304 STAINLESS STEEL BAR

304 is in the "Austenitic" group (or chrome-nickel) series of stainless steels. It is not hardenable by heat-treatment and it is not magnetic in the annealed condition, which is the general method of production. Hardness is accomplished by cold-working, which may create some magnetism.

Tougher and more ductile than most ordinary steels, 304 (and other austenitic grades), also has excellent mechanical properties and weldability, good corrosion resistance and excellent scale resistance.

In general, stainless steel is defined as a steel alloy with a minimum of at least 10% chromium, plus other elements, especially nickel. It is also been referred to as a corrosion-resistant steel (or "CRES"), particularly in the aviation/aerospace industry.

304 and 304L* Stainless Steel Chemical Analysis

	C (max)	Mn (max)	P (max)	S (max)	Si (max)	Cr	Ni	Cu (max)	Mo (max)
304	.08	2.00	.04	.03	1.00	18.00/20.00	8.00/10.50	.75	.75
304L *	.03	2.00	.04	.03	1.00	18.00/20.00	8.00/12.00	.75	.75

304 STAINLESS STEEL BAR

AED stocks SS 304 bars primarily in rounds and flats, but square and hex bars may be available at different times. Stainless Steel bars are produced in "random lengths" that can range between 11 to 13 feet long. Flat bars may be supplied as "gauer" bars, which are sheared and edged from sheet or plate.

The best pricing is always when you order full lengths, which can be cut for economical shipping methods. AED also offers "cut-to-size" pieces.

SS 304 bars are produced in the Annealed Condition, and may meet the specifications for both 304 and 304L. SS 304L has a lower maximum carbon content. 304 bars meet several specifications, including ASTM A276 and AMS 5639, but several others may also apply.

304 and 304L* Bar Typical Mechanical Properties:

Annealed Condition

	304	304L *
Tensile Strength (psi)	85,000	80,000
Yield Strength (psi)	35,000	30,000
Elongation (% in 2")	55	55
Reduction of area (%)	70	70
Brinell Hardness	150	140

* 304L data shown for reference

Note: "Typical Mechanical Properties" have been compiled from a variety of sources. Information is deemed reliable, but it is not guaranteed. This data is provided for information only, **NOT FOR DESIGN PURPOSES**.

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