MARSHALL LABORATORY

STANDARD FORMULATING PRACTICE FP-893

DATE OF ISSUE: 1/22/64 - SUPERSEDING: NEW

I. DESCRIPTION OF LINE:

a) General Description

The 893-Line is a line of high gloss metallic acrylic lacquers for use mainly as trim and striping lacquers for small aluminum aircraft.

The colors are prepared by blending 901-Line bases and the appropriate resins and thinners. 885-Line and 887-Line single pigment tinting lacquers may not be used.

Pigment/Binder ratios are considered rather low by 887-Line standards. P/B ratios are in the range of 5/100. This is necessary to attain the high unbuffed gloss required by 893-Line customers. Gloss of colors should be a minimum of 70 at a 60° angle.

II. APPLICATION AND TESTING:

The 893-Line products are formulated at 25-33% solids at a viscosity of 10-30" in a #15 Parlin cup. The line is designed for spray application after a reduction of 100-125% with 37707. This reduction produces a spray viscosity of 29-32" in a #1 Zahn Cup. Refer to STP #43.

III. FORMULATIONS:

a) Pigmentation

See FP-887, 2-15 inclusive. Pigment blending practices, using 901-Line bases, are based upon this FP. Pigment, binder levels are established at that level, not to exceed 18/100, nor be less than 4/100, which gives the best balance between hiding and unbuffed gloss. Black and white hiding must not exceed 2.5 mils dry film thickness regardless of gloss. Pigment/binder must not fall below 4/100 regardless of gloss.

b) Vehicle:

The vehicle of 893-Line is based upon: RC-909/RC-910/H-654 = 35/35/30 (solids basis). Variations in this ratio are allowable, but should be thoroughly tested before being marketed. Cellulose acetate butyrate is not allowable in 893-Line.

MODIFYING AGENTS:

893-Line vehicle is modified by the addition of 2.5% B-507 on the vehicle solids. This modification is made to improve general working properties, mottle resistance in particular.

893-Line is further modified by the addition of 1.0% of C-84 (Uvinul 400) U.V. screening agent. This is added to protect against premature checking of 893-Line on exposure.

Silicone -- See FP-885-10.

d) Thinners:

#37707, #37692.

IV. FORMULATING TABLES:

None.

V. MANUFACTURING PROBLEMS:

See FP-885-10

VI. REASON FOR ISSUE:

New formulating practice.

MARSHALL DEVELOPMENT LABORATORY

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