

# HonBar

## HARD CHROMIUM PLATED BAR



### MAIN MATERIAL PROPERTIES

The maximum attention and sensitivity in our production are also applied in purchase of raw materials including the service and buying procedure of the products. The quality management is extremely necessary from the firms that we work with and make the purchases. This is a "If there is no existence, there is no existence at all" principle of us. It should be a "win-win case" for our team to have better service.

Enabling the follow-up procedure for our products, we make one moulting order for every charge of steel bar. Following up that process, we buy all the bars that come out of moulting process.

The chemical analysis that we implement to our products are not covered up by other steel products, this enables us to determine the products easily and with certainty. As a result of this, how small our products are cut or processed is determined from chemical analysis which will allow us to determine our product. Actually, this renders the possibility for an absolute



#### Middle carbon steel hard chromium plated bars For hydraulic cylinders column bars and rods

Chemical Properties						
Material	W.No	C %	Mn%	Si%	S %	P %
Ck 45	1.1191	0.42 - 0.50	0.50 - 0.80	0.40	0.0351	0.0351
SAE 1040	1.1186/1.0501	0.36 - 0.44	0.60 - 0.90	0.40	0.035	0.030
SAE 1045	1.1191/1.0503	0.42 - 0.50	0.60 - 0.90	0.40	0.035	0.030
SAE 1050	1.1206/1.0540	0.47 - 0.55	0.60 - 0.90	0.40	0.035	0.030

Mechanical Properties				
Material	Yield point N/mm2	Ultimate Tensile Strength N/mm <sup>2</sup>	Elongation %	Machining
Ck 45	320	350 - 520	13	Good
SAE 1040	600	600 - 650	16	Good
SAE 1045	750	650 - 750	16	Good
SAE 1050	750	700 - 750	16	Good

Conversion		
To Change	to	Multiply by
N/mm <sup>2</sup>	Psi	145.037738007
Psi	N/mm <sup>2</sup>	0.00689476

#### Less carbon steel hard chromium plated bars For welding usages

Chemical Properties							
Material	W.No	C %	Mn %	Si %	S %	P %	V %
St 52	1.0421	0.22	1.60	0.55	0.035	0.040	-
20 Mn V6	1.5217	0.16 - 0.22	1.30 - 1.70	0.10-0.50	0.035	0.035	0.10-0.20
17 Mn V6	1.5216	0.15 - 0.20	1.40 - 1.75	0.10-0.50	0.035	0.035	0.10-0.20

Mechanical Properties				
Material	Yield point N/mm2	Ultimate Tensile Strength N/mm <sup>2</sup>	Elongation %	Weldability
St 52	355	500 - 650	19	Perfect
20 Mn V6	450	540 - 710	16	Perfect
17 Mn V6	450	540 - 710	16	Perfect

#### Stainless steel hard chromium plated bars. For high corrosive environments

Chemical Properties							
Material	W.No	C %	Mn %	Si %	S %	P %	Cr %
X20 Cr 13	1.4021	0.16 - 0.25	1.50	0.0100	0.015	0.040	12.0-14.0
X46 Cr 13	1.4034	0.43 - 0.50	1.00	0.0100	0.015	0.040	12.5-14.5

Mechanical Properties				
Material	Yield point N/mm2	Ultimate Tensile Strength N/mm <sup>2</sup>	Elongation %	Machining
X20 Cr13	350	600 - 850	13	Good
X46 Cr13	350	700 - 850	13	Good