

Q10 can be used with excellent results for applications with high levels of thermal and mechanical stress

- Forging die blocks
- Tools for the extrusion industries; Stems, Innerliners, Sleeves, Die holder, Mandrels, Dummy blocks ...
- Hot forming tools

A special grade of hot working tool steels

Q10

Q10 in comparison

Material	DIN	Analysis in %						Properties	
		C	Si	Mn	Cr	Mo	V	Toughness	Heat resistance
USN 1.2343 (H11)	X 38 CrMoV 5-1	0,38	1,00	0,40	5,20	1,20	0,40		
USD 1.2344 (H13)	X 40 CrMoV 5-1	0,40	1,00	0,40	5,20	1,30	1,00		
RPU 1.2367	X 38 CrMoV 5-3	0,38	0,40	0,40	5,00	2,80	0,60		
Q10		0,36	0,25	0,40	5,20	1,90	0,55		
		Lowest level of trace elements							

Heat treatment:

Annealing	Temperature: 820 – 840°C. Holding time: 4 – 6 h; Slow furnace cooling
Hardness after annealing	max. 220 HB
Stress relieving	Temperature: appr. 650°C. Holding time: 2–4 h, Slow cooling
Hardening	Temperature: 1010 – 1020°C. Quenching: air, hot bath at appr. 540°C, oil or polymer (when oil or polymer, interrupt at 230 – 280°C), or vacuum hardening.
Hardness obtainable	appr. 54 HRC
Tempering	Temperature: 540 – 680°C. To increase toughness, temper 3 times.
Nitriding	Possible
Preheating before use	150 – 350°C – depending on application.

»MORE VALUE«

- Innovative tool steels to guarantee a solid foundation
- Proprietary nitriding to optimize wear resistance



- Heat treatment technology to ensure the highest quality
- Application experience and machining services to provide the total package

Q10

Q10 is an excellent general purpose hot work tool steel. Developed for the most demanding applications. It has **exceptional mechanical** and **heat resistance properties**. **Q10** was developed as an **improvement** to the traditional hot work tool steels. Offering both **increased toughness** and **improved heat resistance**, improving the efficiency of your tooling, resulting an increase in productivity and thereby reduction of costs.

To give the best possible mechanical properties, **Q10** is manufactured with the **lowest level of trace elements**.

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Lowest level of trace elements

