



Engineering Material Specification

Material Name

Specification Number

PAINT PERFORMANCE - TRUCK WHEELS

ESL-M2P122-A1 thru A8

1. SCOPE

These specifications define the performance requirements for paint to be used on truck wheels made of steel only. Primer only, primer-topcoat, or topcoat only systems defined by these specifications are identified by suffixes A1 through A8. These systems are defined as follows:

- ESL-M2P122-A1 Describes a spray or dip primer which provides minimal durability and corrosion resistance.
- ESL-M2P122-A2 Describes a spray, dip, or electrocoated (anodic or cathodic) primer which provides moderate durability and corrosion resistance.
- ESL-M2P122-A3 Describes an electrocoated primer which provides good durability and corrosion resistance.
- ESL-M2P122-A4 Describes an electrocoated primer which provides excellent durability and corrosion resistance.
- ESL-M2P122-A5 Describes an electrocoated primer which provides superior durability and corrosion resistance.
- ESL-M2P122-A6 Describes an electrocoated primer plus topcoat or an electrocoated topcoat only which provides good durability and corrosion resistance.
- ESL-M2P122-A7 Describes an electrocoated primer plus topcoat or an electrocoated topcoat only which provides excellent durability and corrosion resistance.
- ESL-M2P122-A8 Describes an electrocoated primer plus topcoat or an electrocoated topcoat only which provides superior durability and corrosion resistance.

2. APPLICATION

These specifications were released originally for light truck steel wheels with the purpose of defining and controlling the many paints and systems used by various wheel suppliers.

Metal preparation (zinc phosphate, etc.) is not discussed in these specifications and is at the discretion of the wheel supplier in order to meet the specified requirements.

Date	Release No.	Release/Revision
1987 01 06	TR2-018A-96	3.1.3, 3.2.1, Revised & Retyped <i>P.V. Bala 1-23-87</i> <i>R.D. Felt 11/23/87</i>
1982 12 10	TM2-233D-4	Released

E Staff
Jul 84 **3948-a**

Page 1 of 7

9009160 0015790 A94



All testing shall be performed on wheel assemblies or sections of wheel assemblies if possible. When panels are necessary, the panels, 100 mm x 300 mm, are to be prepared from wheel stock sheet material(s) being used to manufacture the subject wheel and are to be processed concurrently with wheel assemblies using the actual production paint system. Paint shall be given a 72 h minimum cure time prior to testing.

Any variances shown on the Engineering drawing supersede these specifications.

3. REQUIREMENTS

3.1 FILM PROPERTIES

3.1.1 Film Thickness, min (FLTM BI 17-1)

Test shall be performed on wheel assemblies.

These are base minimum film thicknesses only and are not to be construed as sufficient to meet resistance properties (para 3.2).

<u>Specification</u>	<u>Primer, micrometre</u>	<u>Topcoat, micrometre</u>	<u>Electrocoated Topcoat Only, micrometre</u>
ESL-M2P122-A1	13	*	*
ESL-M2P122-A2	13	*	*
ESL-M2P122-A3	13	*	*
ESL-M2P122-A4	13	*	*
ESL-M2P122-A5	18	*	*
ESL-M2P122-A6	13	38	*
ESL-M2P122-A7	13	38	*
ESL-M2P122-A8	18	38	*
ESL-M2P122-A6	*	*	18
ESL-M2P122-A7	*	*	18
ESL-M2P122-A8	*	*	18

* Not applicable



3.1.2 Initial Hardness

Shall be sufficiently cured at time of packing to withstand normal handling and shipping without damage. Any tackiness or printing resulting from hard pressure with the thumb shall be cause for rejection.

3.1.3 Final Hardness (ESL-M2P122-A6 through A8 only) (FLTM BI 12-2 or ASTM D 3363)

Test shall be performed on panels.

Tukon K10, min 7.5 KHN

Pencil, min B

3.1.4 Color (ESL-M2P122-A6 through A8 only) (FLTM BI 9-1)

Test shall be performed on panels.

Shall match the standard color panel specified on the Engineering drawing. It is the responsibility of the wheel supplier to assure that a standard color panel matching the production topcoat is on file at the Design Center and has been concurred in by both the affected product engineering office and the Design Center.

3.1.5 Gloss (ESL-M2P122-A6 through A8 only) (FLTM BI 10-1)

Test shall be performed on panels.

Shall be within the limits specified on the engineering drawing by means of a letter suffix to the color designation assigned by the Design Center as follows:

<u>Suffix</u>	<u>Angle</u>	<u>Reading</u>
A	20 deg	72 min
	60 deg	92 min
B	60 deg	80 +/- 4
C	60 deg	70 +/- 4
D	60 deg	62 +/- 4
E	60 deg	50 +/- 3
F	60 deg	35 +/- 3
G	60 deg	20 +/- 3
H	60 deg	10 +/- 3
J	60 deg	6 max