



## 100-70-02 Ductile Iron Material Specification:

**CHARACTERISTICS:** Offers very good machinability and excellent surface finishes combined with higher wear resistance, strength and heat treat response compared to Unibar 80-55-06. Noise and vibration damping are good in this grade

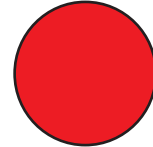
**SPECIFICATIONS:** ASTM A536, Grade 100-70-02, Meehanite SH-700 (SH100)

**CONDITION:** As Cast and Cold Finished (Rounds)  
As Cast (Rectangles and Squares)

**CHEMISTRY:** Subordinate to Mechanical Properties

Typical Ranges:	Element	Typical %
	Carbon	3.40-3.85
	Silicon	2.3-3.1
	Manganese	0.1-0.3
	Sulphur	.02 Max
	Phosphorous	0.1 Max
	Balance	Residual

GRADE COLOR CODE



**MECHANICAL PROPERTIES:** (As taken from bar mid-Radius)

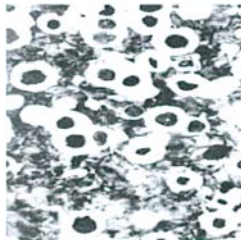
Tensile Strength	Yield Strength	Elongation
100,000 psi Min	70,000 psi Min	2% Min

**Brinell Hardness:** 240-300 Brinell depending on section size

Diameter (in)	Min BHN	Max BHN
< 1.50	240	300
1.50-3.00	240	290
3.00-6.00	240	280
6.00-10.00	240	270

Hardness Values for Rectangles depend on the ratio of height to width and can be supplied upon request

**Microstructure:**



Contains Type I & II nodular (spheroidal) graphite in accordance with ASTM A247. The rim contains approximately 200/250 nodules/square mm, and is essentially pearlitic, with the core containing 90/150 nodules/square mm. The matrix is essentially pearlite with some ferrite (approximately 10% depending on section size). Chill carbides will be less than 5%, well dispersed (at 100X magnification).

**HEAT TREAT RESPONSE:** Grade 100-70-02 can be hardened by conventional methods to Rc 50 on the bar surface