

# MATERIAL DATA SHEET



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## 826M40"W"

Condition of supply:-	<i>As Rolled/Forged, Annealed, Quenched &amp; Tempered</i>
Surface Condition:-	<i>Black, Bright, Proof machined, Machined to Requirements</i>

### Description:

826M40 grade steel is a 2.5% nickel-chromium-molybdenum through hardening steel which has a high hardenability. It may be treated in relatively large section sizes to produce tensile strengths ranging from 850 to over 1550 N/mm<sup>2</sup> combined with good ductility and resistance to stock.

Due to its high molybdenum content, the steel may normally be tempered in the range 300-550C without serious loss of impact values.

Good mechanical properties at low temperature can also be obtained.

### Typical Applications:

Undercarriages, aero-engine and air frame parts, heavy duty gears, pinion connecting rods, crank and differential shafts and other transmission parts, high strength bolts, and studs, electrical motor shafts, turbine discs, gas bottles, mandrel bars for tube manufacture, ordnance parts

### Typical Chemical Composition:

	C	Si	Mn	S	P	Cr	Ni	Mo
Min	0.36	0.10	0.45			0.50	2.30	0.45
Max	0.44	0.35	0.70	<0.040	0.035	0.80	2.80	0.65

### Typical Mechanical Properties: Q+T Condition "W"

	Tensile Strength	Yield (0.2%)	UTS (Rm)	Elongation	Reduction of area	Hardness	Impact test (KV)	
	KSI	KSI	KSI	%	%	HB	J	
Min	940		1075	11	40	311	35	
Max			1225			375		

### Machining

826M40 [EN26] is readily machinable allowing processes such as Sawing, Turning, Drilling, Boring and Milling to be relatively easily achieved.

### Form of supply:

Material can be supplied, Black As-Rolled/Forged Bar, Proof Machined, Bright Turned or Ground Bar, Cut Pieces or Machined to customer specification.

### Size ranges from:

<40mm diameter - 720mm diameter