

Material Specifications

80-55-06 Material Specification:

CHARACTERISTICS: Offers very good machinability and excellent surface finishes combined with higher wear resistance, strength and heat treat response compared to Unibar 65-45-12. Noise and vibration damping are very good in this grade

SPECIFICATIONS: ASTM A536, Grade 80-55-06, Meehanite SP-600 (SP80)

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



80-55-06
Ductile Iron

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

Tensile Strength	Yield Strength	Elongation *
80,000 psi Min	55,000 psi Min	6% Min

* Elongation values will be 4% Min for bars greater than 1.5 inches diameter

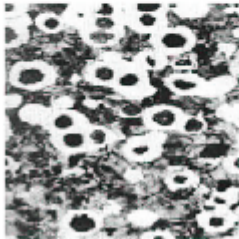
Brinell Hardness:

187-269 depending on section size.
Hardness readings are taken across the entire section of bar.

Diameter	Min BHN	Max BHN
1.00-2.00	187	269
2.00-3.00	187	262
3.00-6.00	187	255
6.00-19.00	187	255

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 essentially pearlitic, with the core containing 90/150 nodules/square mm. Unibar 80-55-06 ductile iron will contain nodular graphite in a matrix of pearlite and ferrite. Chill carbides will be less than 5%, well dispersed (at 100X magnification).

HEAT TREAT RESPONSE: Grade 80-55-06 can be hardened by conventional methods to Rc 50 on the bar surface