

Steel designation		Thickness t or diameter ^b d mm	Annealed		Heat treatment condition	Quenched + tempered				
Name	Number		R _m MPa max.	HBW ^c max.		R _{p0.2} MPa min.	R _m MPa	A ₅ ^d % min.	(long.)	(tr.)
Special grades										
X29CrS13	1.4029	≤ 10 ^e	950	305	+QT850	750	900 to 1100	8	-	-
		10 < t ≤ 16	950	305		700	900 to 1100	8	-	-
		16 < t ≤ 40	900	280		650	850 to 1100	10	-	-
		40 < t ≤ 63	840	260		650	850 to 1050	10	-	-
		63 < t ≤ 160	800	245		650	850 to 1000	12	-	-
X46CrS13	1.4035	≤ 10e	880	280	-	-	-	-	-	-
		10 < t ≤ 16	880	280		-	-	-	-	-
		16 < t ≤ 40	800	250		-	-	-	-	-
		40 < t ≤ 63	760	230		-	-	-	-	-
^a	Including cut lengths from wire.									
^b	Width across flats for hexagons.									
^c	For information only.									
^d	Elongation A ₅ is valid only for dimensions of 5 mm and above. For smaller diameters, the minimum elongation shall be agreed upon at the time of enquiry and order.									
^e	In the range 1 mm ≤ d < 5 mm valid only for rounds. The mechanical properties of non-round bars with thicknesses < 5 mm shall be agreed at the time of enquiry and order.									