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PRODUCT DEVELOPMENT REPORT

COATINGS AND RESINS GROUP LABORATORIES

AUGUST 1966

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FROM F. G. Hidalgo DATE September 30, 1966 FOR  
CITY Cleveland  
ANSWERING LETTER OF  
SUBJECT PRODUCT DEVELOPMENT REPORT  
AUGUST 1966

Electrocoating and new resin developments are among the highlights of this issue. Please refer to Mr. Kingston's listing which appears on page 1.

I would like to call your attention to Mr. Steppart's article on "Industrial Label Warnings " which follows on the next three pages. This summarizes the selection and use of the proper warnings from the standards set up by N.P.V.L.A.

Very careful study is given at Headquarters to the warning statements used in our Trade Sales products, because of our potential liability. The selection of label warnings for Industrial products deserves the close attention of our regional laboratory personnel for the same reason, and this subject will be discussed at our coming Technical Directors' Meeting.

*F. G. Hidalgo*  
F. G. Hidalgo

FGH/br

GLD006851

ITEMS OF PARTICULAR INTEREST

Page

Electrocoating - This months Comment Section on Electrocoating covers the scope and volume of products that Glidden is involved with at the Research Center and at Cleveland. Eventually other Regions will be participating in this field also . . . . .11

Oil-Less Alkyds - New polyesters based on polyols and polyfunctional acids instead of conventional drying oils are growing in the coatings field. Nubian describes products made from NRV5252 and NRV5257. Although the article appears in the Appliance section there could be applications in other areas. Reading is trying it in RGL36313 and RGL36314 for coating aluminum castings (page 49) and San Francisco is using oilless alkyds in rollcoat enamel (page 41). . . . .17

Resins, Lower cost styrenated alkyds - Reading has been able to reduce reactor cooking time by 50% to save 13¢/gallon on 2KB744. Although they don't give the full details in this report they can be contacted for further information . . . . .67

Airless Spraying of Vinyls - The Maintenance Lab at the Research Center points out problems that can occur on airless spraying of vinyls and steps that can be taken to eliminate difficulties. There is a growing field in high build vinyls to reduce number of coats required on low solids vinyls. 88 drums of EGL63436 were supplied to Pullman-Standard for freight cars. . . . .58

Quality Gloss Enamel, Japalac - Japalac Enamel was compared to leading competitive products and found to be superior as an interior-exterior enamel with best chalk resistance and gloss retention after two year exposure. . . . .69

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### INDUSTRIAL LABEL WARNINGS

This subject has been brought up so many times and as yet it has not been resolved. In 1962 NPVLA put out a book called "Recommended Precautionary Labels" which meets the requirements of the Federal Hazardous Substances Labeling Act. These labels were recommended for Trade and Maintenance Sales products suitable or intended for household use, which we The Glidden Company adopted. We supplied Technical Directors and Superintendents of all regions with a copy of one of these 1962 NPVLA books. Later we approved these warnings to be used on Industrial products which is not a requirement of this law but for the protection of The Glidden Company.

The Label Committee recommended some of the label warnings which we believe would be appropriate for Industrial work as well as Trade Sales. There may be a slight chance that we are overlabeled but this again is for The Glidden Company's protection. Since Cleveland is the headquarters for the printing of Trade and Maintenance labels, we use the same warning plates which are available for Industrial work.

We have recently printed a new C & R Formula from #1109 dated 2/66 in which we have made room for the necessary constants required for label warnings. They are:

"Lead Content"

Less than 1% or more than 1%;  
marked on card as -1 or +1.

"Flash Point °F." based upon the Tagliabue Open Cup Test.

Combustible (over 80°F. to 150°F.)  
Flammable (over 20°F. to 80°F.)  
Extremely Flammable (20°F. or lower)

"Viscosity"

Saybolt Universal Scale. Over 150 SSU  
or less than 150 SSU. There is a  
"Viscosity Comparison Chart" on NPVLA  
book.

