



Hot Working Tool Steel

TG H-11 (DIN-1.2343) & TG H-11M (DIN-1.2343M)



Steel Properties : High hot tensile strength and toughness. Good thermal to hot cracking. Can be water-cooled to a limited extent.

Applications : Hot-work tool steel for universal use. Pressure casting dies and metal extrusion tools for processing light metals, forging dies, moulds, screws and barrels for plastic processing, shrink rings, hot-shear blades.

Similar Steel Grade :

CHINA	BRAZIL	AUSTRIA	GERMANY		SLOVANIA	JAPAN	TAIWAN	CHEZ. REP
TG	VILLARES	BOHLER	DEW	GRODITZ	RAVNE	SANYO	GLORIA	POLDI
H11	TENAX 300	W300	1.2343	1.2343 VICTORY	UTOP M01-EFS	QDA61	GMH11	TLH EFS

Chemical Composition: (%)

Indian	Chemical Analysis Typical Value % (Min - Max)											Delivery Condition	
IS	C	S	P	Si	Mn	Ni	Cr	Mo	V	W	other	Heat Treatment	Hardness
H11	0.33-0.41	≤0.030	≤0.030	0.80-1.20	0.20-0.50	***	4.80-5.50	4.70-5.20	1.10-1.50	***	***	Annealed	≤Hb235
H11M	0.47-0.52	≤0.030	≤0.030	0.80-1.20	0.20-0.50	***	4.80-5.50	4.70-5.20	1.10-1.50	***	***	Annealed	≤Hb235

Production process:

Round Bar :

EAF → LF → VD → ESR → (5TONS HAMMER) → [Forged Annealed & Turned : φ81.0-810mm
Hot Rolled & Annealed Peeled : φ14.5-80.0mm
Cold Drawn / Centreless Ground : φ2.0-14.4mm] → ANNEALED CONDITION

Flat Bar :

EAF → LF → VD → ESR → FORGED → HOT ROLLED (850) → ANNEALED CONDITION

UT STANDARD :
SEP 1921, (DEC.84)E/e

REDUCTION RATIO :
As 1:4 or 1:5

DELIVERY STATUS :
In Annealed Condition.

SIZE : Round

Cold Drawn/Ground Bar	Hot Rolled Annealed & Peeled Bar	Forged + Annealed + Turned Bar
φ2.0 - 14.4mm	φ14.5 - 80.0mm	φ81.0 - 810.0mm

SIZE : Hot Rolled Flat Bars / Sand Blasted & Machined Straight

Thickness	Width
5mm - 410mm	10mm - 810mm

Heat Treatment Condition :

Quenching temperature : 1020-1050°C

Cooling Medium : air-cooling

Tempering temperature : 550-650°C

Tempering times : 2Times, the tempering temperature in the second time should be lower than in first time

Tempering Hardness : 47-48HRC.

Tempering °C	500°C	550°C	600°C
HRC	HRC56	HRC54	HRC50