

MACSTEEL - SPECIAL STEELS CATALOGUE

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230M07 (EN1A) Bright Free Cutting Steel
(BS970 Pt 1 of 1983, Cold Drawn.
Bright Drawn
390 - 480 MPa

Typical Uses

For high speed production or repetition work (e.g. manufacture of bushes, pins, bolts, nuts, studs, and couplings) where the major requirements are rapid machining and maximum tool life. Cutting speeds on this quality are considerably higher than those of mild steels and components are produced with far superior surface finishes. Sulphur addition to steels results in the impairment of certain mechanical properties, such as forgeability, cold formability and weldability. It is generally used where parts are not subjected to further processing.

230M07 (BS970 Pt 1 of 1983)	
Carbon	0.15 max
Silicon	0.40 max
Manganese	0.90 – 1.30
Sulphur	0.25 – 0.35
Phosphorus	0.070 max

Properties minima unless stated

	Condition	Tensile Strength Rm MPa	Yield Stress Re MPa	Rp 0.2 MPa	A min on 5.65 √ So	Impact		Hardness HB	Limiting Ruling Section mm
						Izod Ft.lb	KCV J		
HR	CD or	480	400	360	6	-	-	-	≥ 6 ≤ 13
	Cd & G	460	380	345	7	-	-	-	>13 ≤ 16
		430	340	300	8	-	-	-	>16 ≤ 40
		390	280	240	9	-	-	-	> 40 ≤ 63
		370	240	225	10	-	-	-	> 63 ≤ 76

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Size Range	
Diameter in mm	Theoretical Mass Kg/m
5	0.154
6	0.222
7	0.302
8	0.395
10	0.617
11	0.746
12	0.888
13	1.042
14	1.208
15	1.387
16	1.578
17	1.782
18	1.997
19	2.226
20	2.466
22	2.984
24	3.551
25	3.853
28	4.833
30	5.549
32	6.313
35	7.552
36	7.990
38	8.902
40	9.864
42	10.875
45	12.484
48	14.204
50	15.413

Although every care has been taken in the compilation of this brochure, which is for information only, no responsibility can be accepted for inaccuracies.

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