

# CHROME BAR

Typical Analysis (Ave. values %)		C	Si	Mn	Cr	Mo	V	S	P
	<b>4140</b> Chrome Bar	0.40	0.2	0.8	1.0	0.2	-	0.03	0.03
	<b>1045</b> Chrome Bar	0.45	0.3	0.7				0.03	0.03
	<b>20MnV6</b> Chrome Bar	0.18	0.3	1.5	-	-	0.15	0.03	0.03
	<b>38Mn Vs6</b> Induction hardened Chrome Bar	0.37	0.48	1.40	0.30	0.08	0.14		

DESCRIPTION		
<b>4140</b> Chrome Bar	Low alloy general purpose high tensile hardened and tempered steel. Ideal material for highly stressed component applications.	
<b>1045</b> Chrome Bar	Fully Killed medium carbon steel. The traditional product used in the manufacture of hard chrome bar.	
<b>20MnV6</b> Chrome Bar	Vanadium micro alloyed steel grade with higher yield point, excellent weldability and impact strength.	
<b>38Mn Vs6</b> Induction hardened Chrome Bar	An induction hardened hard chrome plated bar designed to withstand mechanical damage.	

STORAGE & HANDLING	
	<p>The Chrome plated bars can easily be damaged, therefore they are delivered protected by packaging in cardboard or plastic tubes. It is necessary to follow several precautions while handling the product between delivery and final production</p> <ul style="list-style-type: none"> <li>➤ <b>Handling</b> – During handling, never use steel chains, always use canvas or plastic belts, fork lift tynes must be lined with wood or plastic material.</li> <li>➤ <b>Cutting</b> – Leave the bar in its protective sleeve and cut dry, cutting emulsions containing water can be absorbed in the sleeve and cause erosion. Vice jaws must be lined with plastic or wood.</li> <li>➤ <b>Storage</b> – Chromed bars must be stored in dry conditions and not exposed to the sun light. Direct contact with the floor should be avoided.</li> </ul>

APPLICATIONS	
	Standard cylinders, Dump trucks, Fork lifts, Presses, Gates and Automatic doors, Tractors, Steering- Gear systems, Robots, Lifts, Hydraulic platforms, Machines for agriculture, Heavy duty cylinders, Cranes, Drilling equipment, Garbage compactors.

HARD CHROME	Surface hardness	800-1000 HV ( 64-69 RC)

<b>PLATING</b>	Surface smoothness	0.10-0.30 $\mu$ m Ra
	Surface deposit	0.025-0.050 mm

<b>INDUCTION HARDENING</b>	The hardened outer layer results in greater strength and resistance to mechanical damage. Case hardness 55-56 R/C before plating.	
	<u>Dia mm</u> 12-20 >20-40 >40-80 >80-120	<u>Case depth mm</u> 1.0 +/-0.5 1.5 +/-0.5 2.0 +/-0.5 2.5 +/-0.5

<b>TOLERANCES</b>	Diameter	According to ISO f7 20-30 mm. -0.020 / -0.041 30-50 mm. -0.025 / -0.050 50-80 mm. -0.030 / -0.060 80-120 mm. -0.036 / -0.071
	Straightness	< 0.5 mm / 2000 mm
	Out of roundness	<1/2 of ISO f7 field
	Concentricity	+/- 3 $\mu$ m
	Surface roughness	Ra 0.2 $\mu$ m max. Rt 3.0 $\mu$ m max.
	Bearing ratio	> 50% ( at depth of 0.15 $\mu$ m)

<b>MECHANICAL PROPERTIES</b>		Tensile Strength MPa	Yield Strength MPa	Elong. %
	<b>4140</b> Chrome Bar	900-1150	>735	>14
	<b>1045</b> Chrome Bar	580-800	>340	>17
	<b>20MnV6</b> Chrome Bar	550-700	>440	>19
	<b>38Mn Vs6</b> Induction hardened Chrome Bar	800-950	>520	>12

<b>WELDING</b>	<p>During welding the chromed bar must be protected against overheating and splatter. Strength properties of the joint will not be the same as the base metal.            Filler metal: <b>4140</b>(FOX CM2-KB electrodes or CM2-IGwire),  <b>1045 &amp; 20MnV6</b> (FOX EV50),            For advice in connection with welding, please consult our engineers.</p>
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<b>SIZE RANGE</b>	<b>4140</b> <b>4140 Induction hardened</b>	19.05 to 101.6 mm 25.40 to 95.25 mm
	<b>1045</b> <b>1045 Induction hardened</b>	12.00 to 171.45 mm 25.40 to 127 mm
	<b>20MnV6 Chrome Bar</b>	12.00 to 101.60 mm
	<b>38Mn Vs6</b>	31.75 to 114.3 mm

<b><u>LOCATIONS</u></b>					
<b>Bohler Uddeholm Australia Pty Ltd ABN 15000013052</b>					
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	
Mackay	19-21 Iridium Dr	4740	Ph 0414 718565		
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	
<a href="http://www.buau.com.au">www.buau.com.au</a>					
<p>Every care has been taken in listing this information, particularly specifications. Bohler Uddeholm Australia Pty Ltd will not accept responsibility for any loss or other damage caused to any person or Company as a result of the use of information contained herein</p>					

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