

**Description**

Double poured high chrome iron produced by the horizontal spinning process.

Unique customer applications require a specific range of material properties, which can be customized by means of controlled heat treatment cycles.

HiCr MECHANICAL PROPERTIES		
U.T.S. (ksi / MPa)	100-140	690-965
Compressive Yield (ksi / MPa)	120-180	827-1240
Young's Modulus (ksi / MPa) x 1000	32-34	220-234
Thermal Conductivity (W/m-K / W/m-K)	16-25	16-25
Coeff. Thermal Expansion (in/in/°F / M/M/°C)	7.5-8.0 E-06	13.5-14.4 E-06

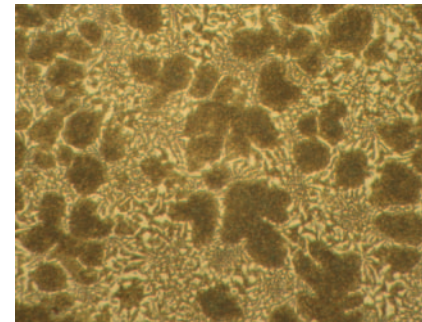
The combination of wear and firecrack resistance provide advantages over alternative grades, depending on the application. The material will display consistent properties throughout the life of the shell.

CHEMICAL ANALYSIS		
		Low/High
C	(Carbon)	2.5/2.9
Si	(Silicon)	0.5/1.0
Mn	(Manganese)	1.1/1.5
Cr	(Chromium)	15.8/17.5
Ni	(Nickel)	1.2/1.6
Mo	(Molybdenum)	1.0/2.0

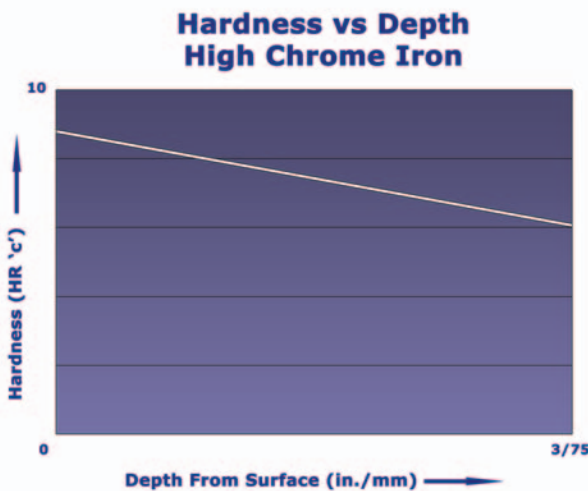
**Microstructure**

The microstructure consists of eutectic and secondary carbides in a tempered martensitic matrix.

HARDNESS RANGES			
	Equotip (°LD')	Shore (°c')	Rockwell (°c')
Low	675	59	44
High	840	95	64



HiCr Microstructure



Typical for Nodular Core

**Applications**

- Work Rolls for Plate Mills
- Work Rolls for Cold Mills
- Work Rolls for Early Finishing Stands of Hot Strip Mills.