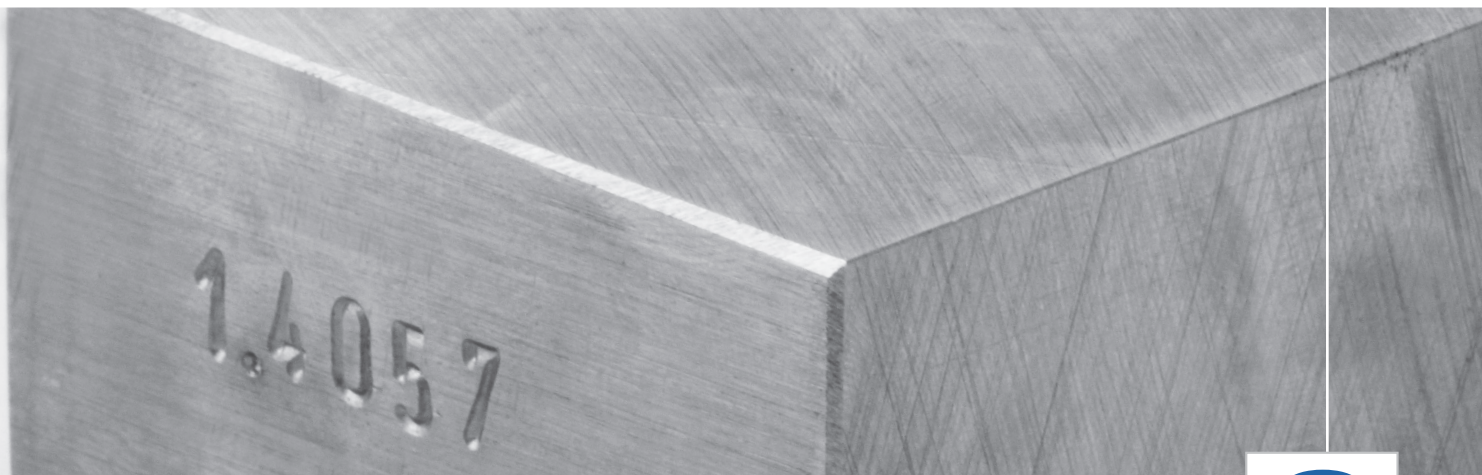


C 0,12 – 0,22 / Cr 15,0 – 17,0 / Ni 1,5 – 2,5
1.4057 / X17 CrNi 16-2 / DIN EN 10088 / DIN 17440
AISI 431 / BS 431 S 29 / SIS 2321*

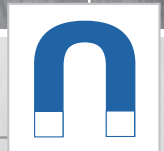


Applications

Mechanical engineering; automotive-, transportation-, aviation- and military-engineering; chemical and petro-chemical industry.

Processing techniques

Machining; open-die and drop forging.



Corrosion resistance ●●●○○

1.4507 is the material of choice if martensitic chromium steels are not adequate with regard to their resistance.

Mechanical properties ●●●○○

A tensile strength of up to approx. 1300 N/mm² can be achieved by means of heat treatment. Owing to the 475 °C-brittleness, the temperature range of between 425 and 525 °C should be avoided. To prevent hardening cracks, tempering must be performed as shortly after the hardening as possible. Commercial grade QT 800 (800 – 950 N/mm²).

Forging ●●○○○

Slow heating to approx. 850 °C followed by more rapid heating to a forging temperature of approx. 1100 °C. Then slow cooling (e.g. furnace cooling).

Welding ●○○○○

Weldable to a limited extent using manual arc and TIG welding processes because a region of hardness must be expected beside the weld. Because of this hard region, tempering or, more favourably, repeated quench hardening is necessary.

Machining ●○○○○

The machining is practically identical to that with high-grade steels of similar strength.

Note:

The material 1.4057 can be polished.