



# AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
TWO PENNSYLVANIA PLAZA, NEW YORK, N. Y. 1000

## AMS 4015F

Superseding AMS 4015E

Issued 12-5-39

Revised 5-1-69

### ALUMINUM ALLOY SHEET AND PLATE 2.5Mg - 0.25Cr (5052-0)

- 1. ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
- 2. APPLICATION:** Primarily for formed parts where welding, moderate strength, and good resistance to corrosion are required.
- 3. COMPOSITION:**

|                         | min       | max  |
|-------------------------|-----------|------|
| Magnesium               | 2.2       | 2.8  |
| Chromium                | 0.15      | 0.35 |
| Iron + Silicon          | --        | 0.45 |
| Zinc                    | --        | 0.10 |
| Manganese               | --        | 0.10 |
| Copper                  | --        | 0.10 |
| Other Impurities, each  | --        | 0.05 |
| Other Impurities, total | --        | 0.15 |
| Aluminum                | remainder |      |

- 4. CONDITION:** Annealed and, unless otherwise specified, mill finish.
- 5. TECHNICAL REQUIREMENTS:** The product shall conform to the following requirements; tensile properties shall be determined in accordance with the latest issue of AMS 2355.

**5.1 Tensile Properties:**

| Ø | Nominal Thickness<br>Inches | Tensile Strength<br>psi | Elongation<br>% in 2 in.<br>or 4D, min |
|---|-----------------------------|-------------------------|--|
|   | 0.006 to 0.007, incl        | 25,000 - 31,000         | --                                     |
|   | Over 0.007 to 0.012, incl   | 25,000 - 31,000         | 14                                     |
|   | Over 0.012 to 0.019, incl   | 25,000 - 31,000         | 15                                     |
|   | Over 0.019 to 0.031, incl   | 25,000 - 31,000         | 16                                     |
|   | Over 0.031 to 0.050, incl   | 25,000 - 31,000         | 18                                     |
|   | Over 0.050 to 0.113, incl   | 25,000 - 31,000         | 19                                     |
|   | Over 0.113 to 0.249, incl   | 25,000 - 31,000         | 20                                     |
|   | Over 0.249 to 3.000, incl   | 25,000 - 31,000         | 18                                     |

- 5.2 Bending:** Material 0.249 in. and under in thickness shall be capable of withstanding, without cracking, bending at room temperature flat on itself with axis of bend parallel to direction of rolling.
- 6. QUALITY:** Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts.
- 7. TOLERANCES:** Unless otherwise specified, tolerances shall conform to all applicable requirements of the latest issue of AMS 2202.

SAE Technical Board rules provide that: "All technical reports, including standards approved by the Board, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."