Material Technical data sheet

WixSteel Industrial - 54SiCr6

Material No.:	German standard:	International steel grades:
1.7102	**DINEN10089**	**SAE:** 9254 **JIS:** SUP 12 **ISO:** 60SiCr8

Material group: Hot rolled steel for quenched and tempered springs

Chemical Composition:
(typical analysis at in %)

C	Si	Mn	S	P	Cr	Ni	Cu
0.51-0.59	1.20-1.60	0.50-0.80	≤0.025	≤0.025	0.50-0.80	-	-

Application: Si alloyed quenched and tempered steel for production of springs with smaller sag tendency, especially of high-stressed automotive suspension springs, produced by cold and hot forming

Hot forming and heat treatment:	Hot rolling:	1050 - 850°C
	Hot forming to springs:	940 - 840°C
	Normalising:	850 - 880°C/air
	Soft annealing:	640 - 680°C/furnace
	Hardening:	min. 840°C/oil
	Tempering:	375 - 500°C/air
Mechanical properties:	Treated for cold shearability (+S):	max. 280 HB
	Soft annealed (+A):	max. 248 HB
	Spheroidized annealed (+AC):	max. 230 HB

	Hardened and tempered (+QT), tempering temperature 375-500°C
0,2% proof stress $R_{p0,2}$ [N/mm²]	min. 1300
Tensile strength R_m [N/mm²]	1450 - 2050
Fracture elongation A_5 [%]	min. 6
Reduction of area Z [%]	min. 25
Notch impact energy ISO-V [J]	min. 8

 www.wixsteel.com info@wixsteel.com