



Unibar

Technical Documentation

Unibar. Continuous Cast Iron Bar produced by United Cast Bar Limited

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UNIBAR INGOTS

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UNIBAR Ingots

UNIBAR INGOTS

Unibar ingots are ideal for cross-sections greater than those obtained by the standard Unibar horizontal casting process. All Unibar Ingots are produced in permanent mould and are proof machined.

Standard sizes are included in the tables of Unibar Turned and Unibar Milled.

Typical Chemical Composition (wt%)

	Grade	C	Si	Mn	S	P	Cu	Mg
FLAKE	Unibar 250	3.05/3.15	2.35/2.45	0.50/0.80	0.05/0.08	0.2 Max		
	Unibar 300	3.05/3.15	2.35/2.45	0.50/0.80	0.05/0.08	0.2 Max	0.8/1.1	
SPHEROIDAL	Unibar 400-15	3.35/3.50	2.40/2.60	0.25 Max	0.02 Max	0.05 Max		0.045/0.065
	Unibar 500-7	3.35/3.50	2.40/2.60	0.25 Max	0.02 Max	0.05 Max	0.25/0.30	0.045/0.065
	Unibar 600-3	3.35/3.50	2.40/2.60	0.25 Max	0.02 Max	0.05 Max	0.55/0.65	0.045/0.065
	Unibar 700-2	3.35/3.50	2.40/2.60	0.25 Max	0.02 Max	0.05 Max	0.80/0.95	0.045/0.065

MECHANICAL CHARACTERISTICS, HARDNESS AND STRUCTURE

	Typical Values	Microstructure				Hardness (HB)	Mechanical Properties (Mpa) **		
	Grade	Graphite	Pearlite	Ferrite	Carbide		0.2%PS	UTS	%EL
FLAKE	Unibar 250	Type I-A3/A4	80%Min	20%Max	5% Max (Ring)	160/220			
	Unibar 300	Type I-A3/A4	95%Min	5%Max	5% Max (Ring)	190/240			
SPHEROIDAL	Unibar 400-15	>80% Type V or VI	20% Max	80% Min	5% Max (Ring)	190 Max	250 Min	400 Min	15 Min
	Unibar 500-7	>80% Type V or VI	15-60%	85-40%	5% Max (Ring)	180/230	320 Min	500 Min	7 Min
	Unibar 600-3	>80% Type V or VI	50-90%	50-10%	5% Max (Ring)	200/260	370 Min	600 Min	3 Min
	Unibar 700-2	>80% Type V or VI	60-100%	40-0%	5% Max (Ring)	220/280	420 Min	700 Min	2 Min

NOTE: **Tensile properties from separately cast test bars