

## 1.2343

Material no.: 1.2343

HASCO colour code: red

Abbreviated DIN name: X 37 CrMoV 5-1

Chemical analysis (%):

| C    | Si  | Cr  | Mo  | V   |
|------|-----|-----|-----|-----|
| 0,37 | 1,0 | 5,3 | 1,3 | 0,4 |

Hardness when supplied: soft-annealed to max. 220 HB (~770 N/mm<sup>2</sup>)

### Characteristics

#### Material properties:

High-alloy hot-work steel with high resistance to changing temperatures and good heat resistance. High thermal conductivity and toughness.

#### Uses:

Cavity plates and inserts for the plastics and die-casting industry (e.g. where nitriding is to be carried out with high core strength).

### Physical properties

Thermal expansion coefficient (10<sup>-6</sup>·m)/(m·K)

| 100  | 200  | 300  | 400  | 500  | 600  | 700  |
|------|------|------|------|------|------|------|
| 10,8 | 11,4 | 11,8 | 12,0 | 12,4 | 12,8 | 12,9 |

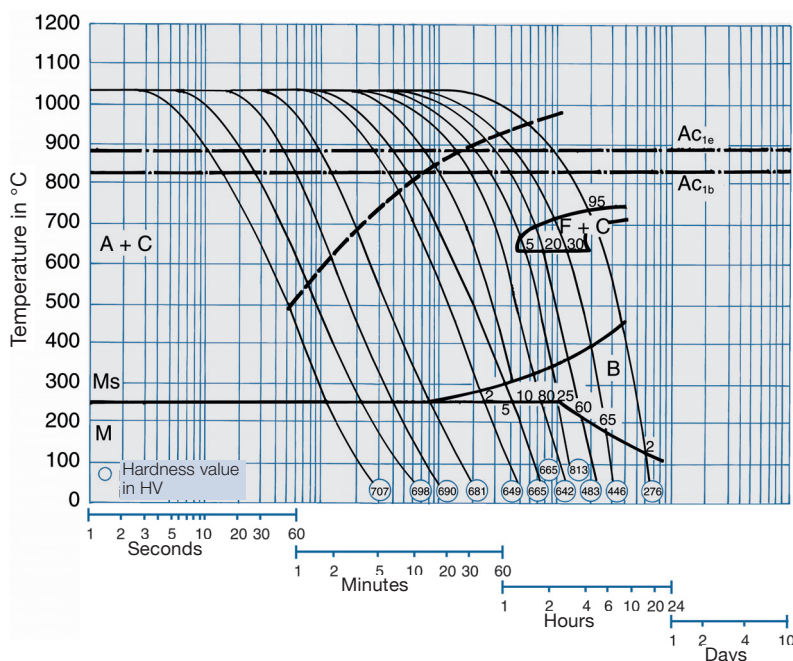
Thermal conductivity W/(m·K)

| 20   | 350  | 700  |
|------|------|------|
| 25,3 | 27,2 | 30,5 |

### Remarks

- Polishing:** Highly suitable for polishing due to homogenous structure. For high-gloss polishes, use 1.2343 in ESR quality.
- Graining:** Well suited, for fine structures use 1.2343 in ESR quality.
- Nitriding:** Increases wear resistance and prevents sticking of insert and component.
- Hardening:** At 1000°C – 1030°C  
Details can be taken from the time-temperature conversion and tempering charts. The most suitable heat treatment for the relevant work piece should be fixed by the hardening shop. The hardness should be specified by the hardening shop and checked on delivery.
- Soft annealing:** 800°C – 840°C, approx. 4 h
- Stress-relief annealing:** To eliminate residual stress after coarse machining at approx. 600°C – 650°C, approx. 4 h with slow heating and furnace cooling.
- Normal working hardness:** 30 - 53 HRC

### Time-temperature conversion chart



### Tempering chart

