



C40R
Non-alloy special steel

(W. NR. 1.1189)

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	0,37	0,10	0,50	-	0,020	-	-	-	-	-
TO	0,44	0,40	0,80	0,025	0,040	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			540	700 - 1000	6
>10≤16			460	650 - 980	7
>16≤40	164 – 207	550 - 710	365	620 - 920	8
>40≤63	164 – 207	550 - 710	330	590 - 840	9
>63≤100	164 - 207	550 - 710	290	550 - 820	9

* Delivery condition: as rolled.

PROPERTIES :

Weldability:

Due to the medium-high carbon content it can be welded with some precautions.

Hardenability:

Low hardenability; it shows intermediate features between those of steels with medium and those of steels with high carbon content; therefore it is not easy to obtain the required features by quenching in oil and the quenching in water can result in cracking.

Notes:

CORRESPONDENCE WITH OTHER STANDARDS (purely as an indication) :

UNI 7845 C40	DIN 17200 Cm40	AISI-SAE 1040	AFNOR 35-552 XC42H1u
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