

Material Grade: **722M24**
 Material Condition(s): **Untreated / Annealed / Quench and tempered**
 Surface Finish: **As rolled / As forged / Bright drawn / Bright turned**

Associated Standard: **BS970**

Description:

A chromium-molybdenum nitriding steel often supplied in the hardened and tempered condition (typically with 1075 N/mm² tensile strength). After nitriding it develops a hard wear resistant case in the range of 61-65HRC with good resistance to shock and fatigue. The relatively low temperature of the nitriding process produces components with a scale free surface and minimum distortion. No significant loss of surface hardness will result from operating temperate up to 500°C.

Typical applications: **Aircraft application, crankshafts, gears, plastic moulds, compressor discs, pins, spindles and bolts**

1. STEELMAKING

	<u>C</u>	<u>Si</u>	<u>Mn</u>	<u>S</u>	<u>P</u>	<u>Cr</u>	<u>Ni*</u>	<u>Mo</u>
Min	0.20	0.10	0.45			2.80		0.40
Max	0.28	0.35	0.70	0.040	0.035	3.30	0.40	0.60

(* denotes residual element)

2. TYPICAL MECHANICAL PROPERTIES

Test type	Tensile and hardness test (at room temperature)						Impact test (KV)
	Yield (Re)	0.2 % proof	UTS (Rm)	Elong (A)	R of A (Z)	Hardness	Room Temp
Unit	N/mm ²	N/mm ²	N/mm ²	%	%	HB	J
Annealed	Min						
	Max					255	
Q + T + Drawn, condition 'T'	Min	700	850	9		248	50
	Max		1000			302	
Q + T + Drawn, condition 'U'	Min	770	925	9		269	42
	Max		1075			331	
Q + T to condition 'T'	Min	680	850	13		248	50
	Max		1000			302	
Q + T to condition 'U'	Min	755	925	12		269	42
	Max		1075			331	