End-Use Applications

Ink Industry - water-base inks

Plastics Industry - limited

- Competitive Products

Nichem Corp. - Chrome Yellow Slurry 70% Solids

Harshaw - Moly Orange Slurry 70% Solids

Modest quantities of the above two products have been purchased by Inmont 51st St. Plant, Chicago. They are starting to reformulate from Dry Toner to Slurry and urge us to get involved. This is our business. Samples of competitive products have been obtained.

- Test Procedures

Same as for Dry Toner plus checks on stability and compatability in ink resins.

C. Estimate of Market Size

Du Pont sales of Chrome Yellow and Moly Orange Toners to the Ink Industry totaled 4.5MM# in 1979 of which about 1.5MM# went into water systems.

Assuming Du Pont at about 25% penetration of this market and that 50% of the market would convert to a water wet slurry, the potential for the slurry products totals 3MM# Dry Toner basis or 4MM# of slurry at 75% solids.

Our initial goal is at Inmont Corp. 51st Plant - protection

of our business:

180 000#/yr. Moly Orange Slurry of YE785D
180 000#/yr. Chrome Yellow Slurry of Y469D
50 000#/yr. Chrome Yellow Slurry of Y758D

These are commodity pounds of 75% average solids to satisfy Inmont's immediate plan to convert 35% of their total Chrome Yellow and Moly Orange purchases to water wet products.

The Total market for Lead and Chromate products is declining because of concern about regulations at an unknown rate - we now estimate 10% per year. The wet slurry products can retard or even stop the decline in the water base ink segment.

D. Estimate of Du Pont's Share of the Market

With a successful product, we estimate an increase from current 20% share to a 25% share of the market. Similar products can be expected to come from the other major sources - Ciba Geigy (now selling Press cake) and Harshaw (now offering Slurry). American Cyanamid withdrew from the market last year. Small companies like Nichem will specialize in slurry.

E. Customers

Inmont Corp. - Initial
plus all manufacturers of ink for packaging.

F. Critical Timing

The Business Center for Colored Pigment Products requests that the right products be produced as expeditiously as practical. The experimental sample of YE735D Slurry from Chestnut Run is most encouraging.

G. Pricing

We plan to price slurries to give at least as good a return as the Dry Toners.

H. Action

The Experimental samples are now being checked for compatability in ink resins. Pending these results, we now request process development and scale up to a small experimental lot at the Newark plant starting from a good lot of YE735D Toner.

REN/nlw