the first batch, all ingredients were charged as per standard mill loading. Mixing continued for approximately 1-1/2 hrs. to obtain a 3-4 grind. In spite of this, the final paint batch was very seedy and will be held for reworking. The second trial was made by alternate addition of inerts and liquid to maintain a consistency for maximum dispersion with out over heating. The total time was still approximately 1-1/2 hrs. with no improvement in smoothness. Further batches might be tried on a modified formula.

EXTERIOR LATEX PAINTS

We are proceeding with the field tests of five major qualities of exterior latex paint. These are all being called experimental Flat Latex House Paint. Several hundred gallons of each quality is being produced in whites and tints. Houses in Cleveland, St. Louis, New Orleans and Cuba will be painted. These tests should be under way this fall, if at all possible. About one half of the tests will be in previous primed new work, the other half self primed over previously painted surfaces. The series using our own Glidden polymer would be termed alpha polymer paints. Those made with Dewey and Almy Everflex BG are being termed Beta polymer paints. Those using Goodrich Geon latex will be called Gamma polymer. Those based on Rohm Haas Accryllic B60K will be called Delta polymer, and those based on Monsanto Latex 8680 will be called Zeta polymer. Several other paints of desirable characteristics, but having an obvious serious flaw in one way or another have been dropped from the field test program. These include paints made from National Starch 12 K 51 and Dow Butadiene-Styrene 512K. All of the fore going materials look more promising on exposure than do these last two. We have commenced expansion of our test racks, because of the vast number of our test panels which have been placed on exposure during the past two years.

Extensive studies are being made to reduce processing time and costs. In this field, several attempts to accomplish a rapid grind for a short mill cycle in producing Spred Glide-On were made. In the laboratory a normal mill load has been ground for as little as 1-1/2 to 2 hours with quite acceptable results. The resultant paint compares favorabiy with an average production batch at 16 hours. This is in regards to quality control properties such as fineness of grind, hiding power, weight per gallon, pH and viscosity. More work is planned, and especially we must check this type of cycle with various colored pigments in the mill.

DRAMATONE

We are continuing to investigate the possibility of new Dramatone formulations for better stability. In addition, the testing work on Dramatone is being turned over to the Cleveland factory in order to free research personnel for further development work. One of our present suppliers of brown pigments is in danger of closing, and a tremendous amount of work must be done in order to provide a new substitute for these materials.

HOUSE PAINTS

The color laboratory has established twelve colors for use on a national basis in our flat house paint. With a few exceptions these colors are the same as Endurance. These colors will be based on the Eagle-Picher type formula, which contains zinc oxide. We feel that the use of zinc oxide will give us superior performance over other competitive flat house paints.

We have done considerable work on Y1800 Endurance White to improve brushing whiteness and non settling. We are using W33, zinc oxide, and W104 lead

carbonate in place of W6 leaded zinc oxide to gain better color and more thixotropy. With the use of bleached linseed oils we then have a very white paint. The formula has good brushing, but with the addition of a puffing agent, excellent brushing is obtained. The new improved formula, with all its selling features, will cost 7¢ less. There will also be a saving in freight rates, since the weight per gallon is 13.8# instead of 14.9#.

We are doing considerable work on Y1867 Imperial House Paint to control the rate of chalking and eliminate the wrinkling. We have found that with the use of 1/2 pint of blown soya, the oil content can be reduced 10% and still maintain the characteristic good gloss. This reduction of oil content raises the P.V.C. from 28 to 33. At this oil to pigment ratio, the wrinkling is nearly 100% eliminated. We can also expect a cost savings in this new formula.

INTERIOR SOLVENT THINNED FINISHES

The Varnish Laboratory has submitted several tall oil containing alkyds for use in Trade sales products. These alkyds, when tested in semi gloss enamels, have in common one very objectionable feature, they remain "tacky" much longer than the regular soya products. We have found no method to eliminate this condition.

We will continue to examine new samples from the Varnish Laboratories, and to study various additives until this very important issue is settled.

A detailed investigation into the control of penetration with particular emphasis on gloss uniformity between sealed and unsealed surfaces is under way. Most effective control to date is in the selection of the individual alkyd vehicle and the solvent combination used with it. Our Resin Laboratory is being consulted on further development.

PCH/fs
11/1/45

P. C. Herzog