

Technical Area
Parlin, New Jersey
May 3, 1957

P. J. PANDOLFI

UNIVERSAL SINGLE PIGMENT BASE DEVELOPMENT
PRELIMINARY COST ESTIMATE
PARLIN

Attached is the cost estimate and detail requested by you. The accuracy of this estimate is dependent upon development of proposed bases at compositions indicated from preliminary investigations. Many of the proposed formulations have not been ground but are predicted results from work with similar pigments and vehicle systems. Some of the highly pigmented bases may have to be altered in scale-up grinding or for stability considerations. The latter is believed particularly important for standardized intermediates.

At the time of the estimate, per our discussion, it was estimated that "Lucite" would replace 50% of the "Duco" production before Universal bases could be developed and aligned. The conversion cost for bases required for "Duco" were not considered because of the following:

1. Reduction of "49 Process" grind cycle.
2. Reduction of filtration expense caused by excessive grit in many "49 Process" products.
3. Increased tinting strength which probably will result in raw materials (pigment) savings.

These considerations will offset a portion of grinding for the "Duco" intermediate.

In the attached calculation the following basic assumptions were made:

1. Universal base could be ground at rates (gallons per hour) equivalent to those of present "Dulux", "Dulux 100", and "Lucite" intermediates because of more desirable dispersion properties, such as wetting, etc.

2. Could replace 42-line (including 33-line and 732-line which is being replaced by 42-line) and 743-line "Dulux" short oil dispersions and 901-line "Lucite" intermediate.

3. 50% of "Duco" products will be replaced by similar "Lucite" products.

4. The advantage of dispersing intermediates for "Duco" will off-set its grinding cost.

EXHIBIT VIII Cont'd

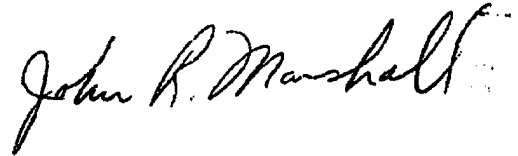
5. All intermediates are ground "47 Process"
6. Based on 1956 production figures.

There is no detailed savings calculation at this time which would include savings resulting from the following:

1. Overall simplification (elimination of intermediates).
2. Increased capacity; decrease storage and inventory.
3. Decrease dispersion equipment requirement (less grinding and volume grinding for each color. Less washing, scheduling and materials handling; decrease investment and depreciation costs.
4. Savings in conversion process, such as from ball mill to "47 Process".

The calculation presented is a savings resulting from increased pigment concentration of the proposed bases over existing intermediates. This results in less grinding volume. The conversion cost is based on a Philadelphia figure of 0.029 dollars per pound and a weighted average weight per gal. for the intermediates of 11.0 pounds per gallon. On this basis a savings of \$266,000 per year for the Division will be realized. If the conversion cost of the required "Duco" intermediate is subtracted the savings is reduced to 203,000 dollars per year.

It is believed here that the magnitude of the savings resulting from adoption of Universal bases will be greater than \$250,000 if all costs were considered in more detail.



J. R. MARSHALL

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EXHIBIT XIII Cont'd

**UNIVERSAL SINGLE PIGMENT BASES
PROJECT JI-1008 - SAVINGS
50% "DUCO" / 50% LUCITE BASIS**

W-Code	1000# Pigment for "Lucite"	1000# Pigment for "Dulux"	% Pigment in "Lucite" Base	Lbs./Gal. "Lucite" Base	% Pigment in "Dulux" Base	Lbs./Gal. "Dulux" Base	% Pigment in Universal Base	Lbs./Gal. Universal Base	1000 Gals. Present "Lucite" Base Required	1000 Gals. Pro- posed Base for "Lucite"	1000 Gals. Pre- sent "Dulux" Base Required	1000 Gals. Pro- posed Base for "Dulux"	1000 Gals. Pro- posed Grinding Saved for "Lucite"	1000 Gals. Grind- ing Saved for "Dulux"
43	746.0	3000.0	33	10.4	56	14.0	80	20.2	108.7	23.0	383.0	185.9	85.7	197.2
* 502	290.0	205.0	58	13.9	56	14.0	80	20.2	173.0	86.3	26.1	12.7	86.7	13.4
224	54.3	21.7	10	8.0	13	7.9	25	8.6	34.0	12.6	21.1	10.1	21.4	11.0
225	9.9	28.1	10	8.0	13	8.0	25	8.6	6.1	2.3	27.0	13.1	3.8	13.9
284	18.8	17.9	10	8.0	13	8.0	25	9.0	11.2	4.0	17.2	8.0	7.2	9.2
300	10.2	13.4	12	8.0	20	8.0	30	8.6	5.3	2.0	8.4	5.2	3.3	3.2
312	9.6	16.8	12	8.0	17	8.2	20	8.4	5.0	2.9	12.1	10.0	2.1	2.1
381	9.7	21.8	30	10.2	56	13.6	75	18.5	1.6	0.4	2.9	1.6	1.2	1.3
382	26.1	11.2	30	10.2	56	12.8	75	18.6	4.3	0.9	1.6	0.8	3.4	0.8
383	18.6	42.3	30	10.2	65	15.7	75	18.6	3.0	0.7	4.1	3.0	2.3	1.1
384	23.4	35.4	30	10.2	60	14.5	75	18.3	3.8	0.9	4.1	2.6	2.9	1.5
505	23.3	27.5	15	8.2	8	7.7	20	8.3	9.5	7.1	44.6	16.5	2.4	28.1
519	6.8	19.2	12	8.1	10	7.9	20	8.4	3.5	3.0	24.3	11.4	1.5	12.9
582	17.7	165.4	16	8.2	18	8.2	25	8.6	6.7	4.2	112.0	76.0	2.5	36.0
608	14.7	1.0	24	10.2	50	13.0	80	21.0	3.0	0.4	0.2	0.1	2.6	0.1
* 612	18.4	13.5	10	8.0	10	8.1	40	4.1	10.6	2.5	16.7	3.7	8.1	13.0
622	64.7	167.5	40	11.6	60	15.1	80	22.8	6.9	1.8	18.5	9.2	5.1	9.3
* 630	83.9	231.0	25	9.5	44	11.2	60	14.0	17.9	5.0	46.9	27.6	12.9	19.3
676	103.0	558.0	40	11.7	60	15.0	80	23.4	11.0	2.8	62.0	29.8	8.2	32.2
* 677	53.1	423.0	40	11.8	71	19.5	80	24.7	5.6	1.3	30.6	21.4	4.3	9.2
* 679	87.1	350.0	40	11.7	53	13.8	80	23.3	9.3	2.3	47.9	18.8	7.0	29.1
* 785	44.1	54.8	15	8.4	11	8.1	25	8.7	17.5	10.1	61.6	25.2	7.4	36.4
803	3.8	87.4	15	8.4	21	7.7	30	8.4	1.5	0.8	54.0	34.7	0.7	19.3
865	16.2	230.0	15	8.4	24	7.9	30	8.4	6.4	3.2	121.0	91.1	3.2	29.9
895	167.0	78.8	27	9.7	40	12.0	45	11.7	31.9	15.9	16.4	14.9	16.0	1.5

*47 Process"- Scaled-up

TOTAL

497.3 195.4 1164.3 633.3 301.9 531.0

Total Gals. Grinding Saved = 301.9 + 531.0 = 832.9 gals. (1000).

Conversion Savings = 832,900 gals. x 11 lbs/gal. x 0.029 \$/lbs. = \$266,000

Conversion Savings (Considering "Duco") = 637.5 gal. x 11.0 lbs/gal. x 0.029 = \$203 (1000).