

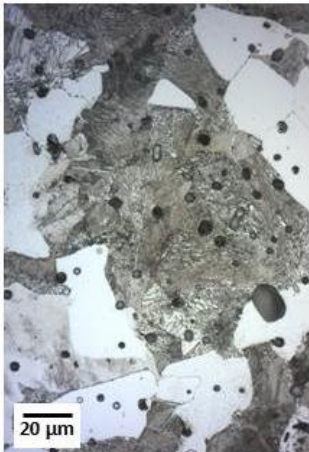


Data Sheet — 42CrMo4

for technical applications

Comparable Standards	DIN 1.7225	AISI/SAE 4140	UNS G41400
	ISO 22068 MIM-4140-400	MPIF Standard 35 MIM-4140	

Composition	Fe	C	Cr	Mo	Mn	Si	others
min (wt.%)	-	0.3	0.8	0.15	-	-	-
max (wt.%)	Bal.	0.5	1.2	0.3	1.0	0.6	1.0

Typical properties	Density	Core hardness	Surface hardness	R _m	R _{p0.2}	A ₁₀
	g/cm ³	HV10	HV10	MPa	MPa	%
as sintered	≥ 7.4	≥ 130	≥ 130	≥ 700	≥ 400	≥ 3
heat treated		≥ 45 HRC	≥ 45 HRC	≥ 1000	≥ 700	≥ 2
heat treated and nitrided		≥ 28 HRC	≥ 600 HV			

Microstructure	as sintered	heat treated	heat treated and nitrided
			

Characteristics	CrMo – alloyed steel for high requirements on strength and toughness; steel suitable for quench and temper, surface hardenable, limited weldability
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Typical Applications	versatile material for highly stressed components where the combination of high strength, wear-resistance and toughness are particularly important: especially components in the aircraft construction and engineering, tool-making as well as automotive industry such as engine and transmission components, gears and so on
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These data presented here are based on our current knowledge and experience, but no liability can be assumed.