

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS 2480A

Issued 5-1-48
Revised 6-15-50

PHOSPHATE TREATMENT (Paint Base)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. APPLICATION: To produce on ferrous parts a coating which will ensure satisfactory paint adherence.
3. PREPARATION: Before placing the parts in the phosphate solution, they shall have chemically clean surfaces, prepared with minimum erosion, pitting, or unintended abrasion.
4. PROCEDURE:
 - 4.1 The properly cleaned parts shall be immersed in, or sprayed with, a balanced phosphate solution containing nitrate as an accelerating agent; the solution shall be maintained at the proper temperature and parts shall be treated for a sufficient length of time to convert the metal surface to a uniform coating meeting all requirements of Section 5.
 - 4.2 Immediately after the above processing, the parts shall be rinsed in cold running water.
 - 4.3 Unless otherwise specified, after the cold water rinse, parts shall be dipped for 20-60 seconds in a dilute chromic acid solution (7.5 ounces per 100 gallons of solution with an approximate pH of 5) at 190 F \pm 10.
 - 4.4 Parts shall be thoroughly dried.
 - 4.5 Parts shall then be protected against contamination of the coating, and the painting should be done as soon as practicable.
5. QUALITY:
 - 5.1 The coating shall have a uniform, dull appearance ranging from light to dark gray in color with or without some silvery iridescence.
 - 5.2 Parts or test panels shall be capable of withstanding exposure to salt spray for not less than 150 hours without showing rust extending more than 1/8 in. on either side of the scratch marks when prepared and tested as follows.
 - 5.2.1 Parts or, in lieu thereof, steel panels approximately 2 x 4 in., shall be processed as in Section 4 and then coated with one coat of AMS 3120 black enamel, air dried 15 min. and baked at 295-305 F for 30 min., and allowed to stand in air for 24 hours. Film thickness of enamel shall be 0.0004-0.001 in. Parts or panels shall be scratched with a sharp instrument to a depth which will cut through the enamel film and shall then be exposed to salt spray test in accordance with ASTM B117-44T for 150 hours.