



# HARDSTEEL

Abrasion never quits.  
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## HS650 Chromium-Carbide Overlay Plate

HardSteel HS650 Chromium-Carbide Overlay Plate is manufactured in our Tuscaloosa, Alabama, USA facility. HS650 is a unique abrasion resistant chromium-carbide overlay on a mild steel base plate. It is designed for areas with moderate impact and severe abrasion. This plate can be cut, formed, or rolled. HardSteel's unique overlaying process produces a plate with a surface that is harder, tougher, and more wear resistant than plate made by any other process.

HS650 can be formed or rolled. HS650 is available in thicknesses from 3/8" to 1". HS650 must be cut by plasma or abrasive water jet.

**Chemistry:**

	<b>%</b>
C	5.27
Mn	2.10
P	0.022
S	0.016
Si	0.50
Cr	26.1/30.0

### Mechanical Properties:

Hardness..... 58 to 62 Rockwell C  
Service Temperature.. 1000 degrees (F)

### Welding Procedures:

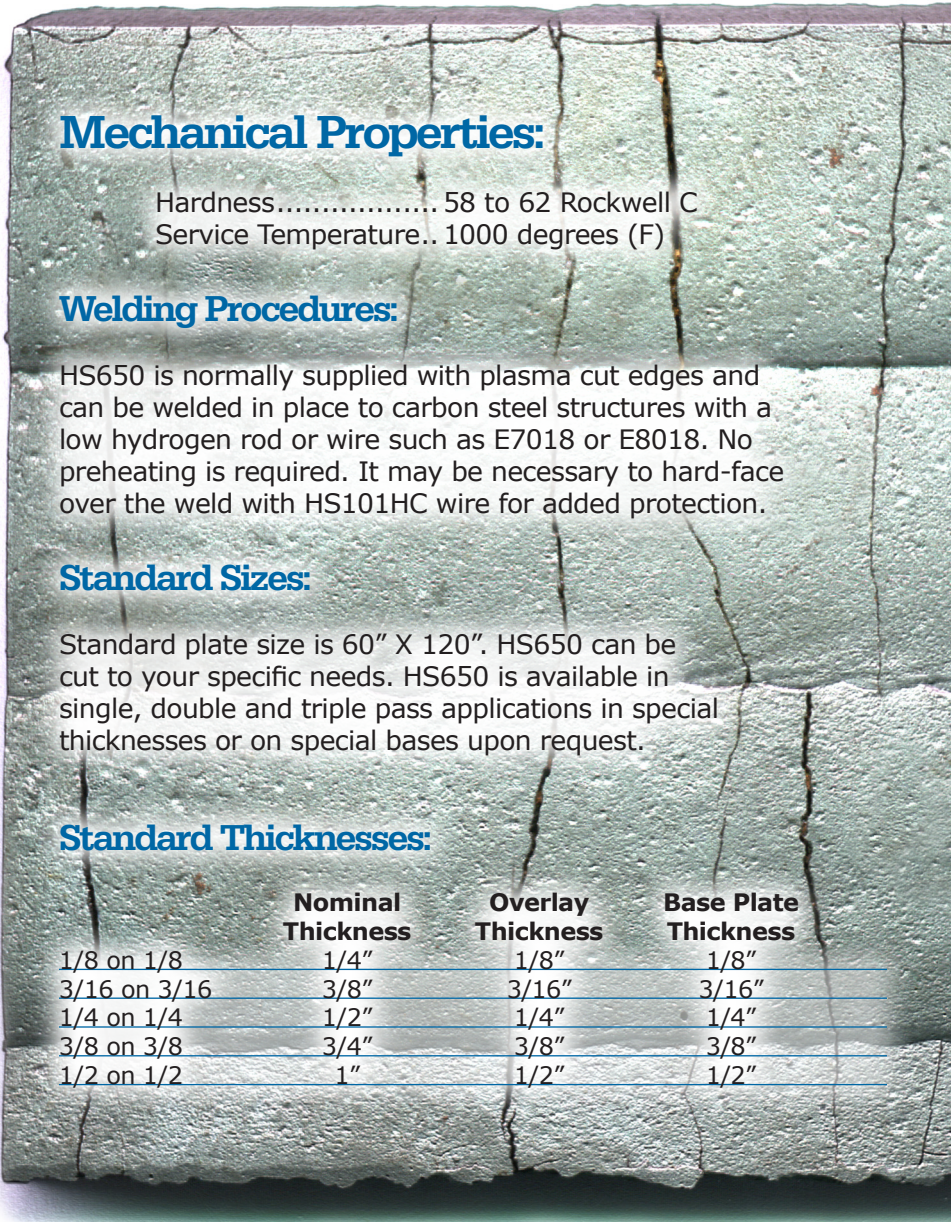
HS650 is normally supplied with plasma cut edges and can be welded in place to carbon steel structures with a low hydrogen rod or wire such as E7018 or E8018. No preheating is required. It may be necessary to hard-face over the weld with HS101HC wire for added protection.

