Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

AEROSPACE MATERIAL SPECIFICATION

AMS 4065E
Superseding AMS 4065D
Issued 6/1/42
Revised 5/1/70

ALUMINUM ALLOY TUBING, SEAMLESS, DRAWN
1.25Mn (3003-0)

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

2. COMPOSITION:

Ø

	min	max
Manganese	1.0	1.5
Iron	--	0.7
Silicon	--	0.6
Copper	0.05	0.20
Zinc	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

3. CONDITION: Annealed.

4. TECHNICAL REQUIREMENTS: The product shall conform to the following requirements; tensile properties shall be determined in accordance with the latest issue of AMS 2355.

4.1 Tensile Properties:

Tensile Strength, psi	14,000 - 19,000

Ø 4.2 Flattening (Round Tubing Only):

4.2.1 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 flat upon itself while under load.

4.2.1.1 If tubing does not pass the flattening test of 4.2.1, a section of 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.

4.3 Flarability (Round Tubing Only): Tubing with nominal OD of 0.375 in. and under shall be capable of being double-flared and tubing with nominal OD over 0.375 in. shall be capable of being single-flared without formation of cracks or other visible defects. Specimens for flaring may be cut from
Ø any portion of the tube or an entire tube may be used as a specimen. The end of the specimen to be flared shall be cut square, with the cut end smooth and free from burrs, but not rounded except for sizes 0.375 in. and under. The specimen shall, at room temperature, be forced axially with steady pressure over a hardened and polished tapered steel pin having a 74 deg included angle, to produce a flare having the permanent expanded OD specified in the following table: