

## TECHNICAL SHEET

## 1 Comparison Standards

W.Nr	DIN	JIS equivalent	AISI/SAE	AFNOR	BS	UNI
1.2316 HH	-	-	-	-	-	-

## 2 Chemical Composition

C	Si	Mn	P (max)	S (max)	Cr	Mo	Ni	Supply Condition	Supply Hardness (HB)
≤ 0.28	≤ 0.30	≤ 0.90	0.08	0.003	14.00	1.00	≤ 0.70	Q & T	360 - 400

## 3 Main Characteristics and Applications

1.2316HH is a pre-hardened stainless steel that is known for its toughness, polishability, machinability, and corrosion resistance. This steel is often used in plastic molds because it can help to reduce maintenance costs and improve production performance.

## Applications:

- PVC Moulding
- Household Appliances
- Plastic Moulds and Dies for Plastic Extrusion

## 4 Physical Properties ( Reference Values )

	20°C	100°C	250°C	500°C
Thermal expansion coefficient (10 <sup>-6</sup> /K)	10.5	10.5	10.9	11.7
Thermal Conductivity (W/mk)	23.4	23.7	24	-
Young modulus (Kn/mm <sup>2</sup> )	218	213	205	180

## 5 Production Route

EAF - LF - VD - Forging - Rolling - Heat treatment QT

## 6 Microstructure



1.2316

50X Martensitic structure with carbides



1.2316HH (MOD)

50X Homogenous microstructure, without carbides

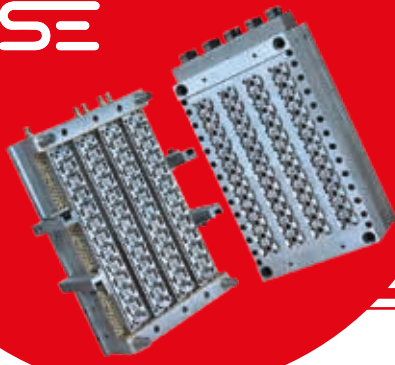
## 7 Heat Treatment

TREATMENT	TEMPERATURE	HOLDING TIME (HT)	COOLING	COMMENTS
Annealing	Heat to 770 - 820 °C	Min. H.T. for 2 minute /mm	Furnace up to 600°C than in air	-
Stress relieving	Heat to 550 - 600 °C	Min. H.T. for 2 minute /mm	Air or Furnace	It is recommended to eliminate the residual stresses induced by mechanical working after machining
Hardening	Preheating to 600 - 700 °C Austenitizing to 990 - 1040 °C	Min. H.T. for 1 minute /mm	Polymer or gas air	Quenched hardness 50 HRC
Tempering	-	-	Air	To be performed after hardening, conduct a second tempering at a temperature no more than 30 °C below the initial tempering temperature



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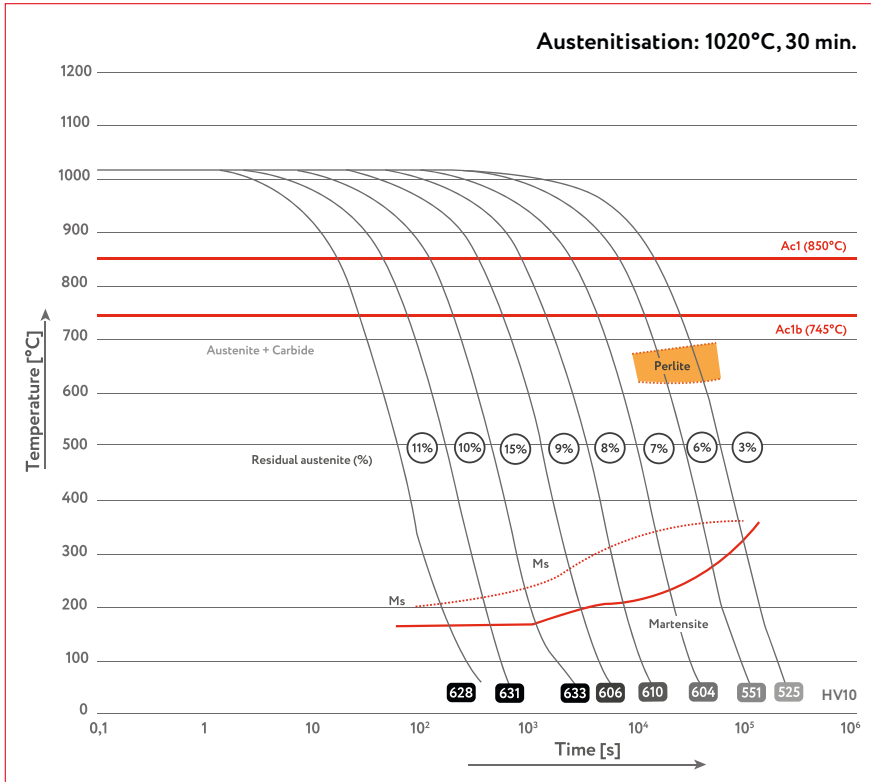


# 1.2316HH (MOD)

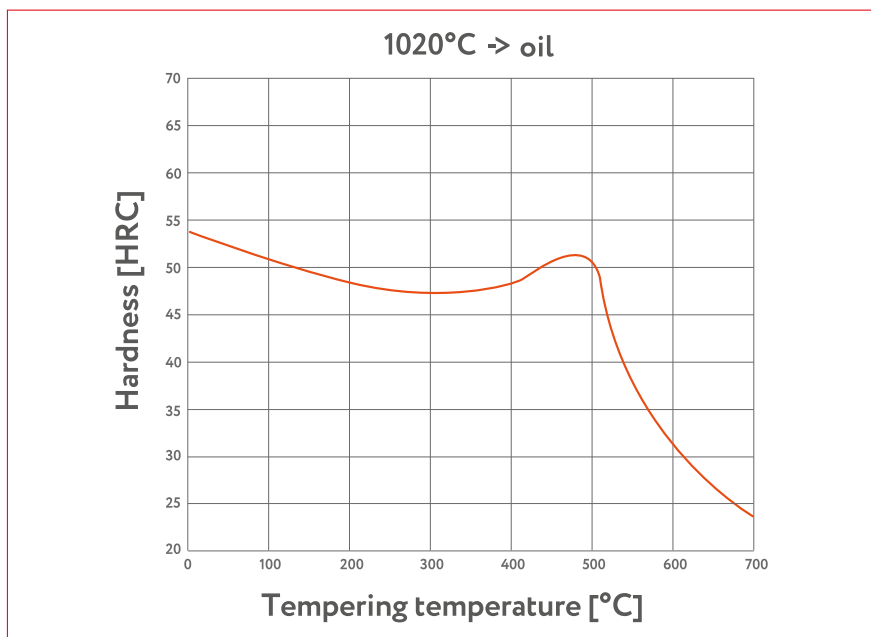
## Plastic Mould Steel

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#### 8 C.C.T. Curve



#### 9 Tempering Curve



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