

Continuously Cast Iron

Unibar 700-2 (EN 16482 EN GJS-700-2C) (Guidance only)

Characteristics:

Unibar 700-2 offers improved wear resistance; increased strength with superior heat-treatment response, compared to other SG/nodular grades, while still possessing reasonable machinability with an excellent surface finish. Noise and vibration damping are good in this grade. Conforms with EN-16482:2014 EN-GJS-700-2C.

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	3.25 - 3.70
Silicon	2.40 - 3.00
Manganese	0.10 - 0.40
Sulphur	0.005 – 0.020
Phosphorous	0.015 – 0.08
Magnesium	0.04 – 0.07
Others/Alloying	Residual
Iron	Balance

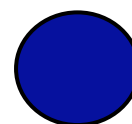
Typical Ranges: (Analysis at the discretion of UCB)

Mechanical Properties:

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

MATERIAL GRADE	MATERIAL SECTION	TENSILE (UTS) N/mm ²	0.2% PROOF STRESS N/mm ²	ELONGATION	HARDNESS (BHN)	MATRIX
Unibar 700-2 EN-16482:EN GJS-700-2C	20 < D/B ≤ 60	700	420	2	210 - 305	Predominantly Pearlitic
	60 < D/B ≤ 120	700	400	2		
	120 < D/B ≤ 400	650	380	1		
	400 < D/B ≤ 700	660	380	1		

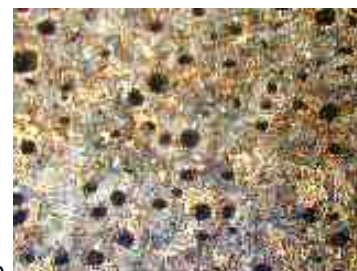
Grade
colour code



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 V & VI nodular (spheroidal) graphite in accordance with ISO 945. The rim contains approximately 200/250 nodules/mm², and is predominantly pearlitic, with the core containing 90/150 nodules/mm². The core matrix is greater than 70% pearlite with some ferrite. Chill carbides will be less than 5%, well dispersed.



Heat Treat Response: Unibar 700-2 is more responsive to heat treatment than 600-3 and the predominantly ferritic grades, in particular hardening and tempering, this along with all conventional surface hardening techniques. potential hardness of 50Rc on the surface and increased depth of hardness through the section. Against all other standard nodular grades.