

Quality	X46Cr13
According to Standard	EN 10088-3:2005 (E)
Number	1.4034



Comparable Standards	EN	W.N.	AISI
	X46Cr13	1.4034	420

Chemical Analysis	C %	Si % max	Mn %	P% max	S%	Cr %
	0,43 to 0,50	1,00	≤ 1,00	0,040	≤ 0,030 ^b	12,5 to 14,5
	Cu	Mo %	Nb	Ni %	Others	
	—	—	—	—	—	

Hot Work and Heat Treatment Temperatures

Heat Treatment Symbol	Hot Forming		Annealing		Quenching		Tempering
	Temperature °C	Type of cooling	Temperature °C	Type of cooling	Temperature °C	Type of cooling	Temperature °C
+A	1100 to 800	slow cooling	750 to 850	furn.,air	—	—	—
+QT 850	1100 to 800	slow cooling	—	—	950 to 1050	oil, air	650 to 700

Mechanical Properties at Room Temperature

Heat Treatment Condition	Ø mm.	Hardness HB ^c max	Rp0,2 ^d min. N/mm2	Rm ^d N/mm2	A ^d min. %	KV min. J
+A	—	245	—	max 800	—	—
+QT800	≤ 160	—	650	850 to 1000	10	12