

Continuously Cast Iron

Unibar 400-15 (EN 16482 EN GJS-400-15C) (Guidance only)

Characteristics:

Unibar offers superior machinability and surface finish combined with good fatigue strength's, electrical conductivity and magnetic permeability. Noise and vibration damping are good in this grade. Conforms with EN-16482:2014-EN-GJS-400-15C.

Size Range:

UNIBAR STANDARD SIZES AND SUPPLY.	
Round	25mm – 700mm
Square	25mm x 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

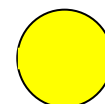
Typical Ranges: (Analysis at the discretion of UCB)

Mechanical Properties:

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

MATERIAL GRADE	MATERIAL SECTION	TENSILE (UTS) N/mm ²	0.2% PROOF STRESS	ELONGATION	BHN	MATRIX
Unibar 400-15 EN-16482:EN GJS-400-15C	20 < D/B ≤ 60	400	250	15	120 - 180	Ferritic
	60 < D/B ≤ 120	390	250	14		
	120 < D/B ≤ 400	370	240	11		
	400 < D/B ≤ 700	370	240	11		

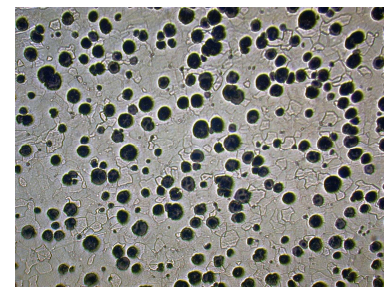
Grade
colour code



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 predominately ferritic (>90%), with the core containing 90/150 nodules/ mm². The core matrix is essentially ferritic with ≤10% pearlite. Chill carbides will be less than 5%, well dispersed.



Heat Treat Response: Unibar 400-15 is not recommended for Hardening and Tempering.