

A.E.D. PUBLIC SERVICE / SAFETY ANNOUNCEMENT - for safety in racecars and aircraft. Recently we became aware of variances with some of the 4130 tubes available from normal distribution sources. 4130 tube can be manufactured to different specifications. One is an Aircraft AMS-T- 6736 / AMS 6360 (Aerospace Material Specifications) also referred to as MIL-T- 6736, and another is an ASTM A-519 spec. (American Society for Testing Materials). What is the difference? A-519 material is not produced to the same mechanical and chemistry standards that an AMS spec material is produced to AMS-T- 6736 4130 tube has higher minimum mechanical specs than an A-519 tube.

TYPICAL MECHANICAL PROPERTIES:

Tensile Strength min. Yield Strength min.

4130 To the AMS 6736 Spec.

95,000 psi 75, 000 psi

4130 To the A-519 Spec.

90,000 psi 60,000 psi

(Note: these are minimum values, it is possible that an A-519 has the higher mechanicals, it is NOT a guarantee)

Why is this important to know: Aircraft 4130 grade tubes have been the standard material for racecars since the 1950's. All designs, chassis and safety specifications have been developed with the understanding of the high performing strengths of the aerospace grade of 4130. IF, one is to build a chassis or component from a A519 4130 tube, the known strengths and characteristics may not be as expected.

While you may call into a metals distributor and ask for 4130, and they sell you 4130 tube to the A-519 spec, they have in fact sold you what you asked for. One might be attracted to the lower price that these materials sell for. But you did not buy the higher strength 4130 tube. So, what does one request when they order 4130 tubes for their racecar or aircraft?

Place your request for 4130 Cold Drawn Seamless AMS-T- 6736 aircraft spec material. Review your quote to be sure it includes this information or MIL - T -6736. If it does not, ask your provider for confirmation, in writing, that this material meets the request. You may also request the MTR's (Material Test Reports). These are the formal mill quality validation test data. If they cannot provide this information, do not purchase those items for your race car or aircraft.

If you have any questions – please feel contact us. 317-334-0569 or sales@aedmetals.com

WHAT SHOULD BE INCLUDED ON AN AMS 6736 MATERIAL TEST REPORT

MATERIAL TEST REPORT

Sold To: 3300069 A.E.D. METAL PRODUCTS LTD 5373 WEST 86th STREET INDIANAPOLIS IN 46268	Ship To: 3300069 A.E.D. METAL PRODUCTS LTD 5373 WEST 86th STREET INDIANAPOLIS IN 46268
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Purchase Order: 29835 Part Number: 41T162083AED Sales Order: 317189 Material: A886162508304101 AMS-T-6736 1625OD 0.083MW AED (P) Delivery / Certificate: 80569102
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Description:		AMS-6360R/AMS-T-6736B COND N./MIL-T-6736B SEAMLESS 4130		
Test: NDT ELECTRIC TESTED TO ASTM A450 OR A1016 & APPLICABLE TEST METHOD E309 OR E426. MAGNETIC INSPECTED TO AMS2301.				
Heat Number:		655415	655668	656926
		%	%	%
CARBON	LDL	0.310	0.308	0.310
MANGANESE	LDL	0.540	0.530	0.530
PHOSPHORUS	LDL	0.011	0.008	0.009
SULFUR	LDL	0.002	0.001	0.003
SILICON	LDL	0.240	0.253	0.230
NICKEL	LDL	0.130	0.130	0.080
CHROMIUM	LDL	0.960	0.970	0.960
MOLYBDENUM	LDL	0.160	0.200	0.160
COPPER	LDL	0.180	0.090	0.140
ALUMINUM	LDL	0.038	0.038	0.036
Ultimate (PSI)		118108 / 120755	120502 / 123389	117363 / 122022
Yield (PSI)		94,112 / 97,281	99,942 / 103971	94,298 / 99,262
Elongation (%)		22 / 23	17 / 19	22 / 24
Hardness (HRBW)		98 / 98	98 / 98	98 / 98
Grain Size		9.000	8.500	9.000
Frequency rate		0.020	0.020	0.020
Severity		0.020	0.015	0.002
Decarb OD Complete (IN)		0.003	0.004	0.004
Decarb ID Complete (IN)		0.003	0.000	0.004
Decarb OD Partial (IN)		0.000	0.000	0.000
Decarb ID Partial (IN)		0.000	0.000	0.000
Origin of Melt		Germany	Germany	Germany
Inc. certifies that the material described was manufactured and tested and/or inspected in accordance with the specification and fulfills requirements in such respect. This document conforms to the requirements of Specification EN 10204				
Inspection Document Type 3.1. Fraudulent, fictitious or false statements or entries may be prosecuted by law. Date: 07/01/2025				

[Handwritten Signature]

