United Cast Bar

UCB DATA SHEET

Continuously Cast Iron

UNIBAR 250+

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

UNIBAR 250+

Characteristics

Unibar 250 PLUS complies with the specification EN-GJL-250 (EN 1561) or EN-GJL-250C (EN 16482). Pearlitic structure (70-90% depending on the diameter), with ferritic rim, typical of concast bar, indicated in EN 16482. Hardness (175/215HB) lower than EN-GJL-250 or UB250 standard.

Size Range

UNIBAR STANDARD SIZES AND SUPPLY	
Round	24mm – 360mm
Square	25mm x 25mm – 625mm x 625mm
Rectangle	Max 320mm x 220mm other sizes and profiles available subject to discussion and special order.
Length	Standard 3,080mm other lengths available subject to discussion.
Supply condition	As-cast, turned, peeled, milled and cut to length.

Chemistry

ELEMENT	TYPICAL %
Carbon	3.00 – 3.55
Silicon	2.10 – 2.80
Manganese	0.50 – 0.70
Sulphur	0.04 – 0.07
Phosphorous	0.15 max
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	20 < D ≤ 50	195	175 – 215	Pearlitic-Ferritic
	50 < D ≤ 100	180		
	100 < D ≤ 200	165		
	200 < D ≤ 360	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 flakes in accordance with ISO 945. The rim contains Type 'D' and 'E' interdendritic graphite. The matrix (core) is greater than 70% pearlitic. The rim is predominantly ferritic. By optimisation of the critical processes and the full absence of carbides in the rim, this quality has excellent machinability and excellent surface finish. The material satisfies mechanical characteristics indicated, with hardness values of 215 HB max.



RIM



CORE

(Photos 100x magnification)

Heat Treat Response

Unibar 250 is not recommended for hardening or heat treatment applications.

Grade colour code

Density

7.3 g/cc