

	44SMn28 High machinability steel for direct hardening	(W. NR. 1.0762)
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CHEMICAL COMPOSITION: (heat analysis according to the EN ISO 683-4:2018 standard)

	C %	Si %	Mn %	P %	S %
FROM	0,40	-	1,30	-	0,24
TO	0,48	0,40	1,70	0,06	0,33

***MECHANICAL FEATURES:** (according to the EN 10277:2018 standard)

Thickness mm	rolled + peeled rolled (+SH)		Cold drawn (+C)		
	HB hardness max.	Rm (MPa)	Rp _{0,2} minimum values (MPa)	Rm (MPa)	A ₅ % minimum values
≥5≤10			600	760 - 1030	5
>10≤16			530	710 - 980	5
>16≤40	241	630 - 820	460	660 - 900	6
>40≤63	231	620 - 790	430	650 - 870	7
>63≤100	228	610 - 780	390	630 - 840	7

* Delivery condition: as rolled

PROPERTIES:

Machinability

This steel grade generally shows a quite good machinability on machine tools; machinability decreases with the increase of carbon, silicon and manganese content.

Weldability

Due to the high sulphur and phosphorus content free-cutting steels for direct hardening are not recommended for welding.

Notes

CORRESPONDENCE WITH OTHER STANDARDS (purely as an indication) :

UNI 4838 CF 44 SMn 28	AFNOR 35-562 45 MF 6.3	EN 10277-3:2008 44SMn28	EN 10087 44SMn28
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