As we come to the first Group I

Contains less than 1% of Lead in total N. V. Viscosity greater than  
raw linseed oil or over 150 SSU. Applied to thick paints and enamels.

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Industrial Label Warnings (continued)

- Label 11-62    #1    Flash Point over 80°F.  
                      Combustible!
- #2    No hazardous ingredients
- Label 12-62    #1    Flash Point over 20°F to 80°F.  
                      Warning! Flammable!
- #2    No other hazardous ingredients.
- Label 12A-62    #1    Flash Point 20°F to 80°F.  
                      Warning! Flammable!  
                      Vapor Harmful!
- #2    Hazardous. Contains 10% or more  
                              of Xylol or Toluol.
- Label 13-62    #1    Flash Point 20°F. or lower.  
                      DANGER! EXTREMELY FLAMMABLE!
- #2    No other hazardous ingredients.
- Label 13A-62    #1    Flash Point 20°F. or lower  
                      DANGER! EXTREMELY FLAMMABLE!  
                      VAPOR HARMFUL.
- #2    Hazardous. Contains 10% or more of  
                              Xylol or Toluol.

Labels 12 and 13 have front panel recommended labeling.

The second part of Group I consists of 14 - 15 - 16 same as for 11 - 12 - 13 with the exception of "more than 1% lead in total N.V.", to this label warning must be added "CONTAINS LEAD, HARMFUL IF SWALLOWED".

Group II consists of labels 21-26, viscosity less than raw linseed oil or less than 150 SSU which applies to thin paints, as Stains, Sealers, Metallic Paints and Clear Lacquers. This Group is also divided in two parts the same as Group I, last three contain lead. Because of thin viscosity which is a hazard, front panel label is required, "DANGER! HARMFUL OR FATAL IF SWALLOWED" and on the back "CAUTION: COMBUSTIBLE! CONTAINS PETROLEUM DISTILLATES". The same holds true for labels in classes of "WARNING! FLAMMABLE!" and "DANGER! EXTREMELY FLAMMABLE!"

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Industrial Label Warnings (continued)

We have label warnings for some of the thinners we use in Trade and Industrial products.

- |              |                                                                            |
|--------------|----------------------------------------------------------------------------|
| Label 71A-62 | Flash Point over 80°F.<br>Aliphatic<br>Petroleum Distillates.              |
| Label 72A-62 | Flash Point over 20°F to 80°F.<br>Aliphatic<br>Petroleum Distillates       |
| Label 72B-62 | Flash Point over 20°F to 80°F.<br>Aromatic<br>Ketones<br>Esters<br>Alcohol |
| Label 72C-62 | Same as 72B-62 except for thinners that are<br>irritant to skin and eyes.  |
| Label 73A-62 | Flash Point 20°F. or lower                                                 |
| 73B-62       | Will cover same group of thinners                                          |
| 73C-62       | as above.                                                                  |

These warnings will provide adequate coverage for all thick paints, thin paints and thinners, but we believe in the rapid change of raw materials there are specials that will require revised label warnings. We agreed that a standard label for drums should be printed with warnings and ordered through headquarters.

By carefully reading the 1962 and 1964 NFVLA book on "Recommended Precautionary Labels" all Technical people should be able to put the proper label warnings on their formulas. The 1964 book contains label warnings for a two package Epoxy system, one for the resin and the appropriate one for the catalyst. If more information is needed contact the Technical Information Center.

