

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
29 West 39th Street  
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## AMS 3500

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Revised

### LEATHER Hot Oil and Gasoline Resistant

1. ACKNOWLEDGMENT: A vendor must mention this specification number in all quotations and when acknowledging purchase orders.
2. GRADE: Chrome retan leather suitable for use at high temperature and/or in contact with oil and gasoline.
3. TANNING:
  - (a) The leather shall be tanned by the mineral retanned process, to prevent the production of a spongy, loose fibered leather. The tanning process shall be such that in the retanning with vegetable tanning material, the leather shall be tanned completely through, so that examination of a cut cross-section shall reveal no indication of a chrome streak.
    - (b) No dyes, excepting tanning agents, shall be used.
    - (c) The tanning process shall be such as will preserve the largest percentage of natural fiber of the butt and bring the fiber into closest contact.
4. QUALITY:
  - (a) Butts shall be close trimmed and from the best quality selected green salted steer hides, free from shoulder or belly portions, and harsh or raw spots.
    - (b) The leather shall be firm and solid, free from holes, slaughter cuts, brand marks, deep wrinkles, soft or spongy spots, grub holes or any other defects detrimental to the finished parts.
    - (c) The leather shall be full grain with the flesh side smooth and free from loose flesh. It may be shaved to an even thickness. The grain side shall be tight, smooth and entirely free from soapstone, chalk, or other smoothing material.
    - (d) The leather shall be free from hard spots or grit that will scratch polished metal surfaces.
    - (e) The leather shall be capable of being formed without showing any tears, cracks, or noticeable wrinkles.
    - (f) The leather shall not ooze on either flat surfaces or edges. All leather showing signs of oozing within six months shall be replaced.
    - (g) The finished parts shall contain no impregnation whatsoever, except the oils and greases used in the currying of the leather.
5. REQUIREMENTS: (a) The leather shall conform to the following requirements:

|   |         |
|---|---------|
| *Petroleum Ether Extract                        | 10-18%  |
| **Total Ash                                     | 7% max  |
| Chromic Oxide (Cr <sub>2</sub> O <sub>3</sub> ) | 3% min  |
| Vegetable Tanning Material                      | 30% min |
| Hide Substance                                  | 35% min |
| Acidity (pH)                                    | 3.0 min |
| Glucose   | none    |

\*Percentage on basis of moisture free leather.  
\*\*Percentage on basis of moisture, grease and wax free leather.