

ES Aktuell S

Name:

40 CrMnMo S 8-6

Material No.:

1.2312

Typical analysis in %:

C	Mn	S	Cr	Mo
0.4	1.5	0.07	1.9	0.2

As-supplied condition:

Quenched and tempered to a hardness of 280 to 325 HB (950 - 1100 N/mm²)

Characteristics:

The very best machinability, high compressive loads

General fields of application:

Plastic moulds, for which the main requirement is for machinability; mould frames and mould plates; mould frames for plastic and die casting moulds

Special note:

ES Aktuell S can be nitrided to improve its wear resistance.

ES Aktuell S is not suitable for graining or polishing. For this we recommend ES Aktuell EST, Mat.-No. 1.2311.

For material cross sections over 400 mm we recommend ES Aktuell 1000 or ES Aktuell 1200 for better full quenching and tempering.

Heat treatment data:

	Temperature	Duration	Cooling
Stress-relief annealing	max. 480°C	min. 4 h	furnace

We recommend stress-relief annealing for more than 30% machining before finish machining.

Physical characteristics:

Coefficient of thermal expansion: between 20 °C and:

10 ⁻⁶ x m	100	200	300	400	500	600	700 °C
m x K	12.2	12.9	13.5	13.9	14.2	14.5	14.8

Thermal conductivity:

W	20	350	700 °C
m x K	39.5	36.5	33.5

Normal working hardness: Used in the as-supplied condition

Continuous time-temperature-transformation diagram Tempering curve

