

## Continuously Cast Iron

### Unibar 250 (EN 16482 EN GJL-250C) (Guidance only)

#### Characteristics:

Unibar 250 offers a good combination of strength and wear resistance over Unibar 200, while still possessing good machinability and an excellent surface finish. Due to the graphite structure in Unibar 250 noise and vibration damping along with thermal conductivity are excellent in this grade. Conforms to EN-16482:EN-GJL-250C.

#### Size Range:

UNIBAR STANDARD SIZES AND SUPPLY.	
Round	25mm – 700mm
Square	25mmx 25mm – 550mm x 550mm
Rectangle	Up to 650mm x 520mm
Supply condition	As-cast, turned, peeled, milled, cut.
Length	Standard 3080mm, other lengths available.

#### Chemistry:

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

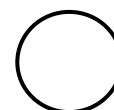
Typical Ranges: (Analysis at the discretion of UCB)

#### Mechanical Properties:

(Taken from mid-radius of cast bar, not separately cast test bar)

MATERIAL GRADE	MATERIAL SECTION	ANTICIPATED TENSILE VALUES	HARDNESS (BHN)	MATRIX
Unibar 250 EN 16482 EN GJL-250C	20 < D ≤ 50	195	160 - 230	Pearlitic - Ferritic
	50 < D ≤ 100	180		
	100 < D ≤ 200	165		
	200 < D ≤ 400	155		

Grade  
colour code



Density: 7.3 g/cc

**Brinell Hardness (BHN):** Test 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 ISO 945. The rim contains fine Type 'D' and 'E' interdendritic graphite. The matrix is greater than 50% pearlitic. The rim is predominantly ferritic, and may contain up to 5% dispersed fine carbides.

(Photo 100x magnification)



**Heat Treat Response:** Unibar-250 is suitable for surface hardening applications, but not recommended for through hardening treatments.