



CERAMIC FINISH, FUSED - BRONZE ALLOYS

ESB-M12P1-B

1. SCOPE

This specification defines the performance requirements for the finish of bronze surfaces which are electroplated after application of a fused glass, porcelain or vitreous type finish.

2. APPLICATION

This specification was released originally for a finish used on bronze surfaces to produce a jewelry appearance for exterior or interior automotive parts. It is specified where corrosion protection and appearance are the primary requisites.

3. REQUIREMENTS

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producer must conform to the Company's Standard Requirements For Production Materials (WSS-M99P111-A).

3.1 HEAT RESISTANCE

No change in color of the ceramic after 30 min exposure at 150 +/- 2 °C.

3.2 WEATHERING RESISTANCE

The finished parts shall show no change in color or fading when exposed as follows:

. Florida Exposure (Miami Area)

160,000 langleys minimum at 45 °C facing south (approximately 1 year).

. Accelerated Weathering

400 h in Atlas XW Weatherometer minimum.

3.3 PLATING REQUIREMENTS

3.3.1 Appearance

All parts shall have a bright finish unless otherwise 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 by specifications for the visual inspection of appearance items established by Product engineering.

Date	Action	Revisions
2007 06 22	Revised	Inserted 3.0; Deleted 3.4
1978 10 06		Metricated and Retyped CAH1-RD572066-112
1965 06 11	Released	CAV1-DR500185





3.3.1.1 Buffing of Chromium Plating

Because of the potential adverse effects on corrosion resistance, buffing of final chromium plating on exterior parts is not permitted.

3.3.2 Adhesion

The plate shall adhere to the base metal and show no separation between layers of plate when tested as follows:

3.3.2.1 Sawing

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

3.3.2.2 Bending

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

3.3.3 Plating Thickness

Minimum plating thickness requirements for significant surfaces are shown in para 3.3.3.3.

3.3.3.1 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 plate thickness requirements, as detailed in 3.3.3.3.

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

3.3.3.2 Plating Thickness Measurement (ASTM A 219)

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 A 219 or by the deplating electronic test, ASTM B 504, Determination of Thickness of Chromium Plate. In case of differences, ASTM B 504 shall be the umpire method.