### Standard Sizes:

Standard plate size is 60" X 120". HS650 can be cut to your specific needs. HS650 is available in single, double and triple pass applications in special thicknesses or on special bases upon request.

### Standard Thicknesses:

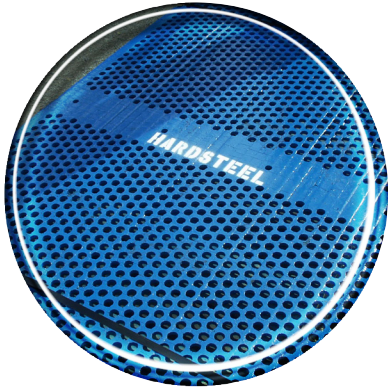
	<b>Nominal Thickness</b>	<b>Overlay Thickness</b>	<b>Base Plate Thickness</b>
1/8 on 1/8	1/4"	1/8"	1/8"
3/16 on 3/16	3/8"	3/16"	3/16"
1/4 on 1/4	1/2"	1/4"	1/4"
3/8 on 3/8	3/4"	3/8"	3/8"
1/2 on 1/2	1"	1/2"	1/2"



## Consultation, Design, & Fabrication



HardSteel offers complete consultation, design assistance and fabrication services to our customers. Years of experience allows HardSteel to provide our customers unsurpassed guidance in ways to solve abrasion problems and save money. HardSteel offers a complete range of services from consultation to final installation. HardSteel can assist with material flow problems. HardSteel can design a chute, a wear plate, or a liner to help our customers delay maintenance and replacement of critical components. HardSteel Overlay and Wear Plate can be custom cut for your needs. Custom forming and press-breaking makes HardSteel's Overlay and Wear Plate available to meet many of your liner needs.



## Wear Parts and Other Services

HardSteel provides a number of wear parts and other services to compliment our HS650 Chromium-Carbide Overlay Plate. HardSteel offers custom hard-facing, custom casting and non-complex wear parts.

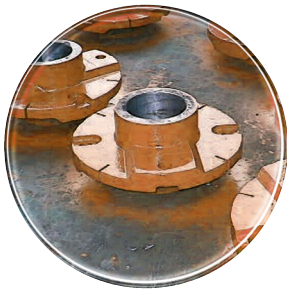
HardSteel does custom hard-facing of parts, liners, elbows, hammers, clinker discs, pug mill paddles & knives, teeth and adapters for

loaders and shovels, etc. In each case, this custom hard-facing can be applied to new parts to extend their usefulness or to worn parts to give them new life.

HardSteel custom cast parts not only save you money, but allow the chemistry of each part to be formulated to best meet your need. If needed, custom cast parts can hard-faced, extending the life of the part more. HardSteel custom castings include hammers, pug mill paddles & knives, clinker discs and more. HardSteel will be happy to review your needs and recommend a custom cast solution for you.

HardSteel Wear Parts are available to extend the life of your heavy equipment. We provide dozer liners; bottom wear plates, heel pads and half-arrows for front-end loaders, tail strips, tail sections and complete liners for off-road haul trucks, etc. HardSteel has an extensive collection of drawings and measurements for many models of heavy equipment, but will gladly take field measurements for any not currently in our files.

HardSteel sizing screens can reduce downtime, lost production, and maintenance costs. Less maintenance means fewer injuries and more effective use of your staff and equipment. Let us show you our HS650 screens.



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