

EN25 High tensile steel

Typical Analysis (Ave. values %)	C	Si	Mn	Ni	Cr	Mo	S	P	
	0.30	0.25	0.60	2.50	0.60	0.50	0.025	0.025	
NEAREST STANDARD	AS		DIN		BS 970		AISI		
	X9931		1.6743 32NiCrMo10-4		EN25 826 M 31		-		

DESCRIPTION	2½% Nickel Chromium Molybdenum alloy steel with increased strength due to the Nickel content. Supplied in the hardened and tempered condition.
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APPLICATIONS	Highly stressed components of large cross section for automotive, and general engineering applications, such as shafts, connecting rods, pump and gear shafts heavy forgings where optimum strength is required.
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HEAT TREATMENT	Forge	850-1050°C. Cool in furnace.
	Normalize	850-880°C. Air cool.
	Anneal	650-700°C. Cool slowly in controlled furnace.
	Stress relieve	In the quenched and tempered condition, about 30-50°C below the tempering temperature. Air cool. In the annealed condition, 600-650°C. Air cool.
	Harden	820-850°C Oil quench.
	Temper	540-660°C hold for 1 hour min. at temperature, air cool.

MECHANICAL PROPERTIES Heat Treated Condition	Condition	Ruling section mm	Tensile Strength MPa	Yield Strength MPa	Elong. %	Izod Impact J	Brinell Hardness
	T	250	850-1000	635	13	40	248-302
	T	150	850-1000	665	13	54	248-302
	U	250	930-1080	725	12	34	269-331
	U	150	930-1080	740	12	47	293-331
	V	150	1000-1150	835	12	47	293-352
	W	100	1080-1230	925	11	40	311-375
	X	63	1150-1300	1005	10	34	341-401
	Y	63	1230-1380	1080	10	34	363-429
	Z	63	1555-	1125	5	10	444-

WELDING	Limited weldability. Parts should be welded in the hardened and tempered condition. Strength properties of the joint will not be the same as the base metal. Preheat 300-400oC. Temper after welding to about 35-50°c below the recommended tempering temperature. Filler metal: - Fox CM2-KB electrodes or CM2-IG wire. For advice in connection with difficult welding, please consult our engineers.
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SIZE RANGE	Round	7.94 to 260 mm
	Square	300 mm

<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 Amsted Rd Bayswater	3153	Ph (03) 9739 8022	Fax (03) 9739 8033	
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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