

In case you are questioning the strength of aluminum...

Aluminum Versus Steel

Like steel, aluminum is available in many different alloys. Also like steel, some aluminum alloys are stronger or more corrosion-resistant than others. In some instances, parts or structures normally made of steel can be re-engineered to be made from alloy aluminum with NO LOSS OF PERFORMANCE and a significant reduction in weight.

Aldon's Miracle Line has been engineered to provide a family of lightweight tools and equipment that will still stand up to the heavy demands of the rail and material handling industries. All of our Miracle products are constructed of 6061-T6 Alloy Aluminum, the strongest and toughest aluminum alloy available. Additionally, all of our Miracle Line items are welded by certified welders under a stringent quality control system.

More and more industrial uses are being found for aluminum. Consider the fact that the railroads now ship 100 tons of coal in aluminum cars traveling at 79 miles an hour in trains numbering more than 110 cars. Every jet airplane is made of aluminum.

	A36 MILD STEEL	6061-T6 ALUMINUM	COMPARISON
Yield Strength (psi)	36,000	35,000	Negligible difference.
Modulus of Elasticity (ksi) (measures stiffness)	29,000	10,100	6061-T6 will deflect more easily than steel, but springs back to its original shape. This helps Miracle products soften the force of impact loads. Where less deflection desirable, Miracle products make use of larger cross-sections that increase stiffness.
Corrosion Resistance	Rusts	Forms protective layer.	6061-T6 will not rust and does not need to be painted. Your Miracle products will continue to work well and look good for years to come.
Weight (Density) lbs/in³	0.283	0.098	6061-T6 weighs almost $\frac{2}{3}$ LESS than mild steel.
Hardness (Bhn)	117 (approx)	95 (approx)	Mild steel is slightly harder than 6061-T6, but the aluminum's ability to flex under impact actually results in superior performance under impact loading.

All of our Miracle Line of products have been engineered to provide equivalent or superior performance to their steel counterparts. Miracle engineered items offer significant weight reductions, which result in greater portability as well as fewer injuries, lost productivity and insurance claims.

Please feel free to contact Aldon today with any questions you may have about how our Miracle Line can help YOUR company!