



SURFACE VEHICLE INFORMATION REPORT

J474™

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Electroplating and Related Finishes

RATIONALE

The technology in this specification is stable and no further technical revisions are applicable at this time.

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Documents

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Foreword—This Document has not changed other than to put it into the new SAE Technical Standards Board Format.

- 1. Scope**—Electroplating is a process whereby an object is coated with one or more relatively thin, tightly adherent layers of one or more metals. It is accomplished by placing the object to be coated on a plating rack or a fixture, or in a basket or in a rotating container in such a manner that a suitable current may flow through it, and then immersing it in a series of solutions and rinses in planned sequence. The advantage to be gained by electroplating may be considerable; broadly speaking, the process is used when it is desired to endow the basis material (selected for cost, material conservation, and physical property reasons) with surface properties it does not possess.

It should be noted that although electroplating is the most widely used process for applying metals to a substrate, they may also be applied by spraying, vacuum deposition, cladding, hot dipping, chemical reduction, mechanical plating, etc. The purpose for applying an electroplate and the metals used for various applications follow.

2. References

- 2.1 Applicable Publications**—The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply.

- 2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J207—Electroplating of Nickel and Chromium on Metal Parts—Automotive Ornamentation and Hardware

- 2.1.2 ASTM PUBLICATIONS—Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM Book of Standards—Part 7

ASTM A 164—Electrodeposited Coatings of Zinc on Steel

ASTM A 165—Electrodeposited Coatings of Cadmium on Steel

ASTM B 177—Chromium Plating on Steel for Engineering Use

ASTM B 200 —Electrodeposited Coatings of Lead on Steel

ASTM B 253—Preparation of and Electroplating on Aluminum Alloys by the Zincate Process