

RDC 2V (Multibloc HQ)

Short name	X40CrMoV5-1
No.	1.2344 (ESR + Micro 900 / BG)
AISI	H13

Typical chemical composition, %	C	0.40
	Si	1.00
	Mn	0.40
	Cr	5.00
	Mo	1.30
	V	1.00

PROPERTIES AND USES

CrMo-alloyed hot-work steel with improved high-temperature strength and wear resistances at elevated temperature. Well suited for through-hardening and tempering. Used in tools for extruding light alloys, such as mandrels, pressure discs, headers, centering and shearing mandrels, dies, liners etc. Also for injection molds, cores and ejectors for light alloy processing. For dies, die inserts, punches and mandrels in forging machines as well as for dies and punches in the manufacture of bolts, nuts and rivets. RDC 2V is also used for the construction of plastic molds. The steel is particularly suited for

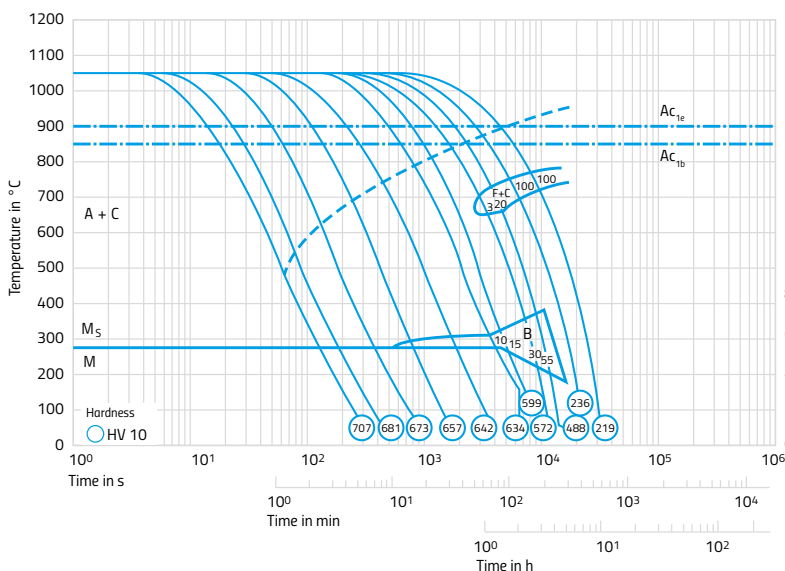
bath nitriding (Tenifer treatment) and can be water cooled. Recommended pre-heating temperature for hot-work tools: 250–350 °C.

RDC 2V (Multibloc HQ) produced by ESR (Electro-Slag Remelting) and our specialized forging and heat-treatment technology Micro 900 / BG shows supreme toughness and extremely homogeneous mechanical and physical properties. Furthermore, a particularly high cleanliness ensures an excellent polishability.

HOT WORKING AND HEAT TREATMENT

Forging	1150–850 °C (2100–1560 °F)
Soft annealing	800–820 °C (1470–1510 °F) 4 hrs/furnace cooling
Brinell Hardness in the annealed condition	Max. 225 HB
Stress relieving	650 °C (1200 °F)
Preheating for hardening	850 °C (1560 °F)
Hardening temperature	1020–1060 °C (1870–1940 °F)
Quenching	Oil, air or salt bath of 450–500 °C (840–930 °F)
Tempering	According to tempering curve
Time	1 hr/25 mm (1 hr/in.)

CONTINUOUS TTT CURVE



TEMPERING CURVE (APPROX. VALUES)

