

Induction Hardened chrome plated Steel bars 20MnV6 Technical Properties.

- **Diameter Tolerance** Standard is ISO-f7. We can provide special tolerance at premium price.
- **Residual Magnetism** Standard is Max. 50 Gauss.
- **Roundness** – max ½ from the diameter tolerance (½ tol.f7).
- **Surface Roughness** is Ra = max 0.20 µm.
- **Surface Hardness** – Chrome Layer hardness is 800-1000 HV0,1. Steel-grade 20MnV6 IH surface hardness is minimum 40HRC.
- **Straightness** is max 0,3 [mm]/1000 [mm] .
- **Chrome Layer thickness** for $\phi \leq 19.05$ [mm] is min. 15[µm] and for $\phi > 20$ [mm] is minimum 20[µm].

Induction Hardened chrome plated steel bars 20MnV6 corrosion resistance.

- **Standard Corrosion Resistance** for $\Phi < 20$ is R9/120h and for $\Phi \geq 20$ is R9/200h according to NSS tests.
- We can provide higher layer or double chrome layer at premium price.

Corrosion Test standards table.

ISO9227	ASTM	DIN50021	Salt Spray Test
NSS	B117	SS	Neutral Salt Spray
AASS	B287	ESS	Acetic Acid Salt Spray

Steel grade correspondents table.

EN	DIN	BS	AFNOR	ASTM
20MnV6	1.5217	55M	E420	A572

Chemical Composition table 20MnV6

C	Si	Mn	P	S	Cr	Mo	Ni	V	N
0.16	0.10	1.20	Max	0.02	Max	Max	Max	0.10	--
0.22	0.45	1.70	0.025	0.06	0.5	0.15	0.30	0.20	

Mechanical Properties table 20MnV6.

Diameter Ø (mm)	Tensile Strength Rm (N/mm ²)	Yeld Point Rp02 (N/mm ²)	Elongation A5 (%)	Hardness Brinell HB	Charpy Test Kv -20°C
6<Ø≤19.05	Min. 700	Min. 620	Min.10	200 min	Min. 27J
19.05<Ø≤70	Min. 600	Min. 450	Min.16	163 - 200	Min. 27J
70<Ø≤250	Min. 530	Min. 380	Min.16	156 min	Min. 27J

Hardening Depth table

Ø (mm)	SHD (mm)
6	0.5-0.8
8	0.6-0.9
10	0.7-1.0
12-14	0.8-1.2
14	0.9-1.3
15	1.0-1.4
16-18	1.1-1.5
20-22	1.2-1.5
24	1.4-1.6
25	1.5-1.7
28	1.5-1.8
30-38	1.5-1.9
40-45	1.6-2.0
50-85	2.-2.6
90-101.6	2.-2.6
105-160	2.2-3
>160	3-4

Standard packaging is made with plastic sleeves or cardboard tubes (depending on the product's diameter).

As an Extra protection with additional cost we can provide also wooden boxes.