

COMPARABLE STANDARD

UNI	EURONORM	W Nr	DIN	AFNOR	AISI/SAE	BS
40NiCrMoV16KU	40NiCrMoV16	(1.2766)	35NiCrMo16	40NCD16	–	–

COMPOSITION

C	Si	Mn	Ni	Cr	Mo	V
0,43	0,3	0,7	3,7	1,7	0,4	0,1

CHARACTERISTICS OF THE PRODUCT

This steel is characterized by extremely good high-temperature toughness and is excellent for deep hardening. After hardening it offers good polishability.

PRODUCT APPLICATIONS

This steel is particularly suitable for the manufacture of dies for hammers and rams, forming dies and punches, cutters for shearing billets, scrap and thick plates, moulds for plastics and for the manufacturing of mechanical components. It is used also for bending tools, for punching and pressing (cutlery and goldsmithing) and for hot and cold coining.

DELIVERY CONDITION

Annealed to $HB \leq 260$.

HEAT TREATMENT

The steel is supplied in the annealed condition for optimum machinability. After the operations of rough-machining (and possibly stress relieving), it is hardened and tempered for the characteristics required by the application.

Soft annealing: heating to $640 \div 650^\circ\text{C}$, holding at temperature, furnace cooling to 550°C ($10^\circ\text{C}/\text{hour}$), then cooling in stationary air.

Stress relieving: after rough-machining, heating to 600°C , holding at temperature, furnace cooling to 500°C , then cooling in stationary air.

Hardening: preheating to $600 \div 650^\circ\text{C}$, austenitization at $850 \div 880^\circ\text{C}$. air-quenching.

Tempering: heating to $550 \div 650^\circ\text{C}$, holding at temperature.

MECHANICAL CHARACTERISTICS

TEMP °C	180	200	300	400	500	600
DUREZZA HRC	54	53	50	47	45	42

