

Indexed

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SALES DEVELOPMENT LABORATORY MEMORANDUM REPORT NO. SM-59-15

PREPARED BY: R. C. CHAMBERLAIN

TRADE SALES LEAD-FREE PAINT

INTRODUCTION:

The purpose of this report is to give a brief history of the problems involving lead-free paints and to summarize the results of the work completed in this program up to date.

HISTORY:

1. Reference is made to "Memorandum Report City of Baltimore - Paint Labeling Ordinance", June 5, 1959 by F. T. Johnson. This report summarizes the results of our meeting with representatives of the Baltimore Health Dept and outlines our future course of action. Our main interest at present lies in the reformulation of Interior Trade Sales Products containing Pb in excess of 0.65% in total solids. Baltimore Health Dept. has given the Paint Manufacturers until January 1, 1960 to comply with this ordinance. Proper labeling procedures on all Pb containing paint of more than 1% Pb in total solids is now/or has been undertaken. This letter provides a list of all the Trades Sales Products involved and emphasizes that work be done immediately on Attachment #2 of this list which represents products containing lead in excess of 0.65% for which use on the interior surfaces of dwellings is suggested or implied by present labels.

2. Sales Request for technical assistance No. WT-742 was requested by F. T. Johnson July 9, 1959 "Reformulated all Trade Sales price list items to a lead-free basis". This request suggests that both a short range and a long range program be initiated. The short range program to cover all interior products with primary concentration on replacing the lead pigmentation first and long range outlook on replacing the lead driers.

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A priority list on line members has been suggested as follows:

- 1) 60 line "Duco" Satin Sheen
- 2) 80 line "Duco" Gloss Enamel
- 3) 621 line Color Cond. Flat
- 4) 75 line Color Cond. Semi-Gloss
- 5) 74 line Color Cond. Gloss
- 6) 307 line Oil Stain
- 7) 81 & 88 line Color Cond. Mach. Enamel
- 8) VK-7718 #703 Floor & Trim Varnish
- 9) 347 line Masonary Block Primer

There will be many problems involved in this investigation, such as colors that can't be matched, etc.

3. O. R. Volk has replied to F. T. Johnson's letter of June 5, 1959 (PARA) pg. 3 pertaining to interior products. He has classified these Interior Trade Sales items into five (5) categories as follows:

- 1) Products requiring drier modification.
- \*2) Products requiring pigment modification.
- 3) Products which a slight change in color standard may be desirable to permit shading with a durable pigment.
- 4) Products which have color requirements which would be impossible to match with lead free pigmentation without a sacrifice in properties of the film.
- 5) Products which cannot be reformulated to a lead-free basis.

Work is presently being undertaken using the priority list of Inv. No. WT-742 on products in the Groups 2\* category above.

4. The following comments were made on O. R. Volk's letter by F. T. Johnson, in his letter of 8/6/59. He assumes no problems will be encountered in Groups 1 & 2 above.

He suggests that we keep in mind when planning our work of the pending obsolescence of 60-272 #272 Harmony Pink, 75-65946 #226 Mandarin Red and 621-934 #126 Mandarin Red.

74-65922 #322 Candy Pink and its Semi-Gloss and Flat analogues represent a different problem in that they are more popular colors. Sales is interested in seeing the nearest match to Candy Pink in a lead-free formulation that can be made on an economical basis. The same applies to 80-62 #336 Hunter Green, 80-55 #346 Primrose Yellow and 81-4039 #506 Dark Green.

In the case of Group 5 products Sales feels that there will be no difficulty in making the necessary label changes to restrict primer usage to exterior application in the case of 67-770 and 67-739. However, 375-785 has been introduced to the

consumer metal line under an alternate code and the interior restriction on this product represents a severe limitation. Sales is considering replacing 373-785 in the consumer metal line with a Zinc Chromate type material.

One other fact of interest is the letter of August 6, 1959 by F. T. Johnson "New York City Sanitation Code - Lead Labeling Requirements". This code puts the responsibility on the general public in cases where paint may be analyzed and found to have a lead content above the 1% limit. The New York Sanitation Dept. may order the removal and refinishing of any interior surface found to have an excess of lead. It is reasonable to assume that a claim will be entered on us by the user.

PRESENT STATUS:

Work was started by the writer about the middle or last part of July. The first step was to formulate a zinc chromate mill base to replace 34-679. It is assumed that three times as much zinc chromate mill base will be used to replace 34-679 directly. Since it is anticipated to use greater amounts of tinting base, RC-537 was used in place of RC-601 to improve overall drying of the finished product. This mill base has been given a permanent code 37-5609 and is presently on experimental basis pending release letter. It is planned to have the plant run off a small batch and use it in a reformulated product for plant alignment purposes.

The 60 line Satin Sheen Group 2 products in O. R. Volk's letter have just been reformulated using the new zinc chromate mill base. Several colors were made up in duplicate using different combinations of tinting bases. Cost figures in 1's are now being calculated on these products and will soon be available for comment.

It has been suggested that the writer make a batch of 60 line mill bases removing the lead driers and replacing them with Pb free driers to check these products vs standard for drying over the next several months and to give us an idea for replacement of lead driers later on.

At present, all Group 2 60 line products have less than 0.40% Pb in total solids.

NOTE:

It should also be brought to our attention that the lab. has contacted Pigment Dept. for consultation and suggestions pertaining to this lead-free pigmentation problems. A trip to the test fence is anticipated to evaluate Pb free pigments for color retention.

Continuation of the present reformulation work will progress in the order of suggested priority (pg.2) list. A drier study has been undertaken and several test batches will be requested by us

in the plant to help align and correct any difficulties in our new Base. Other reports will be written on a monthly basis to keep the people concerned informed of the progress in this lead free paint project.

SALES DEVELOPMENT LABORATORY

*R. C. Chamberlain*

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RCC/bas  
8/17/59