

A BREAKTHROUGH IMPROVEMENT IN ALUMINUM EXTRUDED PRODUCTS

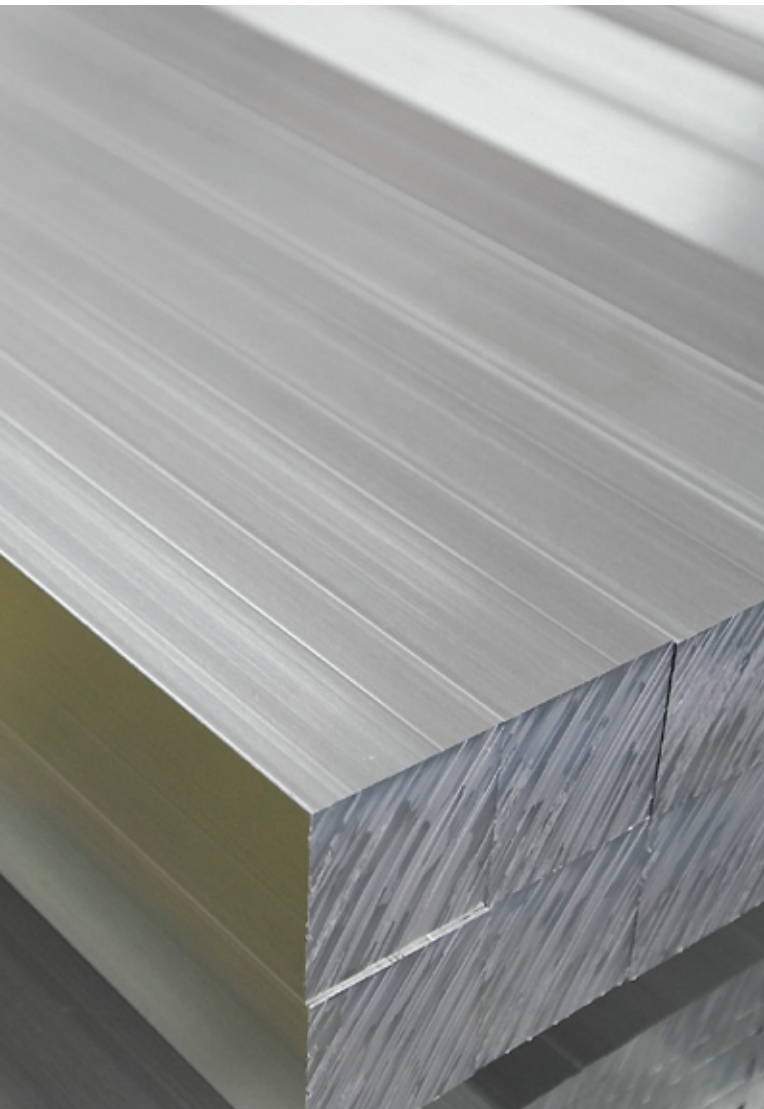


The next level of performance and quality:

- Available in size ranges from 1½" square up through 6" x 8" rectangle
- Kaiser proprietary 6061 alloy KEP 1 composition for improved machinability
- Improved mechanical properties
- Improved dimensional capability
- Improved straightness capability
- Improved lot-to-lot consistency

M A N I F O L D

B A R



Manifold Bar is available in Kaiser's exclusive 6061 alloy KEP 1, in sizes ranging from 1½" square up through 6" x 8" rectangle. The enhanced 6061 alloy KEP 1 used in Kaiser Select Manifold Bar increases the mechanical strength and the overall hardness of the material.

Kaiser Aluminum utilizes innovative new die designs and a certified Press Control System to dramatically improve bar characteristics. As a result, Kaiser produces Manifold Bar to a straightness of 0.075" maximum in 12 feet. To ensure twist is not a concern, Kaiser controls and measures critical factors during the manufacturing process.

Manifold Bar generates compact chips from drilling and boring tools thus improving machining throughput, minimizing downtime and lowering costs. Kaiser Select Manifold Bar offers exceptional consistency over other extruded aluminum bar products.

6061 TYPICAL ALLOY CHEMICAL COMPOSITION LIMITS

MANIFOLD BAR



Element	Minimum	Maximum
Si	0.40	0.8
Fe	-	0.7
Cu	0.15	0.40
Mn	-	0.15
Mg	0.8	1.2
Cr	0.04	0.35
Zn	-	0.25
Ti	-	0.15
Others Each	-	0.05
Others Total	-	0.15

Kaiser Aluminum has optimized the composition within the 6061 limits shown above to provide enhanced machinability with fewer burrs and smaller chips without excessive tool wear in high speed applications.

MANIFOLD BAR KEY CHARACTERISTICS

	Standard Manifold Bar	Kaiser Select Manifold Bar
Flatness	0.004" / inch	0.002" / inch
Twist	AA Standard	1/2 AA Standard
Straightness		
In 12 Feet	0.150" max	0.075" max
In any 1-Foot	0.0125" max	0.006" max

TYPICAL PHYSICAL PROPERTIES

Alloy and Temper	Specific Gravity	Density (lbs./in. ³)	Electrical Conductivity at 68°F (%IACS)	Electrical Resistivity at 68°F (Ohm-Cir. Mil/ft.)	Thermal Conductivity at 77°F English Units (btu-in./ft. ² hr.°F)	Coefficient of Thermal Expansion 68° to 212°F per °F
Kaiser Select Manifold Bar 6061-T6511 B	2.70	0.098	43	24	1160	13.1 x 10 ⁻⁶

For more information on the complete line of Kaiser Aluminum and Kaiser Select products, call 800-474-6814.

KAISER
ALUMINUM

www.kaiseraluminum.com

MINIMUM MECHANICAL PROPERTIES

Alloy	Specifications	Product	Heat Treatable Tempers	Tensile Strengths								Elongation % min		
				Dimensions		Ultimate				Yield				
				Inches	mm	ksi	Mpa	ksi	Mpa	ksi	Mpa			
Kaiser Select Manifold Bar 6061	ASTM B221	Manifold Bar	T6511B	0.625-3.000	15.9-76.2	42	-	290	-	38	-	260	-	10
Commercial Extrusion 6061	ASTM B221	Manifold Bar	T6511	0.500-3.000	12.7-76.2	38	-	260	-	35	-	240	-	10