



**Wolverine Tube, Inc**  
 2100 Market Street  
 Decatur, AL 35601  
 800-633-3972

**CERTIFIED INSPECTION REPORT FOR  
 EXTRUDED PRODUCTS**

	OUR ORDER NUMBER 19106-1	DIE NUMBER WS10481	DATE OF SHIPMENT 1/31/2023
	CUSTOMER PO 605958- LA	ALLOY 6061	TEMPER T6
MANIFEST NUMBER 37918	CUSTOMER PART NUMBER 2421112	DESCRIPTION 1/8 x 4 Flat Bar	

We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown.

Application Specifications: ASTM B221-20

Tickets:  
194207

*J. D. Dugan*  
 Quality Assurance  
 Wolverine Tube Inc.

**Mechanical Properties**

Order # - Item # - Lot #	Cast Number	Alloy	Alloy Type	Test No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation
19106-1-1/A/11	084833	6063	P	1	01/13/23	46.0	44.3	12%
19106-1-2/A/11	084833	6063	P	1	01/21/23	46.1	43.2	8%
19106-1-2/A/11	084833	6063	P	2	01/21/23	46.1	43.3	8%

**Chemical Limits**

	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Ga	V	B	Zr	Bi	Pb	Sn	Sr	Co	Each	Total
ALLOY 6061 TYPE P																				
Minimum	0.40	0.14	0.15	0.00	0.8	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.15
Maximum	0.80	0.40	0.29	0.15	1.2	0.35	0.00	0.25	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Density:	0.098 g/cm <sup>3</sup>																			

ALLOY 6063 TYPE P																				
Minimum	0.20	0.00	0.00	0.00	0.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.15
Maximum	0.60	0.35	0.10	0.10	0.9	0.10	0.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Density:	0.097 g/cm <sup>3</sup>																			

**Chemical Composition**

Cast Number	Alloy	Type	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Ga	V	B	Zr	Bi	Pb	Sn	Sr	Co	Al	Other
084833	6063	P	0.44	0.17	0.00	0.01	0.5	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	REM	0.00
096293	6061	P	0.59	0.17	0.18	0.01	0.8	0.06	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	REM	0.00

Note: The cast #'s for all lot numbers ending in /12, /13, etc are the same for lot #'s ending in /11. The numbers after the slash denote a different heat treat oven load.

Country of Origin: U.S.A