

**SAE** The Engineering  
Resource For  
Advancing Mobility

400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

**AEROSPACE  
MATERIAL  
SPECIFICATION**

**AMS** 4018B

Issued 11-1-54  
Revised 10-1-81

ALUMINUM ALLOY SHEET AND PLATE  
3.5 - 0.25Cr (5154-0)

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 10-1-81. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the "B" revision of the subject specification.

SAE Technical Board rules provide that: "All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade or their use by governmental agencies is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."

SAENORM.COM : Click to view the full PDF of ams4018B



# AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 1000

## AMS 4018B

Superseding AMS 4018A

Issued 11-1-54  
Revised 5-1-69

### ALUMINUM ALLOY SHEET AND PLATE 3.5Mg - 0.25Cr (5154-0)

- 1. ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
- 2. APPLICATION:** Primarily for low-strength formed parts fabricated by fusion welding.
- 3. COMPOSITION:**

	min	max
Magnesium	3.1	3.9
Chromium	0.15	0.35
Silicon + Iron	--	0.45
Zinc	--	0.20
Titanium	--	0.20
Copper	--	0.10
Manganese	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

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

#### 5.1 Tensile Properties:

Nominal Thickness Inches	Tensile Strength psi		Yield Strength at 0.2% Offset or at Extension Indicated (E = 10,100,000)		Elongation % in 2 in. or 4D, min
	min	max	psi, min	Extension Under Load in. in 2 in.	
0.020 to 0.031, incl	30,000	41,000	11,000	0.0062	12
Over 0.031 to 0.050, incl	30,000	41,000	11,000	0.0062	14
Over 0.050 to 0.113, incl	30,000	41,000	11,000	0.0062	16
Over 0.113 to 3.000, incl	30,000	41,000	11,000	0.0062	18

- 5.1.1** When a dispute occurs between purchaser and vendor over the yield strength values, yield strength determined by the offset method shall apply.
- 5.2 Bending:** Material 0.249 in. and under in thickness shall be capable of withstanding, without cracking, bending at room temperature flat on itself with axis of bend parallel to direction of rolling.
- 6. QUALITY:** Material 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.