United Cast Bar

UCB DATA SHEET

Continuously Cast Iron

UNIBAR 250

(EN-GJL-250C, EN 16482)
GUIDANCE ONLY

UNIBAR 250

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.

Size Range

UNIBAR STANDARD SIZES AND SUPPLY	
Round	25mm – 700mm
Square	25mm x 25mm – 625mm x 625mm
Rectangle	Up to 750mm x 550mm
Supply condition	As-cast, turned, peeled, milled and cut
Length	Standard 3080mm, other lengths available

Chemistry

ELEMENT	TYPICAL %
Carbon	2.95 – 3.45
Silicon	2.10 – 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

MATERIAL GRADE	MATERIAL SECTION mm	TENSILE STRENGTH N/mm² MINIMUM	HARDNESS (HB)	MATRIX
Unibar 250	20 < D ≤ 50	195	160 – 230	Pearlitic-Ferritic
	50 < D ≤ 100	180		
	100 < D ≤ 200	165		
	200 < D ≤ 400	155		

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

Brinell Hardness (HB)

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 flake 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 not recommended for hardening or heat treatment applications.

Grade colour code

Density

7.3 g/cc