

Material specification sheet

Saarstahl - 21CrMoV5-11

Material No.:	Former brand name:	International steel grades:
1.8070	Atrix 231	BS: AFNOR: SAE:

Material group: High temperature constructional steel

Chemical composition: (Typical analysis in %)	C	Si	Mn	Cr	Mo	V
	0,21	0,35	0,40	1,35	1,10	0,30

Application: High temperature constructional steel for srews, nuts and for turbine forgings

Hot forming and heat treatment:	Hardening:	900-950°C/oil, air	930-950°C/water, oil
	Tempering:	680-740°C min. 2h	690-730°C
	Stress relieving:	580-650°C	-

Mechanical Properties:

Dimension [mm]	<250	<750
0,2% proof stress $R_{p0,2}$ [N/mm ²]	min. 550	min. 550
Tensile strength R_m [N/mm ²]	700 - 850	700 - 850
Fracture elongation A_5 longitudinal [%]	min. 17	min. 16
Fracture elongation A_5 tangential [%]	min. 15	min. 14
Fracture elongation A_5 transverse [%]	min. 13	min. 12
Notch impact energy ISO-V longitudinal [J]	min. 38	min. 31
Notch impact energy ISO-V tangential [J]	min. 24	min. 24
Notch impact energy ISO-V transverse [J]	min. 19	min. 16