T. M. Steppart

GLD006855

PRODUCT DEVELOPMENT REPORT  
PRODUCTS APPROVED AND SOLD  
AUGUST, 1966

| <u>REGION</u><br><u>Customer</u> | <u>Product</u><br><u>Formula</u>           | <u>Use</u><br><u>Application</u>       | <u>Cure</u><br><u>Min. °F.</u> | <u>Resin</u> |
|----------------------------------|--------------------------------------------|----------------------------------------|--------------------------------|--------------|
| 1. <u>POLYESTER AND GEL-KOTE</u> |                                            |                                        |                                |              |
| NOBIAN<br>Inland Plastics        | #6962 Carricraft Aqua<br>Gel-Kote SPG-6962 | Boats<br>Spray                         | R. T.                          | 14RP-587     |
| Turbocraft Div.                  | #4117 Skipper Blue<br>Gel-Kote SPA-4117    | Boats<br>Spray                         | R. T.                          | 14RP-587     |
| Corl Corp.                       | #4124 Turquoise Gel-Kote<br>SPA-4124       | Boats<br>Spray                         | R. T.                          | 14RP-587     |
| Corl Corp.                       | #6158 Lt. Beige<br>Gel-Kote SPD-6158       | Boats<br>Spray                         | R. T.                          | 14RP-587     |
| Inland Plastics                  | #942 Translucent<br>Gel-Kote - 295-W-942   | Boats<br>Spray                         | R. T.                          | 14RP-587     |
| KV Molded Products               | #6108 Camper Brown<br>Gel-Kote - SPD-6108  | Trailers<br>Spray                      |                                |              |
| Jeff Boats Co.                   | #3233 Glidpol Resin<br>GRP-3233            | Boats<br>Spray                         | R. T.                          |              |
| A & A Boats &                    | #3293 Glidpol Resin<br>GRP-3293            | Boats<br>Spray                         | R. T.                          |              |
| Art Forms                        | #3282 Flame Retardant<br>Resin GRP-3282    | Decorative<br>Placques-<br>Hand Lay-Up | R. T.                          |              |
| KV Molded<br>Products            | #1017 Glidpol Resin<br>GRP-2804            | Molds<br>Hand Lay-Up                   | R. T.                          |              |
| Middleton Mfg.                   | #3025 Glidpol Resin<br>GRP-3025            |                                        | R. T.                          | GLD0006856   |

August, 1966

Atlanta

Metal Windows

AGL-4217 Gray Nubelite Primer

Continental Conveyor & Equipment

This company makes metal casement windows. They are using an automatic Fisher electrostatic system with touchup ahead of the automatic guns. They are having problems with wrap from time to time and in some instances, it was traced to dead paint. In others perhaps it was the equipment. We have on test a Nubelite Primer which has a good Ransburg meter reading. It is of the NRV-2917, VM-732 quality, reduced 4-1 with S-23 for application, and baked 12 minutes at 325°F.

AGL-3830-A Cabin Green VCM Enamel

Manly Jail Works

This material was formulated for use on C. R. Steel sections. In the past customer has had trouble with the paint discoloring over the welds. The BL-91 was replaced with G-74 and lab test showed much improvement. This is a V-903 quality, reduced 4-1 with S-23 for spraying, and air dries to handle in 15 minutes.

Conveyor Primer

AGL-4239 Red Oxide Metal Primer

Continental Conveyor Company

The above company makes metal conveyor idlers of cold rolled, hot rolled and castings. They wanted a Red Oxide Primer to dip and air dry in 30 minutes to handle and pack overnight. This material will not be top coated before packing.

AGL-4239 Red Oxide Metal Primer is of the VR-51107 quality. One gallon on test.

Carl Boyd

AGL-4236 Light Gray Texture Finish

AGL-4237 Dark Gray Texture Finish

Rockwell MFG

Customer requires a two-coat air dry finish that will texture and hide the rough spots in his cast metal parts. These materials are made with sufficient clay and cabosil to have a body of 65 - 75 KU, and do not sag when spattered on vertical surfaces.

By reducing the paints 3-1 with S-6, the first or prime coat can be sprayed in the conventional manner. After a 10 minute flash dry, the second coat is spattered with a spatter gun, using 10# atomizing air and 7# fluid pressure. These grays are made with 2-KB-500 to give the resistance qualities of a NuPon Ester. Gallon samples are on test at the customer's plant.

R. M. Lake

GLD006857