

# Gr.50

Carbon Steel

## DESCRIPTION:

Grade 50 (ASTM A572-50) is a carbon steel, high-strength, low-alloy structural steel material. Gr. 50 has a higher yield strength than A36. Gr. 50 is more difficult to form than A36 but offers more strength and good weldability. Like most carbon steels, it does not provide good corrosion resistance. Gr. 50 steel can be laser welded to produce sharp cornered profiles such as hollow structural steel, tees, and custom shapes.

## APPLICATIONS:

- Structural Applications
- Architectural Steel Profiles
- Heavy Construction
- Tank and Conveyor Supports

## CHEMICAL COMPOSITION:

Carbon	0.23 max
Manganese	1.35 max
Phosphorus	0.03 max
Silicon	0.15 - 0.4
Sulfur	0.050 max

## \*MECHANICAL PROPERTIES:

Yield Strength	50 KSI min
Tensile Strength	65 KSI min
Elongatin	18%
Hardness	74 Rockwell

\* Laser Fused Profiles (ASTM A1069) are produced to meet a 35 KSI Min Yield or higher, depending on strength grade specified.

STAINLESS STRUCTURALS CAN PRODUCE THIS ALLOY IN BEAMS, CHANNELS, ANGLES, TEES AND CUSTOM SHAPES.

### **Disclaimer:**

The information on the stainless alloy data sheets are accurate to the best of our knowledge, but are intended for general information only. Applications suggested for the different alloys are listed only to help our customers make their own decisions. These are neither guarantees nor warranties on material uses. Data referring to chemical composition and mechanical properties are industry norms at the typical state of the alloys tested. These properties can change in different environments, temperatures, applications and so forth. Stainless Structural assumes no responsibility or liability for the information given.

