

UCB DATA SHEET

Continuously Cast Iron:

UCB Grade Unibar 250 (Guidance only)



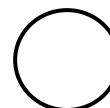
Characteristics: Offers a good combination of strength and wear resistance, while still possessing reasonable machinability and excellent surface finishes. Noise and vibration damping are good in this grade. Compares with standard EN-1561-GJL-250 GG25 and Meehanite GD250.

Unibar Profile and Size Range	
Round	20mm - 500mm diameter
Square	Up to 410 mm x 410mm
Rectangle	Narrow side 25mm up to a maximum 650mm x 280mm or 550mm x 380mm
Ingots	400mm - 780mm diameter x 1.2 metre long (proof machined)
Ingot Blocks	up to 550mm x 500mm x 1400mm long (proof machined)
Standard Length	Continuously Cast Bar 3 metres (other lengths available upon request)
Supply condition	As-cast, turned and peeled (Rounds). As-cast milled (proof machined) and saw cut (rectangles and squares)
Non Standard	Sizes/shapes to customer design available on special order and subject to discussion.

Chemistry: (Typical Ranges)
(Subordinate to mechanical Properties)

Element	Typical %
Carbon	2.9 - 3.65
Silicon	1.8 - 2.90
Manganese	0.40 - 0.70
Sulphur	0.10 Max
Phosphorous	0.30 Max
Others/Alloying	Residual
Iron	Balance

Grade colour code



No colour/White

Mechanical Properties: (As taken from bar mid-radius, not separately test bar)

Material specification	Material Section	Anticipated Values N/mm ² (Taken from casting/bar)
Unibar 250 EN-GJL-200:1997	20mm - 40mm	195
	40mm - 80mm	170
	80mm - 150mm	155
	150mm - 300mm	145
<i>Reference EN-1561-GJL-250 Table 1 Page 5</i>		

Brinell Hardness: (Range) 160-230 (10mm dia Ball 3000Kg load) depending on section size. Hardness readings are taken across the entire section of the bar. Hardness values for rectangles depend on the ratio of height to width and can be supplied upon request.

Microstructure:

Contains type 'A' graphite flakes in accordance with ASTM A247. The rim contains fine Type 'D' and 'E' interdendritic graphite. The matrix is predominantly pearlitic with < 30% ferrite. The rim is predominantly ferritic with 10 – 20% pearlite and may contain up to 5% dispersed fine carbides.

(Photo 100x magnification)



Heat Treat Response: Unibar 250 is not recommended for hardening heat treatments.

Density: 7.2 g/cc