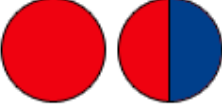


MACSTEEL - SPECIAL STEELS CATALOGUE

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





817M40 (EN24)
Pt 1, 1983. As Rolled/Forged or Heat Treated Steel.
1 1/2 % Nickel Chrome Moly Steel

Typical Uses

Automobile main shafts, axles, connecting rod bolts, high duty connecting rods, push rods, high tensile bolts, studs, differential shafts, pinion sleeves, mandrels for tube manufacture, gun barrels, breech mechanism parts, various parts of machine tools, ie. spindle gears and compensating washers, power transmission slide gears and slide cams.

BS970 of 1955 EN24	
BS970 Pt 1 of 1983	817M40
W.Stoff (German)	1.6582
AISI (American)	4340
Carbon	0.36 – 0.44
Silicon	0.10 – 0.35
Manganese	0.45 – 0.70
Nickel	1.30 – 1.70
Chromium	1.00 – 1.40
Molybdenum	0.20 – 0.35
Sulphur	0.035 max
Phosphorus	0.040 max

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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		
T	850/1000	650	635	13	30	35	248/302	250
	850/1000	680	665	13	40	50	248/302	150
U	925/1075	755	740	12	35	42	269/331	100
V	1000/1150	850	835	12	35	42	293/352	63
W	1075/1225	940	925	11	30	35	311/375	29
X	1150/1300	1020	1005	10	25	28	341/401	29
Y	1225/1375	1095	1080	10	18	21	363/429	29
Z	1550	1235	1125	5	8	9	444	29

Size Range

Diameter in mm	Theoretical Mass Kg/m	Diameter in mm	Theoretical Mass Kg/m
16	1.578	150	138.713
20	2.466	160	157.824
25	3.853	165	167.842
30	5.549	170	178.169
35	7.552	180	199.746
40	9.864	190	222.557
45	12.484	203	254.053
50	15.413	215	284.977
55	18.649	230	326.129
60	22.194	240	355.104
65	26.047	250	385.313
70	30.209	260	416.754
75	34.678	280	483.336
80	39.456	290	518.477
85	44.542	300	554.850
90	49.937	305	573.499
95	55.639	320	631.296
100	61.650	330	671.369
108	71.909	350	755.213
115	81.532	360	798.984
120	88.776	370	843.989
130	104.189	380	890.226
140	120.834	405	1011.214

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N.B.

1. Actual mass will vary from theoretical mass due to manufacturing tolerances.
2. Sizes above limiting ruling section will be heat treated to a hardness only, with no guarantee on mechanical properties.
3. A 6 % allowance should always be made for removal of surface defects during machining.
4. For sizes not listed please contact our sales department - we may be able to assist you.
5. Condition "W X Y and Z" this material is often ordered in the annealed condition for machining and subsequent heat treatment to achieve these properties.

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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A M A C S T E E L G R O U P C O M P A N Y