

**CHROME WELD™ 600** is a unique material that is ideal for surfaces requiring high levels of abrasion resistance. It is a premium grade of chromium carbide wear plate. It is produced with a mild steel base plate and hardfaced/overlayed with our proprietary CHROME WELD™ 600 wire. Regardless of whether a CHROME WELD™ 600 application requires machining, cold bending, welding, CHROME WELD™ 600 will yield outstanding results if you follow these helpful instructions.

## Fabrication Facts

**Cutting:** Plasma burning, air arc, abrasive saw cutting, or waterjet.

**Machining:** The overlay surface can be finished by grinding only. EDM, plasma arc cutting, or carbon-arc gouging may produce countersunk holes for bolts. Pre-machined mild steel inserts may be welded into straight holes for additional machining. CHROME WELD™ 600 cannot be machined by ordinary methods.

**Cold Bending:** When using a press brake, forming should be perpendicular to the weld pass direction. Plate rolling should be performed in the direction of the overlay beads. Forming CHROME WELD™ 600 to the outside will cause cross-check cracks to open. This may require post-fabrication weld repair using suitable weld rod/wire.

**Welding:** CHROME WELD™ 600 overlay plate can be joined by welding substrate to substrate using 309 weld wire/rod. Liner plates can be plug welded in place by welding the substrate to the base plate. Stud welds can be applied, but it is highly recommended that stainless steel studs be used. All weld seams: plug-weld holes, bolt holes, and all other joints exposed to wear should be protected by a cap weld of one of our JADCO FUSION™ Wires.

## Mechanical Information

CHROME WELD™ 600 typical hardness ranges from 58-62 HRC based on weld deposit thickness. The surface of the plate is a composite of chromium iron carbides in a chromium austenitic matrix. The surface of the plate exhibits numerous hairline cracks which are a natural stress relieving phenomenon that is essential to the performance of the plate and enable it to be formed, bent, and rolled without damage.

## General Overlay Chemistry

- » Standard Plate size is 90" X 120" with bead direction running the length. 90" x 240" plates available in certain thicknesses.
- » CHROME WELD™ 600 displays excellent abrasion resistance and will withstand continuous moderate impact.
- » CHROME WELD™ 600 overlay will remain abrasion resistant at temperatures up to 1100°F.
- » Standard thicknesses range from 1/8" on 1/8" (.25") through 1/2" on 1" (1.5").
- » Your specific application needs, including custom requirements (thickness, alloy and size), are capable at JADCO. The JADCO process produces a microstructure consisting of fully austenitic matrix filled with primary carbides. This structure provides outstanding abrasion resistance in the most challenging applications.



Etched Micro @ 50X

TYPICAL CHEMISTRY %				
2 Layer Deposit				
Carbon ( C )	Chromium ( Cr )	Manganese ( Mn )	Silicon ( Si )	Iron ( Fe )
4.5-6	25-30	0-2	0-2	balance