AERONAUTICAL
MATERIAL SPECIFICATIONS
SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

AMS 4069

Issued 6-15-59
Revised

ALUMINUM ALLOY TUBING, SEAMLESS, DRAWN, CLOSE TOLERANCE
2.5Mg - 0.25Cr (5052-0)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.

2. APPLICATION: Primarily for ducts requiring small radius bends.

3. COMPOSITION:

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

4. CONDITION: Annealed.

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties:

Tensile Strength, psi	35,000 max
Yield Strength at 0.2% Offset or at 0.0080 in. in 2 in. Extension Under Load (E = 10,100,000), psi	20,000 max
Elongation, % in 2 in.	
Strip	10 min
Full Section	12 min

5.1.1 When a dispute occurs between purchaser and vendor over the yield strength value, yield strength determined by the offset method shall apply.

5.2 Flattening: Tubing having nominal wall thickness less than 10% of the nominal OD shall be capable of withstanding, without cracking, flattening sideways under a load applied gradually at room temperature until the outside dimension under load is equal to 3 times the nominal wall thickness.

5.2.1 If tubing does not pass the flattening test of 5.2, a section of the tube not less than 1/2 in. in length and embracing 1/3 to 1/2 the circumference of the tube shall be capable of withstanding, without cracking, bending at room temperature through an angle of 180 deg around a diameter equal to the nominal wall thickness of the tubing with axis of bend parallel to axis of tube and with inside of tube on inside of bend.

6. QUALITY: Tubing 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.

 Printed in U. S. A.