

UCB DATA SHEET

Continuously Cast Iron:

UCB Grade Unibar 300 (Guidance only)



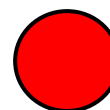
Characteristics: Unibar 300 is alloyed to achieve the properties, giving excellent wear resistance, strength & heat-treatment response compared to Unibar-200 and Unibar-250, while still possessing reasonable machinability and an excellent surface finish. Noise and vibration damping are excellent in this grade. Compares with standard EN-1561-GJL-300 GG30 and Meehanite GB300.

Unibar Profile and Size Range	
Round	25mm - 645mm + diameter
Square	Up to 520 mm x 520mm
Rectangle	Unibar is produced in a wide range of combinations, in height and width, up to 650mm x 510mm and 620mm x 370mm for example, other sizes to customer requirements can also be considered after consultation.
Ingots	Up to 1200mm diameter x 2100mm metre long (proof machined).
Ingot Blocks	Up to 800mm x 750mm x 2100mm 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/profiles to customer design available on special order, subject to discussion. Unibar 300 produced to customer order, with limited stocks available.

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

Element	Typical %
Carbon	2.95 - 3.45
Silicon	2.1 - 2.90
Manganese	0.55 - 0.75
Sulphur	0.04 - 0.07
Phosphorous	0.1 - 0.2
Others/Alloying	Residual
Iron	Balance

Grade colour code



Red

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

Material specification	Material Section	Anticipated Values N/mm ² (Taken from casting/bar)
Unibar 300 EN-GJL-300:1997 (GG30)	20mm - 40mm	270
	40mm - 80mm	240
	80mm - 150mm	210
	150mm - 300mm	195

Reference EN-1561-GJL-300 Table 1 Page 5

Brinell Hardness: (Range) 190-260 (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 zone contains fine types 'D' and 'E' interdendritic graphite. The core matrix is greater than 90% pearlite. The rim matrix is a ferrite/pearlite mixture. The rim may contain up to 5% dispersed fine carbides. (Photo 100x magnification)



Heat Treat Response: Unibar 300 can be hardened by conventional methods, to Rc 50 on the bar surface.

Density: 7.3 g/cc

United Cast Bar Ltd

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www.unitedcastbar.com