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AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS
4035

ALUMINUM ALLOY SHEET Copper Magnesium Manganese

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

2. COMPOSITION:	Copper	3.8 - 4.9
	Magnesium	1.2 - 1.8
	Manganese	0.3 - 0.9
	Iron	0.5 max
	Silicon	0.5 max
	Chromium	0.25 max
	Zinc	0.03 max
	Other Impurities, each	0.03 max
	Other Impurities, total	0.10 max
	Aluminum	remainder

3. **CONDITION:** (a) Annealed conforming to the following physical properties when test pieces are cut from the sheet in any direction:

Tensile Strength, lb per sq in.	35,000 max
Elongation, % in 2 in.	12 min

(b) The material shall not crack when cold bent 180°, in any direction, over a diameter equal to the thickness times the following bend factor:

<u>Thickness inches</u>	<u>Bend Factor</u>
0.012 - 0.032	0
0.033 - 0.064	1
0.065 - 0.128	2
0.129 - 0.250	4
0.251 - 0.500	6

4. **PHYSICAL PROPERTIES:** (a) Unless otherwise specified, the material after heat treating and when cut in any direction, shall conform to the following minimum physical properties:

<u>Thickness, inches</u>	<u>Tensile Strength, lb per sq in.</u>	<u>Yield Strength, lb per sq in.</u>	<u>Elongation, % in 2 in.</u>	<u>Bend Factor</u>
0.010 - 0.020	62,000	40,000	12	4
0.021 - 0.040	"	"	15	4
0.041 - 0.051	"	"	15	5
0.052 - 0.128	"	"	17	6
0.129 - 0.250	"	"	15	8
0.251 - 0.500	"	"	12	10
0.501 - 1.000	"	"	8	—

(b) The material shall not crack when cold bent 180° over a diameter equal to the thickness times the above bend factor, the axis of the bend being parallel to the direction of rolling.