



SIQUAL 7131 Steel

Designation by Standards

Brand Name	Ravne	Mat. No.	DIN	EN	AISI/SAE
SIQUAL 7131	EC80	1.7131	-	16MnCr5	5115, 5117

Chemical Composition (in weight %)

C	Si	Mn	Cr	Mo	Ni	V	W	Others
0.16	max. 0.40	1.15	0.95	-	-	-	-	-

Description

Alloyed carbon steel.

Applications

Higher stressed components - gears, shafts, crankshafts, connecting rods, cam shafts, etc.

Physical properties (average values) at ambient temperature

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

Density [g/cm^3]: 7.81

Thermal conductivity [W/m.K]: 41.0

Electric resistivity [$\text{Ohm mm}^2/\text{m}$]: 0.16

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

Coefficient of Linear Thermal Expansion $10^{-6} \text{ }^\circ\text{C}^{-1}$

20-100°C	20-200°C	20-300°C	20-400°C	20-500°C
11.1	12.1	12.9	13.5	13.9

Soft Annealing

Heat to 650-700°C, cool slowly.

Intermediate Annealing

Temperature: 650-680°C.

Normalizing

Temperature: 850-880°C.

Carburizing

Temperature: 880-980°C.

Case Hardening

Temperature: 780-820°C.

Core Hardening

Harden from a temperature of 860-980°C followed by water, oil or thermal bath quenching.

Tempering

Tempering temperature: 150-200°C.

Forging

Hot forming temperature: 1100-850°C.

Machinability

No data.

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

Disclaimer

The information and data presented herein are typical or average values and are not a guarantee of maximum or minimum values. Applications specifically suggested for material described herein are made solely for the purpose of illustration to enable the reader to make his own evaluation and are not intended as warranties, either express or implied, of fitness for these or other purposes. There is no representation that the recipient of this literature will receive updated editions as they become available.

Unless otherwise specified, registered trademarks are property of SIJ Metal Ravne company. Copyright 2016 by SIJ Metal Ravne d.o.o. All rights reserved. Contact our [Sales Office](#) for more information.