

## ASTM A514 Grade E

## General Product Description

ASTM A514 Grade E 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 E has a minimum yield strength of 100 ksi up to 2.5 inches in thickness and 90 ksi for plates greater than 2.5 inches to 6 inches in thickness. Grade E may be ordered with supplemental Charpy V-notch toughness test requirements.

## Applications

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

## Dimensions

Grade	Product Type	Thickness (Inches)	Width (Inches)	Length (Inches)
Grade E	Plate	0.185- 6.00	60- 131.9	73- 590

## 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 <sup>1)</sup> (min %)	Area <sup>2)</sup> (min %)	Brinell hardness <sup>3)</sup> (HBW)
Grade E	Plate	0.185- 0.750	100	110- 130	16	35		235- 293
Grade E	Plate	0.751- 2.50	100	110- 130	16	35	45	
Grade E	Plate	2.51- 6.00	90	100- 130	14		45	

<sup>1)</sup> Reduction in area for 1.5 in. wide rectangular tension specimen.

<sup>2)</sup> Reduction in area for 0.5 in. round tension specimen.

<sup>3)</sup> 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](http://www.ssab.com/contact)