

EN39B Case hardening steel

Typical Analysis (Ave. values %)	C	Si	Mn	Ni	Cr	Mo	S	P
	0.15	0.25	0.4	4.2	1.2	0.25	0.025	0.025
NEAREST STANDARD	AS		DIN			BS		
	X9315		1.6723			835 M 15		

DESCRIPTION	4¼% Nickel Chromium Molybdenum case hardening steel for large and highly stressed applications.
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APPLICATIONS	Components with large cross sections requiring very high toughness and core strength (1300 MPa) such as gears, gear shafts and heavy duty gear shafts in aircraft, truck construction and mechanical engineering.
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MECHANICAL PROPERTIES Heat Treated Condition	Tensile Strength MPa	Elong. %	Izod Impact J	Brinell Hardness Annealed
	1310	12	33	277 max

HEAT TREATMENT	Forge	850-1050°C. Cool in furnace.
	Normalize	850-880°C. Air cool.
	Anneal	650-700°C. Cool slowly in controlled furnace.
	Carburize	880-930°C. Furnace or Air cool
	Core Refine	850-880°C. Oil quench or Air cool.
	Harden	760-780°C Oil quench.
	Temper	180-200°C air cool

WELDING	Parts should be welded before Carburizing and Hardening. Preheat to 250-350°C. Filler metals:-Bohler FOX DCMS-KB or FOX 2.5 Ni electrodes. DCMS-IG wire.
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Round Black										
SIZE RANGE	42	80	90	95	101	110	116	125	160	205
	56	87	92	97	105	115	120	146	170	240
Round Peeled K12										
SIZE RANGE	102	106	116	122	200					

<u>LOCATIONS</u>						
Bohler Uddeholm Australia Pty Ltd ABN 15000013052						
Sydney	129-135 McCredie Rd Guildford	2161	Ph (02) 8724 5554	Fax (02) 8724 5555		
Newcastle	3 Pavilion Pl Cardiff	2285	Ph (02) 4954 6611	Fax (02) 4956 5773		
Albury	1 Eames St Albury	2640	Ph (02) 6041 3399	Fax (02) 6041 1820		
Wollongong	40 Doyle Ave Unanderra	2526	Ph (02) 4272 6544	Fax (02) 4272 7563		
Marayong	1/21 Binney Rd Marayong	2148	Ph (02) 9831 4431	Fax (02) 9671 1682		
Melbourne	282-290 Greens Rd Dandenong	3175	Ph (03) 9767 5554	Fax (03) 9767 5555		
Bayswater	4 Ramage St Bayswater	3153	Ph (03) 9729 7356	Fax (03) 9738 0850		
Adelaide	1 Williams Cir Pooraka	5095	Ph (08) 8368 4554	Fax (08) 8368 4555		
Brisbane	12-18 Limestone St Darra	4076	Ph (07) 3712 9554	Fax (07) 3712 9555		
Townsville	9-11 Caldwell St Garbutt	4814	Ph (07) 4479 4800	Fax (07) 4725 1316		
Perth	29-33 Gauge Cir Canningvale	6155	Ph (08) 9455 8672	Fax (08) 9455 8673		
Kewdale	5 Beete St Welshpool	6106	Ph (08) 9350 9582	Fax (08) 9350 9683		
Launceston	20 Murphy St Invermay	7248	Ph (03) 6334 3542	Fax (03) 6331 4001		
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