

## 1.7380

## 10CrMo9-10

Designation (DIN 17 006) 10CrMo9-10  
 Similar AISI materials (UNS)  
 As-delivered condition  
 Microstructure (as deliv. cond.)

(\* F=Ferrite Ce=Cementite Ca=Carbides A=Austenite)

### Chemical Composition

C%	Si%	Mn	P%	S%
0,08-0,14	≤ 0,50	0,40-0,80	0,030	0,025
Cr%	Mo%	Ni%	V%	Others%
2,00-2,50	0,90-1,10	-	-	Cu ≤ 0,30

### Mechanical properties at room temperature

Hardness Brinell HB30	Yield stress ≥ N/mm <sup>2</sup>	Tensile strength N/mm <sup>2</sup>	Elongaion (L <sub>0</sub> =5d <sub>0</sub> ) ≥ %	Impact value ISO-V (DVM) ≥ J
130-175	290	480-630	18	40

### Heat treatment

Hot working °C	Soft annealing °C	°C	Hardening		Temper °C
			Oil	Air	
1100-850	650-750 <sup>2)</sup>	920-980 <sup>6)</sup>	•	•	680-760

<sup>1)</sup> Normalizing

<sup>4)</sup> Normalized and tempered

<sup>2)</sup> Stress relieving

<sup>5)</sup> ∅ ≤ 100mm

<sup>3)</sup> Values for longitudinal samples bars ≤ 60 mm ∅

<sup>6)</sup> Austenize

### Mechanical and physical properties above ambient temperature

0,2% Yield stress ≥ N/mm <sup>2</sup>					
200°C	300°C	350°C	400°C	450°C	500°C
245	220	210	200	190	180

Hours	Creep limit N/mm <sup>2</sup> at °C			
	450°C	500°C	550°C	600°C
1.000 h	-	206	118	64
10.000 h	240	147	83	44
100.000 h	166	103	49	22

Hours	Creep rupture strength N/mm <sup>2</sup> at °C			
	450°C	500°C	550°C	600°C
10.000 h	306	196	108	61
100.000 h	221	135	68	34