


# TECHNICAL GUIDE

## BOI/Grade OI

BS 4659	COLOUR CODE		DESCRIPTION
GRADE OI	BOI		Non shrinking oil hardening tool steel

CHEMICAL ANALYSIS	
Car	0.85 / 1.40
Sil	0.40 max
Mang	1.10 / 1.35
Phos	0.035 max
Sul	0.035 max
Chr	0.40 / 0.60
Van	0.25 max
Tung	0.40 / 0.60

MECHANICAL PROPERTIES	
Tensile Strength N/MM2 Min Rm	
Yield Stress N/MM2 Min Rm	
Elongation A Min % on 5.65v/50	
Izod Min	
Kcv Min	
Proof Stress 0.2% N/MM2 Min	
Brinell Hardness	ann'd 229max

INTERNATIONAL SPECIFICATION COMPARISON	
BS 4659	GRADE OI
BS 4659	BOI
GERMAN DIN	
FRENCH AFNOR	90MCW5
SWEDISH SS	
AMERICAN SAE	OI
EUROPEAN STEEL NO.	1.2510
EUROPEAN STEEL NAME	100MnCrW4
EUROPEAN STANDARD	

QUICK VIEW SYSTEM	
MACHINEABILITY	90
WELDABILITY	Not recommended
HARDENABILITY	Good
SELECTION GUIDE AND USAGE EXAMPLES	General purpose tool steel. Tough hard and economical. Press tool punches, moulding dies

SIZES														
Size (ins. dia)	1/2	3/4	1	1.1/4	1.1/2	1.3/4	2	2.1/2	3	3.1/2	4	5	6	

Size (ins.)	2 x 1	2 x 1.1/2	3 x 1	3 x 2	4 x 1	4 x 1.1/4	4 x 1.1/2	4 x 2	4 x 3	6 x 1	6 x 1.1/4	6 x 1.1/2	6 x 2	8 x 3/4
	8 x 1	10 x 2												

Size (ins. sq)	1.1/2	2	3	4										
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