

Continuously Cast Iron

Unibar 350 (EN 16482 EN GJL-350C) (Guidance only)

Characteristics:

Unibar 350 is a special grade alloyed to achieve the specified properties, gives excellent wear resistance and strength. Suitable for all heat-treatment applications, the pearlitic structure giving a better response compared to Unibar 200, 250 and 300, while still possessing reasonable machinability and producing a good surface finish after machining. Noise and vibration damping are good in this grade. Compares with standard EN-1561-GJL-350 and GG35.

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 |

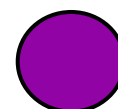
Typical Ranges: (Analysis at the discretion of UCB)

Mechanical Properties:

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

| MATERIAL GRADE | MATERIAL SECTION | ANTICIPATED TENSILE VALUES N/mm ² | HARDNESS (BHN) | MATRIX |
|----------------------------|------------------|--|----------------|-----------|
| Unibar 350 NO EURO-NORM | 20 < D ≤ 50 | 315 | 230 - 300 | Pearlitic |
| | 50 < D ≤ 100 | 280 | | |
| | 100 < D ≤ 200 | 250 | | |
| | 200 < D ≤ 400 | 225 | | |

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 zone contains fine types 'D' and 'E' interdendritic graphite. The core matrix is greater than 95% pearlitic. The rim matrix is a ferrite/pearlite mixture. The rim may contain up to 5% dispersed fine carbides.

(Photo 100x magnification)



Heat Treat Response: Unibar 350 is ideal for all conventional methods of heat treatment, with ability to through harden; hardness levels of up to Rc 50 are achievable.