



SIQUAL M130 Steel

Designation by Standards

Brand Name	Ravne	Mat. No.	DIN	EN	AISI/SAE
SIQUAL M130	TORKA	-	-	-	4340

Chemical Composition (in weight %)

C	Si	Mn	Cr	Mo	Ni	V	W	Others
0.46	0.27	0.65	0.95	0.25	1.55	0.14	-	-

Description

SIQUAL M130 is a heat treatable, low alloy steel containing nickel, chromium and molybdenum. It is known for its toughness and capability of developing high strength in the heat treated condition while retaining good fatigue strength.

Applications

Permanently stressed machine, engine and vehicle parts when high strength and toughness are required. Typical applications are for structural use, such as aircraft landing gear, power transmission gears and shafts and other structural parts.

Physical properties (average values) at ambient temperature

Modulus of elasticity [$10^3 \times \text{N/mm}^2$]: 210

Density [g/cm^3]: 7.85

Soft Annealing

A full anneal may be done at 840°C followed by controlled (furnace) cooling at a rate not faster than 10°C per hour down to 300°C . From 300°C it may be air cooled.

Normalizing

Temperature: 890°C

Hardening

Harden from a temperature of 830°C followed by oil quenching.

Tempering

The temperature for tempering depends upon the strength level desired. Before tempering the alloy should be in the heat treated or normalized & heat treated condition. For strength levels in the 260 - 280 ksi range temper at 230°C .

Forging

Hot forming temperature: $1100\text{-}850^\circ\text{C}$.

Machinability

Machining is best done with this alloy in the annealed or normalized and tempered condition. It can be machined by all conventional methods..

Corrosion Resistance

This is a low alloy steel and not a corrosion resistant alloy. Protective coating should be used.

Welding

The alloy can be fusion or resistance welded. Preheat and post heat weld procedures should be followed when welding this alloy by established methods.

Cold working

The TORKA alloy may be cold worked, in the annealed condition, by conventional methods and tooling. It has good ductility.

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

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