

Quality	X33CrS16	Supply conditions:
According to standards		Quenched and tempered
Number	1.2085	

Chemical composition						
C%	Si%	Mn%	P%	S%	Cr%	Ni%
	max	max	max			max
0,28-0,38	1,00	1,40	0,030	0,050-0,100	15,00-17,00	1,00

Temperature °C				
Hot-forming	Preheating	Quenching	Tempering	Tempering
1050-850	800, pause, then ▲	▲ 1000-1050 oil or polymer (HRC 48)	150-200	see table
Soft annealing			Pre-heating welding	Stress-relieving after welding
760-780 slow cooling in furnace (HB max 230)				not recommended
			Ac1	Ms

the symbol ▲ indicates the temperature rise to°C ▲

Tempering table								
HRC	48	48	47	46	47	47	36	30
N/mm ²	1640	1640	1580	1520	1580	1580	1110	950
Tempering to °C	100	200	300	400	450	500	550	600

Modulus of elasticity	GPa	212
Thermal expansion	10 ⁻⁶ • K ⁻¹	11
Thermal conductivity	W/(m.K)	18
Specific heat capacity	J/(Kg.K)	460
Specific electric resistivity	Ohm•mm ² /m	0.65
Electrical conductivity	Siemens•m/mm ²	1.54
Density	Kg/dm ³	7.65
Testing at	°C	20
		100
		200
		300
		400
		500

Martensitic stainless steel resistant to corrosion

- magnetizable steel
- good mechanical resistance and toughness
- excellent for manufacturing of components that have to resist to aggressive plastics
- good tool machinability thanks to its sulphur content
- suitable for working in wet atmosphere and moisture
- suitable for polishing, wear and corrosion proof
- very stable dimensionally during heat treatment
- applications: *dies and die-blocks in the plastics industry such as PVC*