

## 1.2085

**Material no.:** 1.2085

**Abbreviated DIN name:** X 33 CrS 16

**Chemical analysis (%):**

C	Si	Mn	Cr	S
0,3	0,5	1,0	16,0	0,1

**HASCO colour code:** black / green / green

**Hardness when supplied:** annealed to max. 280 - 325 HB (~950 - 1100 N/mm<sup>2</sup>) depending on x-section

### Characteristics

#### Material properties:

Corrosion-resistant, pre-hardened mould steel with high strength. Good machinability and high strength without subsequent heat treatment.

#### Uses:

Cavity and frame plates in injection moulding and die-casting tools. Further applications in mould design for metal and plastics processing, where corrosion resistance is required due to aggressive plastics or damp climatic conditions.

### Remarks

- Polishing:** Technical polishing possible.
- Graining:** Possible to a limited extent, but not usual.
- Nitriding:** Possible by all known processes, but not usual.
- Hardening:** Is fundamentally not usual with this material.
- Soft annealing:** Is fundamentally not usual with this material.
- Stress-relief annealing:** To eliminate residual stress after coarse machining at max. 480°C, approx. 4 h with slow furnace cooling. At higher temperatures, the surface will scale.

### Physical properties

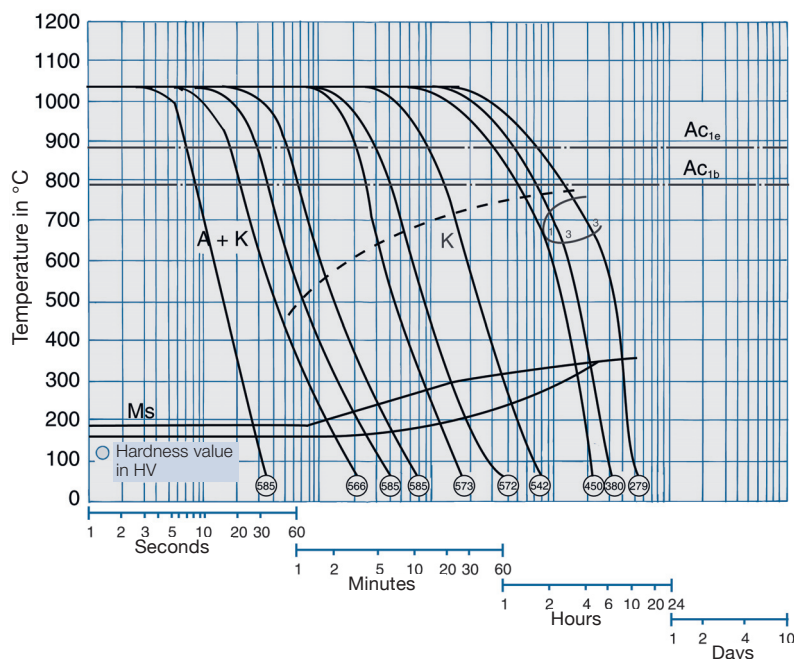
**Thermal expansion coefficient**  
(10<sup>-6</sup>·m)/(m·K)

100	200	300	400	500	600	700	°C
10,5	11,0	11,0	12,0				

**Thermal conductivity**  
W/(m·K)

20	350	700	°C
17,2	21,0	24,7	

### Time-temperature conversion chart



### Tempering chart

