

Technical data sheet – 51CrV4 (1.8159)

- Structural steel

Applications: Springs, gears, surface hardening

Chemical composition (acc. DIN EN ISO 683-2 (09/2018))

mass fraction in %				
51CrV4	C [%]	Si [%]	Mn [%]	Cr [%]
	0,47 – 0,55	0,10 – 0,40	0,60 – 1,00	0,80 – 1,10
	P [%] max.	S [%] max.	Mo [%]	Cu [%]
	0,025	0,025	-	≤ 0,40
	Ni [%]	V [%]		
	-	0,10 – 0,25		

Mechanical properties (acc. DIN EN 10250-3 (08/2021))

	≤ 16 mm	>16 - 40 mm	>40 - 100 mm	>100 - 160 mm	>160 - 250 mm
Diameter d	≤ 16 mm	>16 - 40 mm	>40 - 100 mm	>100 - 160 mm	>160 - 250 mm
Thickness t	≤ 8 mm	>8 - 20 mm	>20 - 60 mm	>60 -100 mm	>100 - 160 mm
Yield Strenght Re	≥ 900 MPa	≥ 800 Mpa	≥ 700 MPa	≥ 650 Mpa	≥ 600 Mpa
Tensile Strenght Rm	1100 - 1300 MPa	1000 - 1200 MPa	900 - 1100 MPa	850 - 1000 MPa	800 - 950 MPa
Elongation A	≥ 9 %	≥ 10 %	≥ 12 %	≥ 13 %	≥ 13 %
Reduction Z	≥ 40 %	≥ 45 %	≥ 50 %	≥ 50 %	≥ 50 %
ISO-V	-	≥ 30 J	≥ 30 J	≥ 30 J	≥ 30 J

ISO 9001: 2015 TÜV NORD certified.