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RYERSON 169

## GUIDE TO SELECTION

### HIGH STRENGTH/LOW ALLOY PLATES

HSLA plates offer higher strength than plain carbon steel plates — plus ductility, weldability, formability, toughness and fatigue strength. Can lower your material costs and increase payloads because lighter material obtains the strength needed. Applications include: railroad cars, trucks, trailers, cranes, excavating equipment, buildings, bridges.

**EX-TEN 50® or ASTM A572(50)** are available at a strength level of 50 KSI minimum. Provides high strength, good workability and weldability at a comparatively moderate price. Atmospheric corrosion resistance is the same as that of plain carbon steel. Conforms to ASTM A572, SAE J1442 Grade 050X. Also available in Grades 42, 45, 55, 60, and 65. Most material is certified to A709 Gr. 50 bridge specification, through 4" in thickness. Standard impact tests are available upon request.

**COR-TEN® A, COR-TEN B** with the combination of high strength and outstanding resistance to atmospheric corrosion, is often used wherever weight reduction or maintenance cost savings are prime considerations. Easily cold formed and welded. Thickness to 1/2" incl. (Cor-Ten A) conform to ASTM A242 (Type 1). Over 1/2" (Cor-Ten B) conforms to ASTM A588 (Gr. A).

**A656 GR. 80, HI-FORM 80®** — A low alloy, hot rolled, controlled cooled steel developed for applications where high strength (80,000 psi minimum yield) along with toughness, formability, weldability, and fatigue resistance are required. Conforms to ASTM A656 Gr. 80.

**Domex 100 XF, Domex 110 XF.** These products are an as-rolled, extra high strength, fine grain, cold forming steel used where high strength and good bendability are needed. 100 XF (100,000 PSI minimum yield); 110 XF (110,000 PSI minimum yield). Low carbon, phosphorus and sulfur levels allow trouble free welding by conventional methods. No preheating is required. Typical applications include cranes, car, truck and rail industries, agricultural machinery. Conforms to ASTM A6.

#### Minimum Mechanical Properties\*

Type and Thickness	Yield Point, KSI	Tensile Strength, KSI	Elong. in 8"
Ex-Ten 50 (A572 Gr. 50)	50	65	18
Cor-Ten A (A242)	50	70	19
Cor-Ten B (A588)	50	70	19
A656 Gr. 80, Hi-Form 80	80	95	18
Domex 100XF	100	110	15
Domex 110XF	110	118	15

\*Properties vary when plates are annealed, normalized, or severely formed.