Designation in accordance with DIN EN 1561				EN-GJL-150	EN-GJL-200	EN-GJL-250	EN-GJL-300
Reference analysis	C			3.40 – 3.60	3.20 – 3.40	2.90 – 3.10	2.90 – 3.10
for medium wall thicknesses	Si			2.30 – 2.60	2.00 – 2.40	1.80 – 2.10	1.60 – 1.90
	Mn			0.60 – 0.90	0.70 – 1.00	0.80 – 1.10	0.80 – 1.10
Microstructure				 Pearlite, coarse lamellar 100:1	 Pearlite, coarse lamellar 100:1	 Pearlite, fine lamellar 100:1	 Pearlite, fine lamellar 100:1
Mechanical properties [1)]							
Tensile strength	R_m	MPa		150 – 250	200 – 300	250 – 350	300 – 400
- dependent on wall thickness	R_m	MPa	2.5 – 50 mm	150	200	-	-
			5 – 50 mm	-	-	250	-
			10 – 50 mm	-	-	-	300
			50 – 100 mm	130	180	220	260
			100 – 200 mm	110	160	200	240
Yield strength	$R_{p0.1}$	MPa		98 – 165	130 – 195	165 – 228	195 – 260
Elongation at fracture	A	%		0.8 – 0.3	0.8 – 0.3	0.8 – 0.3	0.8 – 0.3
Elastic modulus	E	GPa		78 – 103	88 – 113	103 – 118	108 – 137
Bending fatigue strength		MPa		0.46 x R_m	0.46 x R_m	0.46 x R_m	0.46 x R_m
Compression-tension fatigue strength		MPa		0.34 x R_m	0.34 x R_m	0.34 x R_m	0.34 x R_m
Hardness/material designation				EN-GJL-HB175	EN-GJL-HB195	EN-GJL-HB215	EN-GJL-HB235
- dependent on wall thickness	BHN		2.5 – 50 mm	115 – 175	-	-	-
			5 – 50 mm	-	135 – 195	155 – 215	-
			10 – 50 mm	-	-	-	175 – 235
			50 – 100 mm	105 – 165	125 – 185	145 – 205	160 – 220
Technological properties							
Machinability				Excellent	Excellent	Excellent	Excellent
Wear resistance				Average	Good	Excellent	Excellent
Induction or flame-hardening capacity				Poor	Low	Good	Excellent
Nitriding capacity				Good	Good	Good	Excellent
Damping				Excellent	Excellent	Excellent	Excellent
Weldability				Only weldable using special electrodes			
Physical properties							
Density	ρ	kg/dm^3		7.10	7.15	7.20	7.25
Thermal conductivity	λ at 300 °C	W/(K*m)		50.0	48.0	46.5	45.0
Thermal expansion coefficient	α up to 400 °C	10^{-6}/K		13.0	13.0	13.0	13.0
				Special materials or grades not listed available on request			

1) The mechanical properties in integrally cast test specimens with a diameter of 30 mm (minimum values)