

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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New York City

AMS 4290 D

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ALUMINUM ALLOY CASTINGS, DIE 9.5Si - 0.5Mg (360) As Cast

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** For intricate die castings with thin sections used at relatively low stresses, and requiring good corrosion resistance.

3. **COMPOSITION:**

Silicon	9.00 - 10.00
Magnesium	0.40 - 0.60
Iron	2.00 max
Copper	0.60 max
Nickel	0.50 max
Zinc	0.50 max
Manganese	0.30 max
Chromium	0.25 max
Tin	0.10 max
Other Impurities, total	0.20 max
Aluminum	remainder

NOTE: When low pressure die casting is permitted by purchaser, silicon may be 11.00 - 13.00% in which case magnesium shall be not higher than 0.10%.

4. **CONDITION:** As cast.

5. **QUALITY:**

- 5.1 Castings shall be uniform in quality and condition, sound, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts. Castings shall have smooth surfaces and shall be well cleaned.
- 5.2 Quality standards shall be as agreed upon by purchaser and vendor.
- 5.3 Castings shall not be repaired by plugging, welding or other methods without written permission from the purchaser.
- 5.4 Castings shall not be impregnated, chemically treated or coated to prevent leaking, unless specified or allowed by written permission which states the method to be used. Impregnated castings shall be marked IMP.

6. **REPORTS:**

- 6.1 Unless otherwise specified, the vendor of castings shall furnish with each shipment three copies of a notarized report stating that the castings conform to the requirements of this specification. This report shall show the material specification number, purchase order number, part number, and quantity.

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