

AEROSPACE MATERIAL SPECIFICATION



AMS 2361C

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Superseding AMS 2361B

Elevated Temperature Tensile Properties of Castings

1. SCOPE:

This specification establishes a procedure for designating minimum elevated temperature tensile property requirements of castings by means of this AMS number and a series of dash numbers.

2. APPLICABLE DOCUMENTS:

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

2.2 ASTM Publications:

Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM E 8 Tension Testing of Metallic Materials
ASTM E 8M Tension Testing of Metallic Materials (Metric)

3. TECHNICAL REQUIREMENTS:

3.1 Tensile Specimens:

Shall be machined from a representative casting or castings after any heat treatment specified in the basic material specification has been accomplished. Specimens shall be of standard proportions in accordance with ASTM E 8 or ASTM E 8M with 0.250 inch (6.35 mm) diameter at the reduced parallel gage section, except that if the thickness of the casting is insufficient to provide such specimens, they shall be of a smaller size proportional to the standard as agreed upon by purchaser and vendor.

3.1.1 Specimen Location: When property requirements are designated by the procedure of this specification, the location(s) in the casting to which the designated property requirements apply shall be as shown on the purchaser's drawing and as follows:

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3.1.1.1 When the property limit dash-number designations of 3.2 apply to a specific area or areas, the designation of 3.2 may be used alone or with the final two-letter designation "DR" to indicate that the drawing shows the location(s) from which specimens shall be taken.

3.1.1.2 Property requirements for specimens from non-specific locations in castings may be designated as in 3.2, using one of the following two-letter suffixes as applicable:

-AO = Requirements apply to all areas of the casting.

-GR = Requirements apply to all areas except near gate, sprue, and riser locations.

3.2 Tensile Property Requirements:

Will be designated by AMS 2361, followed by five groups of one to four digits indicating in successive order, the temperature in Fahrenheit or Celsius degrees, the minimum tensile strength in 1000 psi or in MPa, the minimum yield strength in 1000 psi or in MPa, the minimum elongation in 4D in percent, and the minimum reduction of area in percent. Designations of temperature and stress shall be assumed to be in inch/pound units (°F and psi) unless "AMS 2361" is followed by "(SI)". When there is no requirement for a particular property, an "X" shall replace the figures for that property.

3.2.1 Examples:

3.2.1.1 In inch/pound units, AMS 2361-1300-75-37-5-10 shall designate that the test is to be conducted at 1300 °F and that the requirements are as follows:

Tensile Strength, minimum	75,000 psi
Yield Strength at 0.2% Offset, minimum	37,000 psi
Elongation in 4D, minimum	5%
Reduction of Area, minimum	10%

3.2.1.2 In SI units, AMS 2361(SI)-700-500-250-5-10 shall designate that the test is to be conducted at 700 °C and that the requirements are as follows:

Tensile Strength, minimum	500 MPa
Yield Strength at 0.2% Offset, minimum	250 MPa
Elongation in 4D, minimum	5%
Reduction of Area, minimum	10%

4. QUALITY ASSURANCE PROVISIONS:

Not applicable.