

	C50E Non-alloy special steel	(W. NR. 1.1206)
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CHEMICAL COMPOSITION: (heat analysis according to the EN ISO 683-1:2018 standard)

	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Cu%	Cr+Mo+Ni %
FROM	0,47	0,10	0,60	-	-	-	-	-	-	-
TO	0,55	0,40	0,90	0,025	0,035	0,40	0,40	0,10	0,30	0,63

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

Thickness mm	Rolled + peeled rolled (+SH)		Cold drawn (+C)		
	hardness HB	Rm (MPa)	Rp _{0,2} minimum values (MPa)	Rm (MPa)	A ₅ % minimum values
≥5≤10			590	770 - 1100	5
>10≤16			520	730 - 1080	6
>16≤40	179 - 269	610 - 910	440	690 - 1050	7
>40≤63	179 - 269	610 - 910	390	650 - 1030	8
>63≤100	179 - 269	610 - 910	-	-	-

* Delivery condition: as rolled.

PROPERTIES :

Weldability:

Not weldable. It can be welded only with particular precautions. It has a bad machinability.

Hardenability:

It has a low hardenability in water or oil; fit for surface hardening that gives this steel grade a high hardness of the hardened shell.

Notes :

CORRESPONDENCE WITH THE OTHER STANDARDS (purely as an indication) :

UNI 7845 C50	DIN 17200 Ck50	AISI-SAE 1050
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