

ASTM A514 Grade F

General Product Description

ASTM A514 Grade F is a quenched and tempered alloy steel plate used in structural applications that require high yield strength combined with good formability and toughness. A514 Grade F has a minimum yield strength of 100 ksi and may be ordered with supplemental Charpy V-notch toughness test requirements.

Applications

Typical applications for A514 Grade F include transport trailers, construction equipment, crane booms, mobile aerial work platforms, agriculture equipment, heavy vehicle frames and chassis.

Dimensions

Grade	Product Type	Thickness (Inches)	Width (Inches)	Length (Inches)
Grade F	Plate	0.185- 2.50 ¹⁾	60- 131.9	73- 590

¹⁾ Inquire for thickness greater than 2.50 in.

Mechanical Properties

Tensile Properties: Tensile testing is performed in the transverse direction according to ASTM A6 requirements. The tensile property and hardness requirements are tabulated below:

Grade	Product Type	Thickness (Inches)	Yield strength (ksi)	Tensile strength (ksi)	Elongation in 2" (min %)	Area ¹⁾ (min %)	Area ²⁾ (min %)	Brinell hardness ³⁾ (HBW)
Grade F	Plate	0.185- 0.750	100	110- 130	16	35		235- 293
Grade F	Plate	0.751- 2.50	100	110- 130	16	35	45	

¹⁾ Reduction in area for 1.5 in. wide rectangular tension specimen.

²⁾ Reduction in area for 0.5 in. round tension specimen.

³⁾ For plates up to 0.375 in., a Brinell hardness test may be used instead of a tensile test for those plates not tensile tested in a 15 ton lot.

Contact Information

www.ssab.com/contact