

COMPARABLE STANDARD

UNI	EURONORM	W Nr	DIN	AFNOR	AISI/SAE	BS
X40Cr14KU	X40Cr13	1.2083	X40Cr13	Z40C14	420C	–

COMPOSITION

C	Si	Mn	Cr	V
0,40	0,8	0,5	14,5	0,3

CHARACTERISTICS OF THE PRODUCT

This Cr-steel is corrosion resistant. It is produced by electroslag remelting (ESR). It offers good machinability and after heat treatment it has good dimensional stability and excellent polishability. It can be photoengraved and welded with appropriate precautions.

PRODUCT APPLICATIONS

It is used for molds requiring excellent polishability and resisting attacks by corrosive plastics materials.

DELIVERY CONDITION

Annealed to $HB \leq 215$.

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 $750 \div 850^{\circ}\text{C}$, holding at temperature, furnace cooling to $600 \div 650^{\circ}\text{C}$, then cooling freely in air.

Stress relieving: after rough machining. heating to 650°C , equalizing and holding for a minimum of 2 hours, furnace cooling to 500°C , then cooling in air.

Hardening: preheating at $650 \div 850^{\circ}\text{C}$, austenitization at $1000 \div 1040^{\circ}\text{C}$, air, oil-quenching or in thermal bath at $450 \div 550^{\circ}\text{C}$.

Tempering: heating to the temperatures given in the chart corresponding to the desired hardness, then air-cooled. Two tempering steps are necessary.

MECHANICAL CHARACTERISTICS

TEMP °C	200	300	400	500	600
DUREZZA HRC	51	50	51	48	36

