

1045 flat steel bar stockholders and suppliers from china. OTAI SPECIAL STEEL Supply in 1045 steel round bar, plate, sheet, square bar, flat bar, pipe since 2007.our steel stock more 1000tons

1045 flat Steel bar is a high quality Quenched and Tempered Carbon Structural steel, It belong to the high quality low carbon, Low carbon chromium, molybdenum, nickel case hardening steel. Oil Quenched & Tempered Hardness is 28-34 HRC. AISI 1045 steel Annealing delivery hardenss less than 250HB.EN3 With a medium carbon content range.

Related Specifications ASTM A29/A29M DIN EN 10083/3 JIS G4053 GB China steel standard

Form of Supply

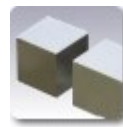
AISI 1045 Carbon steel, we can supply the round bar, steel flat bar, plate, hexagonal steel bar and steel square block. AISI 1045 steel Round bar can be sawn to your required lengths as one offs or multiple cut pieces. 1045 carbon steel Rectangular pieces can be sawn from flat bar or plate to your specific sizes. Ground tool steel bar can be supplied, providing a quality precision finished bar to tight tolerances.



Round



sheet



Square



Plate

Chemical composition

C (%)	0.43~ 0.50	Si (%)	0.60~0.90	Mn (%)	0.60~ 0.90	P (%)	0.040 max
S (%)	0.050 max						

Equivalent Of 1045 Carbon Steel | flat steel bar

USA	Germany	China	Japan	France	England	Italy	Poland	ISO	Austria	Sweden	Spain
ASTM/AISI/UNS/SAE	DIN,WNr	GB	JIS	AFNOR	BS	UNI	PN	ISO	ONORM	SS	UNE
1045 / G10450	C22E Ck22 / 1.1151	45	S45C	C45E / XC48	C40E 080M46					1660	

Heat treatment Related

① Annealing of 1045 Carbon structural steel flat bar

Heat to 800° C – 850° C (1472° F – 1562° F)

Hold until the temperature is uniform

Cool in furnace.

② Hardening of 1045 Carbon structural steel flat bar

Heated slowly to 820° C – 850° C , Then after adequate soaking at this temperature quench in water and temper.. Temper as soon as tools reach room temperature.

③ Forged of 1045 medium Carbon structural steel bar

Forged at forged temperature 850° C – 1250° C, normal small size steel bar and plate hot rolled is ok.

Mechanical Properties of aisi 1045 flat steel bar

The mechanical properties of annealed AISI 1045 carbon steel are outlined in the table below

Tensile strength σ_b (MPa): ≥ 600 (61)

Yield strength σ_s (MPa): ≥ 355 (36)

Elongation δ_5 (%): ≥ 16

Reduction of area ψ (%): ≥ 40

Impact energy Akv (J): ≥ 39

Impact toughness α_{kv} (J / cm²): ≥ 49 (5)

Hardness: no heat treatment, $\leq 229\text{HB}$; annealed steel, $\leq 197\text{HB}$

Sample size: Sample size is 25mm

Applications of medium carbon flat steel bar 1045

AISI 1045 steel flat bar is widely used for all industrial applications requiring more wear resistance and strength. Typical applications as Gears Pins Rams

Shafts Rolls Sockets Axles Spindles Worms Bolts Ratchets Light gears Studs Crankshafts Guide rods Connecting rods Torsion bars Hydraulic clamps

Regular size and Tolerance of medium carbon 1045 flat steel bar

Steel round bar: Diameter \varnothing 5mm - 3000mm

Steel plate/ steel flat bar: Thickness 5mm - 3000mm x Width 100mm - 3500mm

Steel Hexagonal bar: Hex 5mm - 105mm

Others EN3 steel have not specified size, pls [contact](#) our experienced sales team.

Processing

DIN W N-R EN3 carbon steel round bar and flat sections can be cut to your required sizes. EN3 carbon steel ground bar can also be supplied, providing a high quality tool steel precision ground tool steel bar to your required tolerances. DIN W N-R EN3 steel is also available as Ground Flat Stock / Gauge Plate, in standard and nonstandard sizes.

Contact our experienced sales team to help you with your 1045 carbon steel questions and enquiry by [Email](#) or Telephone. The questions will be reply in 24 hours.

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