



ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

SYNTHETIC BAKING ENAMEL, EXTERIOR QUALITY

SK-M21J9550-A

1. SCOPE

The material defined by this specification is a synthetic baking enamel, exterior quality, for wet on wet application over SK-M6J9556-A primer or equivalent. The material must be suitable for pneumatic as well as for electrostatic application.

2. APPLICATION

The material is generally used for decorative painting of exterior areas of bodies.

3. REQUIREMENTS

3.1 COMPOSITION

The enamel shall be composed of durable resins wet on wet compatible with primer, which is used in the production system. The enamel shall be pigmented as required to obtain the specified color and gloss, and to meet the performance requirements of this specification.

3.1.1 Toxicity

Contents of toxic components, e.g. benzene, chlorinated hydrocarbons, lead compounds, etc., shall conform to the safety regulations currently prevailing in the plant and/or country where the material shall be used.

3.2 PHYSICAL PROPERTIES

3.2.1 Non-Volatile
(FLTM EU-BI 2-1)

Minimum solids content for various color classes are shown in table, Section 3.2.7.

3.2.2 Package Viscosity, min 45 second FC 4 at 25 C
(FLTM EU-BI 11-1)

Date	Release No.	Released
1994 12 19		Revised and Retyped was: 14 pages
1976 02 05	B/CP 7064 TP	No. of sheets, 3.2.7, 3.7.3, 3.7.4 revised
1973 08 16	A/CY 8609 KP	Released

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3.2.3 Density
(FLTM EU-BI 2-2)

According to initial sample report +/- 0.02.

3.2.4 Flash Point

The flash point shall conform to the safety regulations applicable to the plant and/or country where the material shall be used.

3.2.5 Compatibility

The material supplied must be of such compatibility that it can be reduced with S-M14J245-A (Xylene) and S-M14J210-A (solvesso 100).

3.2.6 Hiding Power, Wet
(FLTM EU-BI 1-1)

Maximum black and white cryptometer readings are shown in table, Section 3.2.7.

Test Conditions:

Viscosity: 20 second Ford Cup at 25 C

Wedge Constant: 0.002 for black
0.007 for all other colors

Reducer: S-M14J245-A

3.2.7 Solids and Hiding

Color Class	Solids %, min	Hiding, max
1) Black	34	15
2) All dark solid colors, reds, maroons	44	15
3) All medium colors, including light reds and oranges (20 - 80 % TiO ₂)	44	15
4) Medium colors (80 - 95 % TiO ₂)	46	15
5) Light Colors (95 % or more TiO ₂)	48	15
6) Chrome colors (80 % or more lead molybdate or chromate)	50	15
7) White	52	15



3.2.8 Shelf Stability

During a storage of 3 months at room temperature, the material as received shall not gel or liver upon standing and must be free from settling which cannot be dispersed by normal agitation. The viscosity of the material shall not increase in excess of 10 seconds when tested according to FLTM EU-BI 2-3). (Exception: Black, maximum 40 seconds).

3.3 PREPARATION OF TEST PANELS

Use test panels according to DIN Standard 1623, type RRSt 1405 or Grade CR 1 (E) according to BS 1449, part 1 B 1962, surface finish (CLA) 1.4 +/- 0.3 micrometre.

Panels shall be phosphate coated under production conditions. If no newly coated panels are available, panels shall be dried 3 minutes at 105 C. The panels shall be coated with S-M64J4 and baked according to material specification (FLTM EU-BI 20-1). Spray a covering coat (approx. 20 micrometre) of SK-M6J9556-A or equivalent. Allow to flash 1 minute and spray a full wet covering coat (approx. 20 micrometre dry film thickness) of material under test. Flash 3 minutes and bake 5 minutes at 163 C metal temperature. After cooling down to room temperature, panels for testing according to clause 3.5 to 3.7 shall be stoved once more for 20 minutes at 130 C object temperature.

3.4 AGEING

All panels shall be aged 72 hours at room temperature of 16 hours at 45 C prior to testing, unless otherwise specified.

3.5 APPEARANCE

3.5.1 Color

The color shall match approved master panel, when tested according to FLTM EU-BI 9-1.

3.5.2 Gloss

(FLTM EU-BI 10-1, using 60 deg glossmeter)

The gloss shall be specified by means of a letter suffix to the color number as follows:

B = 80 +/- 5
C = 70 +/- 5
D = 62 +/- 5
E = 50 +/- 5
F = 35 +/- 5