

MACSTEEL - SPECIAL STEELS CATALOGUE

Lea Road
Dunswart
P O Box 6130, Dunswart 1508
South Africa

Tel: (011) 897-5000
Fax: (011) 918-1125
Email: mac.dun@mactrading.co.za
Web: www.macsteel.co.za



080M40 – (EN8) Black BS970 Pt 1, 1983. as Rolled/Forged.

Typical Uses

Dynamo and motor shafts, heat treated bolts, crankshafts, connecting rods, driving rings and flanges, railway couplings, axles, brackets, housings and parts not subjected to high stresses or severe wear.

BS970 of 1955 EN8	
W.Stoff (German)	1.1186
AISI (American)	1038
Carbon	0.36 – 0.44
Silicon	0.10 – 0.40
Manganese	0.60 – 1.00
Sulphur	0.050 max
Phosphorus	0.050 max

Properties minima unless stated

Heat Treatment	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		
N	550	280	-	16	15	16	152/207	150
	510	245	-	17	-	-	146/197	250
Q	625/775	385	355	16	25	28	179/229	63
R	700/850	465	450	16	25	28	201/255	19

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Size Range			
Diameter in mm	Theoretical Mass Kg/m	Diameter in mm	Theoretical Mass Kg/m
20	2.466	165	167.842
25	3.853	170	178.169
26	4.168	180	199.746
28	4.833	190	222.557
30	5.549	203	254.053
32	6.313	215	284.977
35	7.552	230	326.129
40	9.864	240	355.104
45	12.484	250	385.313
50	15.413	260	416.754
55	18.649	265	432.937
60	22.194	270	449.429
65	26.047	280	483.336
70	30.209	290	518.477
75	34.678	300	554.850
80	39.456	320	631.296
85	44.542	330	671.369
90	49.937	350	755.213
95	55.639	360	798.984
103	65.404	380	890.226
108	71.909	400	989.400
115	81.532	420	1087.506
120	88.776	425	1113.553
130	104.189	450	1248.413
140	120.834	500	1541.250
150	138.714	525	1699.228
160	157.824	550	1864.913

Squares			
40	12.576	75	44.213
45	15.917	92.1	66.200
50	19.650	105	83.00
55	23.777	112.5	96.188
60	28.296		
65	33.209		
70	38.514		

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N.B.

1. Actual mass will vary from theoretical mass due to manufacturing tolerances.
2. A 6 % allowance should always be made for removal of surface defects during machining.
3. For sizes not listed please contact our sales department - we may be able to assist you.
4. Normalised hardness given for guidance only.
5. 140mm square to be used for reforging purposes only.

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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