

Material Data sheet

WixSteel-Industrial 25CrMo4

Material No.:	Former brand name:	International steel grades:
DIN 1.7218	Mo 25	BS: 708A25 AFNOR: 25CD4, 25CrMo4 SAE: 4130

Material group: Steel for quenching and tempering according to DIN EN 10083

Chemical composition: (Typical analysis in %)	C	Si	Mn	S	P	Cr	Ni	Cu	Mo
	0.20 ~ 0.29	0.10 ~ 0.40	0.60 ~ 0.90	≤0.035	≤0.035	0.90 ~ 1.20	≤0.030	≤0.010	0.15 ~ 0.30

Application: Alloyed heat treatable steel with a typical tensile strength of 700 - 950 N/mm² and a good weldability. For automotive and aircraft components with high toughness as axles, axle journals, turbine parts, turbine rotors.

Hot forming and heat treatment:	Forging or hot rolling:	1100 - 850°C
	Normalising:	860 - 890°C/air
	Soft annealing:	680 - 720°C/furnace
	Hardening:	840 - 880°C/water, oil
	Tempering:	540 - 680°C/air

Mechanical Properties:	Treated for cold shearability +S:	max. 255 HB
	Soft annealed +A:	max. 212 HB

Quenched and tempered, +QT:

Diameter d [mm]	< 16	>16 – 40	>40 – 100	>100 – 160	>160 – 250
Thickness t [mm]	< 8	8<t<20	20<t<60	60<t<100	100<t<160
0,2% proof stress R _{p0,2} [N/mm ²]	min. 700	min. 600	min. 450	min. 400	-
Tensile strength R _m [N/mm ²]	900 - 1100	800 - 950	700 - 850	650 - 800	-
Fracture elongation A ₅ [%]	min. 12	min. 14	min. 15	min. 16	-
Reduction of area Z [%]	min. 50	min. 55	min. 60	min. 60	-
Notch impact energy ISO-V [J]	min. 45	min. 50	min. 50	min. 45	-