

## Material specification sheet

### Saarstahl - 38MnVS6 (38MnSiVS5)

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

1.1303 (1.5231)

BS:  
AFNOR:  
SAE:

**Material group:** Dispersion hardening ferritic-pearlitic steel according to DIN EN 10267

Chemical composition: (Typical analysis in %)	C	Si	Mn	P	S	Cr	Mo	V	N
	0,34 0,41	0,15 0,80	1,20 1,60	<0,025	0,020 0,060	<0,30	<0,08	0,08 0,20	0,01 0,02

**Application:**

This high strength Mn-V-based steel is a low alloy high grade steel with good machinability for controlled cooling from working heat (BY-treatment, condition +P according to DIN EN 10267)

Applicable for automotive components as crankshafts, push rods, rotating bearings, axle journals, hubs and piston heads.

**Hot forming and heat treatment:** Furnace temperature before hot forming: 1220 - 1280°C  
Separate cooling at air: 1000 - 500°C  
Stress relieving (if necessary): <= 600°C

**Mechanical Properties:**

0,2% proof stress R <sub>p0,2</sub> [N/mm <sup>2</sup> ]	min. 520
Tensile strength R <sub>m</sub> [N/mm <sup>2</sup> ]	800 - 950
Fracture elongation A <sub>5</sub> [%]	min. 12
Reduction of area Z [%]	min. 25

**Microstructure:** Pearlite and 10 - 30 % ferrite