

## Material specification sheet

### Saarstahl - 25CrMo4

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

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

Chemical composition: (Typical analysis in %)	C	Si	Mn	Cr	Mo	other
	0,25	0,25	0,70	1,05	0,25	(Pb)

**Application:** Alloyed heat treatable steel with a typical tensile strength of 700 - 950 N/mm<sup>2</sup> and a good weldability. For automotive and aircraft components with high toughness as axles, axle journals, turbine parts, turbine rotors.

<b>Hot forming and heat treatment:</b>	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

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

Quenched and tempered, +QT:

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