


TECHNICAL GUIDE

817M40T / EN24T

Steel Description


817M40T / EN24T is a popular through hardening 1.1/2% Nickel Chromium Molybdenum alloy steel which is supplied in the bright drawn, turned and hot rolled condition. It is also available in forged block form which can be cold sawn to size. 817M40T / EN24T is readily machineable in the hardened and Tempered “T” condition and offers good tensile, ductility and wear resistance properties, suitable for the manufacture of axles, gears, pins and studs. See properties below and our hardness comparison table under the Useful Information section on our website. We can also supply this specification in the 817M40 ANNEALED condition on which we also have a technical guide.

BS970: 1955	BS970: 1991	COLOUR CODE	DESCRIPTION
EN24T	817M40T		Bright / black 1.1/2% nickel chromium molybdenum steel

CHEMICAL ANALYSIS	
Car	0.36 / .044
Sil	0.10 / 0.40
Mang	0.45 / 0.70
Phos	0.035 max
Sul	0.040 max
Chr	1.00 / 1.40
Moly	0.20 / 0.35
Nick	1.30 / 1.70

MECHANICAL PROPERTIES	
Tensile Strength N/MM2 Min Rm	850 / 1000
Yield Stress N/MM2 Min Rm	700
Elongation A Min % on 5.65√SO	9
Izod Min	54
Kcv Min	-
Proof Stress 0.2% N/MM2 Min	680
Brinell Hardness	248 / 302

INTERNATIONAL SPECIFICATION COMPARISON	
BRITISH BS 970:1991	817M40T
BRITISH BS 970:1955	EN24T
GERMAN DIN	34NiCrMo6
FRENCH AFNOR	35NCD6
SWEDISH SS	2541
AMERICAN SAE	4340
EUROPEAN STEEL NO.	1.6582
EUROPEAN STEEL NAME	34CrNiMo6
EUROPEAN STANDARD	EN10277-5

SIZE RANGE SUMMARY			
	Rounds	IMP	3/8" - 3" dia
		MM	10mm - 310mm dia

SEE STOCK RANGE FOR SPECIFIC SIZES.

QUICK VIEW SYSTEM	
MACHINEABILITY	40
WELDABILITY	Pre / post heat precaution required
HARDENABILITY	High strength up to 100mm dia
SELECTION GUIDE AND USAGE EXAMPLES	Popular direct hardening steel with good tensile, ductility, shock and wear resistance properties