

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
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## AMS5032

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Revised

### ANNEALED STEEL WIRE, UNCOATED

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

2. COMPOSITION:

		Individual Coil Check Analysis Over or Under
Carbon	0.18 - 0.23	0.01
Manganese	0.30 - 0.50	0.02
Phosphorus	0.040 max	0.005
Sulphur	0.050 max	0.005

3. CONDITION: Bright annealed conforming to the following physical properties:

Tensile Strength, lb per sq in.	50,000 min
Tensile Strength, lb per sq in.	75,000 max
Elongation, % in 10 in.	15 min

4. QUALITY: (a) The wire shall be uniform in quality and temper, cylindrical, clean, smooth, and free from rust, scrapes, splits, laps, cracks, seams, kinks and other injurious defects consistent with best commercial manufacturing practices.

(b) A straight length of wire not less than 12 inches long shall withstand being wrapped in a closed helix for at least 6 complete turns around a cylindrical mandrel having a diameter equal to the diameter of the wire and then unwrapped, without splitting or breaking.

5. TOLERANCES: The following variations in wire diameter are permissible; all dimensions are in inches;

<u>Diameter</u>	<u>Tolerance, plus or minus</u>
0.0230 to 0.0720, incl.	0.001
0.0800 to 0.2437, incl.	0.002

6. REPORTS: Unless otherwise specified, the manufacturer shall furnish three copies of a notarized report of the chemical composition and physical properties of the wire in each shipment. This report shall include the purchase order number, material specification number, size, and quantity.

7. PACKAGING AND MARKING: Unless otherwise specified, the wire shall be supplied in catchweight one piece coils or reels having a mean diameter of approximately 8 inches for wire diameters 0.0317 inch and under, a mean diameter of approximately 16 inches for wire diameters 0.0348 inch to 0.0720 inch, and a mean diameter of approximately 22 inches for wire diameters 0.0800 inch and over. Each coil or reel shall be properly wrapped in waterproof paper, and shall have attached a tag bearing the manufacturer's name or trade mark, purchase order number, material specification number and title, size, and quantity contained therein.