



SINOXX 4938 Steel

Designation by Standards

Brand Name	Ravne	Mat. No.	DIN	EN	AISI/SAE
SINOXX 4938	PK942	1.4938	X11CrNiMoN12 †	X12CrNiMoV12-3	-

Chemical Composition (in weight %)

C	Si	Mn	Cr	Mo	Ni	V	W	Others
0.11	0.18	0.70	11.75	1.75	2.50	0.33	-	-

Description

High strength steel with good oxidation resistance.

Applications

Special purpose steel.

Physical properties (average values) at ambient temperature

Modulus of elasticity [$10^3 \times \text{N/mm}^2$]: 200

Density [g/cm^3]: 7.7

Thermal conductivity [W/m.K]: 29.0

Electric resistivity [$\text{Ohm mm}^2/\text{m}$]: 0.86

Specific heat capacity [J/g.K]: 0.46.

Magnetisable: Yes

Annealing

Temperature: 660-690°C.

Hardening

Temperature: 1035-1065°C, oil.

Tempering

Ageing I: 640-690°C. Ageing II: 590-640°C.

Mechanical properties at ambient temperature

Condition: Hardened and tempered

0.2% proof stress: 760 N/mm^2

Tensile strength: 930 N/mm^2

Elongation: min. 14%

Reduction: min. 40%

Forging

Hot forming temperature: 1150-900°C.

Machinability

No data.

Forms manufactured: Please see the [Dimensional Sales Program](#).

Disclaimer

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