



PLATING, CHROMIUM-DECORATIVE INTERIOR-COPPER-NICKEL-STEEL

▽ ESB-M1P17-A

PLATING, CHROMIUM-DECORATIVE EXTERIOR-COPPER-DUAL-NICKEL-STEEL

ESB-M1P18-A

1. SCOPE

These specifications define the performance requirements for interior and exterior chromium plating systems on steel substrates.

2. APPLICATION

These specifications were released originally for coating where a bright or low gloss decorative and/or protective metallic finish is required on steel and/or iron surfaces.

Unless otherwise specified on the engineering drawing, all parts shall be finished with a final coating of chromium. When nickel finish is desired, the engineering drawing shall specify nickel plate, e.g. nickel plate ESB-M1P17, omit chromium plating.

3. REQUIREMENTS

Material specification requirements are to be used for initial qualification of materials.

3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.2 APPEARANCE

All parts shall have the finish specified on the engineering drawing. The plated parts shall be free from surface imperfections such as rough or orange peel conditions, crazing, cold shuts, pits, slivers, dullness, stains, discoloration, breaks in the plate, and wheel marks or buff lines to the extent required specifications for the visual inspection of appearance items established by Product Engineering. Low gloss parts shall match the approved Styling master sample for appearance.

3.2.1 Buffing of Chromium Plating

Because of the potential adverse effect on corrosion resistance, buffing of final chromium plating on exterior parts is not permitted. Brushing or other approved mechanical treatments on nickel coating are permitted provided that minimum plating thickness requirements are met after treatment and minimum chromium porosity is maintained for ESB-M1P18-A, option 2, para 3.4.3.

Date	Action	Revisions
2006 04 19	Revised	Updated format, Deleted 4.2
2002 08 23	Revised	Updated & Renumbered
1963.09.22	Released	AS1-1047



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3.3 ADHESION

The plate shall adhere to the base metal and show no separation between layers of plate.

3.3.1 Sawing

Position the part in a vise or holding fixture so that the significant plated surface is perpendicular to the saw blade and the cutting motion of the blade is in a direction which tends to pull the plating away from the base metal.

3.3.2 Bending

Any section of the part containing a significant plated surface shall be positioned in a vise or holding fixture and subjected to repeated bending until fracture of the section.

3.4 PLATING THICKNESS

Minimum plating thickness requirements for significant surfaces are shown in para 3.4.3.

3.4.1 Significant surfaces

All surfaces visible on a part as assembled in a vehicle or surface which can be the source of corrosion products visible on an assembled vehicle are significant surfaces. Except as noted on the engineering drawing, all significant surfaces shall meet the corrosion and plate thickness requirements, as detailed in para 3.4.3.

Threads shall be completely plated, but shall not be considered as significant surfaces, unless so indicated on the engineering drawing.

Rear of bumpers shall not be considered significant surfaces, unless so designated on engineering drawing.

3.4.2 Plating Thickness Measurement (ASTM B 487)

The optical measurement of copper and nickel deposits on significant surfaces shall be considered the standard thickness test method.

The chromium plate thickness on significant surfaces shall be checked by the spot test as described in ASTM B 556 or by the electronic deplating test, ASTM B 504, Determination of Thickness of Chromium Plate. In case of differences, ASTM B 504 shall be the umpire method.