

Material-information-sheet

Material-number: 1.6582

Material: 34 Cr Ni Mo 6

Steel-group: Alloyed steels, Cr-Ni-Mo-steel with < 0,4 % Mo and < 2,0 % Ni

Usage:

Heat-treatable-steel:

Drills and high claimed components used for vehicle- and motor constructions for example crankshaft, controls parts, gear parts drive axle, eccentric shaft.

Cold forging steel

High quality components used for vehicle-, apparatus-, machine- and motor-constructions.

You can produce parts in different constructions by working in different steps (hot-press, cold extrusion, pressing, expanding, producing with surface- and annealing treatments)

Be equipped with

- high density
- grain flow you need in terms of stress
- high surface quality and
- high dimensional accuracy

You reach an improvement of quality, for example

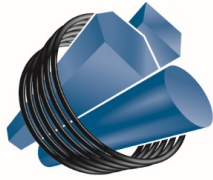
- Hardness,
- Ultimate breaking strength and
- Elastic limit

by cold work hardening.

The smooth surface results in connection with the high internal stressing of the by cold work hardening border zone into a higher vibration and fatigue limit. Furthermore there is an adherent phosphate-layer on the surface. This favours the running quality and good abrasion resistances. The choice of material depends primarily on the component shape, the necessary cold work hardening and the required mechanical properties of the finished part. Cold-formed pieces can also be heat-treated, tempered or case-hardening depending on the steel quality.

Chemical-composition:

	C	Si	Mn	P	S	Cr	Mo	Ni	Al
Minimum	0,34	0,00	0,50	0,00	0,00	1,40	0,15	1,40	0,020
Maximum	0,38	0,40	0,80	0,035	0,035	1,70	0,35	1,70	0,050



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Heat-treatment:

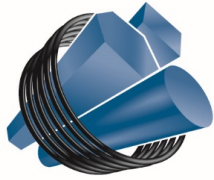
Hot-forming	Soft-annealing (+A)	Normal glow	Hardening in oil	Tempering
850 - 1100 °C	680 - 720 °C	840 – 880 °C	820 - 860 °C	480 - 650 °C

Mechanical-characteristics:

Hardness after tempering	$R_m \leq 840$ MPa	
Hardness after AC –tempering	$R_m \leq 720$ MPa	
Reduction	$Z \geq 58$ %	
	2 – 5 mm	5 – 40 mm
Hardness after AC –tempering and cold-drawing	$R_m \leq 710$ MPa	$R_m \leq 700$ MPa
Reduction	$Z \geq 60$ %	$Z \geq 60$ %
Hardness in quenched and tempered condition	700 – 1400 MPa	

Cold drawn and tempered condition:

Dimension [mm]	> 16 - 40	> 40 – 63	> 63 - 100
Elastic limit _{p0,2} [MPa]	≥ 900	≥ 800	≥ 800
Tensile strength R_m [MPa]	1100-1300	1000-1200	1000-1200
Flexural Strength A_s [%]	≥ 10	≥ 11	≥ 11



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Stock:

Bars:

- Bar length 3 – 4 m
- Tolerance data: EN 10278
- Technical delivery conditions: EN 10277, surface quality class2

Execution	Cross section in mm
	round
Tolerance	h9
+AC+C	9,95 - 40
+AC+SH	29 - 40