

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 7212

Issued 12-1-42

Revised

STEEL COTTER PINS, GALVANIZED Low Carbon

1. ACKNOWLEDGMENT: A vendor must mention this specification number in all quotations and when acknowledging purchase orders.

2. COMPOSITION: (a) Basic Steel Wire. -
- | | |
|------------|-------------|
| Carbon | 0.08 - 0.13 |
| Manganese | 0.30 - 0.50 |
| Phosphorus | 0.040 max |
| Sulphur | 0.050 max |
| Silicon | 0.15 - 0.30 |

(b) The steel wire shall be uniformly coated with pure zinc.

3. CONDITION: (a) The wire shall be annealed and cold drawn so that the pins manufactured from it shall be within the following hardness limits for the diameter ranges indicated:

Nominal Pin Diameter, inch	Hardness	
	Vickers	or Rockwell 15-N
3/32 and less	200-330	65-77
1/8 and less	140-240	55-70

(b) A prong of any pin shall withstand bending flat on itself, without cracking of the base material, or flaking or chipping of the coating; the flat side of the prong shall form the outside of the bend.

4. QUALITY: (a) The pins shall be uniform in quality, temper and diameter, of smooth, bright finish and good workmanship, and shall be free from rough zinc coating and injurious defects consistent with best commercial manufacturing practices.

(b) The pins shall be capable of withstanding, without rusting, not less than 150 hours exposure to the salt spray test conducted in accordance with the general procedure outlined in ASTM B117-41T, using specifically a 20% solution by weight of sodium chloride and an operating temperature of 95 $\pm$ 2°F.

5. SHAPE: The pins shall have ends slightly rounded, beveled, pointed, or with one end slightly extended beyond the other to permit easy assembly.
6. TOLERANCES: Permissible variations in the cross-sectional dimensions of the half-round wire used for the manufacture of the pins shall be plus or minus 0.002 in. for the major axis and plus or minus 0.001 in. for the minor axis.
7. SIZES: Standard sizes shall start with 1/16 in. nominal diameter and increase by 1/32 in. increments to and including 1/4 in. nominal diameter, and then increase by 1/16 in. increments for diameters over 1/4 in.
8. REPORTS: The manufacturer shall supply three copies of a notarized report of the chemical composition of each lot in each shipment. This report shall include the purchase order number, material specification number, part number, size, and quantity.

9. REJECTIONS: Material not conforming to this specification, or modifications specified on the drawing or the purchase order, is subject to rejection. If samples for verification are desired by the vendor, they must be claimed within three weeks. Rejected material or parts will be held for a reasonable time, at the vendor's risk, awaiting shipping instructions for the return of same for credit or replacement, as specified. Vendor shall pay all transportation charges.

NOTE. SIMILAR SPECIFICATIONS: Navy 42P7, type B; Federal FF-P-386, type B; SAE 1010; are listed here for information only and shall not be construed as acceptable alternates unless all requirements of this AMS are met.

