

# JADCO 450



ISO 9001:2008 Certified

**JADCO: 450** is a superior steel, designed for moderate to high abrasion and impact applications. Due to the heat-treating processes and chemistry JADCO: 450 yields a lengthier service to the end user than a mild steel. With a low carbon and alloy content its properties allow for great capabilities weldability and forming. This product is popular because it does lend to being a more cost-effective material option.

## Fabrication Facts

**Cutting:** JADCO: 450 easily flame cut with oxyacetylene or plasma. Hardening will occur at the edge of the cut and it's beneficial to pre-heat before flame cutting (250°F) or allow enough stock to get below the hardened edge. **Note:** At JADCO, high-definition plasma is used to burn and the material is under water to decrease distortion of the heat-affected area. When preheating the plate do not heat directly with a torch, use indirect heat to heat evenly over the entire plate.

**Machining:** JADCO: 450 is accepting conventional equipment for universal machining including, but not limited to, countersinking, counterboring, drilling, and milling.

**Forming:** Plate 3/4" and thinner can be cold bent to a minimum inside bend radius of 6T, with bend axis transverse to the rolling direction. Greater than 3/4" a radius of 8T should be used. Hot forming or stress relief operations are not recommended for 1" and under. Maximum heat of 480°F for plate over 3/4" thick, anything more can change mechanical properties. In all causes bending should follow good practices, including but not limited to: grinding of plate edges, die lubrication, conditioning and uniform load application.

**Welding:** JADCO: 450 has the capability to be welded using simple procedures and readily available consumables because of its superb weldability. JADCO does not recommend high heat input welding as it can cause a reduction of the mechanical properties and hardness. Pre-heating is recommended for thicknesses over 1-1/2" thick.

## General Information

- » Standard Plate sizes are 96" x 288".
- » Thicknesses range from 3/16" – 2-1/2".
- » Hardness ranges from 420-495 BHN
- » Typical Notch Toughness (CVNL) to 1" is 30ft/lbs @ -40 F
- » Typical Tensile Strength is 200 ksi
- » Typical Elongation % (for 2") 15

Typical Chemistry %							
C	Mn	P	S	Si	Cr	Mo	B
.21-.26	1.5	0.0025	0.015	0.45	.20-.60	.20-.45	0.003