

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
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AMS 4510 A

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

2. COMPOSITION:

| | | |
|------------|---------------|-----------|
| Copper | 94.00 - 96.00 | |
| Tin | 3.50 - 5.80 | 99.50 min |
| Phosphorus | 0.03 - 0.35 | |
| Zinc | 0.30 max | |
| Iron | 0.10 max | |
| Lead | 0.05 max | |
| Antimony | 0.01 max | |

3. CONDITION: (a) Spring temper conforming to the following physical properties:

| | Min | Max |
|------------------------------------|------------|------------|
| Tensile Strength, lb per sq in | 91,000 | 105,000 |
| Rockwell Hardness for thicknesses: | | |
| 0.010" to 0.030" | 30-T 75 | 30-T 79 |
| 0.030" and over | 30-T 77 | 30-T 81 |
| 0.040" and over | B 90 (G69) | B 96 (G75) |

(b) Rockwell hardness values are offered as an indication of tensile strength; unless otherwise specified, they will be subject to confirmation by tension tests.

4. QUALITY: The material shall be uniform in quality and temper, clean, smooth, commercially flat, and free from foreign material and all injurious internal and external defects within the limits of best commercial manufacturing practices.

5. TOLERANCES: Permissible variations in thickness of sheet 20 inches wide or less shall be as follows; all dimensions are in inches:

| <u>Nominal Thickness</u> | <u>Tolerance, plus and minus</u> |
|-----------------------------|----------------------------------|
| *Up to 0.004, incl. | 0.0004 |
| *Over 0.004 to 0.006, incl. | 0.0006 |
| Over 0.006 to 0.009, incl. | 0.002 |
| Over 0.009 to 0.017, incl. | 0.0025 |
| Over 0.017 to 0.026, incl. | 0.003 |
| Over 0.026 to 0.037, incl. | 0.0035 |
| Over 0.037 to 0.050, incl. | 0.004 |
| Over 0.050 to 0.073, incl. | 0.0045 |
| Over 0.073 to 0.130, incl. | 0.005 |
| Over 0.130 to 0.205, incl. | 0.006 |
| Over 0.205 to 0.300, incl. | 0.007 |
| Over 0.300 to 0.500, incl. | 0.008 |

*Tolerance applies to a maximum width of 8 inches in these thickness ranges.