



# E STEEL SDN BHD (891338-A)

NO 3, Lorong Sungai Puloh 7/KU 6,  
Kawasan Perindustrian Sungai Puloh, 42100 Selangor D.E  
Tel : 03-3292 8686 / 32928666 / 32928777  
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## 2316 STAINLESS STEEL

NEAREST EQUIVALENT DIN 2316 (Code X36CrMo17) AISI420, JIS SUS420M, S136

### CHARACTERISTIC

1.2316 plastic mold steel, supplied from stock in rounds, flats and plate.

1.2316 is a chrome-molybdenum steel with improved corrosion resistance properties, 1.2316 possesses good polishability, toughness, heat resistance and wear-resistant properties. It is often used for tools for processing chemically aggressive plastic materials (e.g. PVC).

1.2316 is a martensitic stainless chromium steel with uniform hardness in all dimensions, it is easy to machine, high surface finish and polishability. 1.2316 is commonly used for plastic moulds, and offers a higher corrosion resistance than 1.2083. It can be used with for the manufacturing of chemically aggressive materials like PVC and plastics containing abrasive fillers.

This grade is not suitable for nitriding and chrome plating because of the high chrome content.

### CHEMICAL COMPOSITION (%) DELIVERY CONDITION

C	S max	P max	Si	Mn	Cr	Mo
0.4	0.002	0.020	0.350	0.90	16	09

### Mechanical properties

1.2316 is delivered **quenched and tempered to 280 – 325 HB (29 – 33 HRC)**.

Hardness	YS 0.2		UTS		Elongation	Reduction of area	Elastic modulus	
	MPa	ksi	MPa	ksi			GPa	ksi
300	855	124	1020	148	13	38	205	29733



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Compared grades(based on usage):

GB	ASTM	DIN	ASSAB
3Cr17NiMnMo	420	1.2316	RAMAX

Typical applications of 2316 / S136 :

Injection mould for plastics, die-casting moulds, moulding of corrosive material (PVC), extrusion tools.

**Annealing 1.2316 ( RAMAX ) :**

810 - 830 °C, Hardness after annealing : Max. 235 HB

**Stress relieving 1.2316 / RAMAX :**

Soak at 600 - 650°C, furnace cool.

**Hardening 1.2316 , RAMAX :**

Heat to 1020 - 1040 °C. Quench in oil at Oil at 500 - 550°C. Hardness after quenching : 48 - 52 HRC

**Tempering:**

Tempering 1.2316 mould steel						
Tempering °C	100	200	300	400	500	600
HRC	49	47	46	46	47	32