

Material specification sheet

Saarstahl - 46Si7

Material No.: Former brand name: International steel grades:

1.5024

BS:
AFNOR:
SAE:

Material group: Alloyed heat treatable steel

Chemical composition: (Typical analysis in %)	C	Si	Mn	P	S	N
	0,42	1,50	0,50	<0,050	<0,050	<0,007
	0,50	1,80	0,80			

Application: Alloyed heat treatable steel for hot formed springs as bellville washers, elliptic springs, buffer springs.

Hot forming and heat treatment:	Hot forming:	1100 - 850°C
	Hot deformation:	900 - 830°C
	Normalising:	850 - 880°C
	Soft annealing:	640 - 680°C
	Hardening:	850 - 880°C/Wasser
	Tempering:	430 - 500°C

Mechanical Properties: As hot rolled: ca. 270 HB
Soft annealed +A: max. 230 HB

Dimension [mm]	14 mm flat; 20 mm diameter
0,2% proof stress R_{p0,2} [N/mm²]	min. 1100
Tensile strength R_m [N/mm²]	1300 - 1500
Fracture elongation A_s [%]	min. 6
Reduction of area Z [%]	min. 30
Notch impact energy ISO-V [J]	min. 9