



## SIQUAL 1248 Steel

### Designation by Standards

Brand Name	Ravne	Mat. No.	DIN	EN	AISI/SAE
SIQUAL 1248	CK75	1.1248	CK75 †	C75S	1075

### Chemical Composition (in weight %)

C	Si	Mn	Cr	Mo	Ni	V	W	Others
0.75	0.25	0.70	-	-	-	-	-	-

### Description

This is one of the higher carbon steels used for high hardness in the fully hardened condition. In such condition the steel is more brittle than the lower carbon steels.

### Applications

Quenched and subsequently tempered steel for cold rolled springs strips, wire, forgings, cutting tools, etc.

### Physical properties (average values) at ambient temperature

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

Density [ $\text{g/cm}^3$ ]: 7.85

### Soft Annealing

Anneal at 926°C and slow furnace cool.

### Hardening

Hardens by cold working and heating and quenching.

### Tempering

Temper, after heating and quenching, at 350-700°C. However this steel is most often used in the fully hardened condition (not tempered) of Rockwell C 55 or so.

### Forging

Hot forming temperature: 1050-850°C.

### Machinability

The machinability of this steel suffers because of the high carbon content. It rates at 50% that of the AISI 1112 steel that is considered the 100% machinable base reference.

### Welding

SIQUAL 1248 steel is weldable by all of the welding methods. However with its higher carbon content it is important to use both pre-heat at 150 to 260°C and post-heat at 590 to 650°C practice per an approved welding procedure.

### Cold working

Cold working of SIQUAL 1248 is difficult even in the annealed condition. However it may be done by conventional methods but requires more force than for the low carbon steels.

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

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