

## SM - 2312

### Plastic Mould Steel

	C	Mn	Si	Cr	Mo	S	P
■ Typical analysis	0,38	1,50	0,30	2,00	0,20	0,07	
■ Chemical composition as per SEL	0,35	1,40	0,30	1,80	0,15	0,05	
	0,45	1,60	0,50	2,00	0,25	0,10	0,030 Max

Figures in % by mass.

■ Standards	
W.Nr	1.2312
DIN EN ISO 4957	X40CrMnMoS8-6
AFNOR	(40CMD8S)
AISI/SAE	~ P20 + 5
BS	~ P20 + 5

■ Supply Conditions	
Hardened and Tempered HB	280

#### ■ Characteristics and applications up to 400mm

Steel with good hardening penetration and good tool workability, also in hardened and tempered condition, thanks to the high level of sulphur.

The main application is for plastic material dies also in large sizes, on condition that surface finish properties are not too excessive.

It is also used for plates, dies box, dies of light alloys with low melting point.

It is steel suitable for nitriding (around 800 HV) and chrome planting.

■ Heat Treatment		
Annealing	Temperature:	Heat to 720-750 °C
	Duration:	For 2 - 4 h
	Cooling:	Furnace cool
Stress relieving	Temperature:	Up to 560-600 °C
	Duration:	For 2 - 4 h
	Cooling:	Furnace or steel air cooling
Hardening	Preheating:	600-650 °C
	Hardening:	840-870 °C
	Cooling:	in oil
	Hardening:	HRC 51
Tempering	580-650 °C for 1 hour for 25mm of thickness minimum 2h	

■ Critical points	
Ac1	740° C
Ms	310° C

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