



EN10083-2: C45, C45E steel works/steel structures/steel machining parts

The chemical composition of EN10083-2: C45 (material NO.: 1.0503)

C: 0.42-0.5, Si: 0.4, Mn: 0.5-0.8, P: 0.045, S: 0.045, Cr: 0.4, Mo: 0.1, Ni: 0.4

The chemical composition of EN10083-2: C45E (material NO.: 1.1191) steel:

C: 0.42-0.5, Si: 0.4, Mn: 0.5-0.8, P: 0.03, S: 0.035, Cr: 0.4, Mo: 0.1, Ni: 0.4

Mechanical Properties in quenching and tempering condition (room temperature):

C45: diameter ≤ 16 mm or thickness ≤ 8 mm:

Tensile strength σ_b (MPa): 700-850

Yield strength σ_s (MPa): ≥ 490

Elongation δ_5 (%): ≥ 14

C45: 16mm < diameter ≤ 40 mm or 8mm < thickness ≤ 20 mm:

Tensile strength σ_b (MPa): 650-800

Yield strength σ_s (MPa): ≥ 430

Elongation δ_5 (%): ≥ 16

C45: 40mm < diameter ≤ 100 mm or 20mm < thickness ≤ 60 mm:

Tensile strength σ_b (MPa): 630-780

Yield strength σ_s (MPa): ≥ 370

Elongation δ_5 (%): ≥ 17

Recommended temperature in heat treatment: Normalizing: 850°C,

Quenching: 840°C, tempering 600°C

C45 steel is a kind of high strength, high quality carbon steel. It is usually used in normalized condition because of weak harden-ability. It will be tempered when it has high requirements for mechanical properties. C45 steel is usually made to components which need high strength, such as gear, shaft, piston pin, etc. It is also used for mechanical parts, forging, stamping parts, bolts, nuts and pipe joints.

Shanghai Katalor Enterprise is located in Pudong district of Shanghai city. It is only 30 minutes from Pudong International airport to our company. If you need C45 or C45E steel rod/round bar, steel plate, steel pipe, please check with us. We have plenty of stock. And also we can provide the process and machining service. So we can offer the C45 and C45E steel works, steel structures and steel machining parts, we sincerely invite you to visit us. We will pick you up at the airport if you tell us your schedule.



Shanghai Katalor Enterprises

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Shanghai Katalor Enterprises Co., Ltd located in Shanghai of China, is specialized in manufacturing and exporting steel and casting products. Based on the domestic rich product resources and professional research on the international market, Katalor's service has already spread to many countries in Europe, America, Southeast Asia, Middle East, South America, Africa, and so on.

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