

# UCB DATA SHEET

## Continuously Cast Iron:

### UCB Grade Unibar 200 (Guidance only)



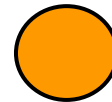
**Characteristics:** Offers exceptional machinability and excellent surface finishes, but limited strength and wear resistance. Noise and vibration damping are excellent in this grade. Compares with standard **EN-1561-GJL-200 GG20** and **Meehanite GE200**

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.

**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**



Orange

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

Material specification	Material Section	Anticipated Values N/mm <sup>2</sup> (Taken from casting/bar)
Unibar 200 EN-GJL-200:1997 (GG20)	20mm - 40mm	180
	40mm - 80mm	155
	80mm - 150mm	130
	150mm - 300mm	115

*Reference EN-1561-GJL-200 Table 1 Page 5*

**Brinell Hardness:** (Range) 120-200 BHN (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 A 247. The rim contains fine type 'D' and 'E' interdendritic graphite. The matrix structure is predominantly ferritic with less than 10% pearlite throughout.  
(Photo 100x magnification)



**Heat Treat Response:** Unibar-200 is not suitable for hardening applications.

**Density:** 7.3 g/cc

**United Cast Bar Ltd**

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