

C60

Quenched and tempered steels

Material no.	1.0601
according to	DIN EN ISO 683-1
Tensile strength class	C

General

Quenched and tempered steels are used for components subjected to high stresses where the combination of high strength, wear resistance and toughness is particularly important. We supply high-grade steel as well as stainless steel according to DIN EN ISO 683-1, with also stand out for their high degree of purity.

Quenching and tempering gives the materials their special properties. The user of these steel grades must make sure that his calculation, design and processing methods are appropriate for the material. Temperature control during quenching and tempering is essential to achieve the desired component properties, however, it must be matched to the respective application.

Steel grades C60/60E are used both as hot strip and as input stock for cold rolling. As the melting and hot-rolling conditions have an effect on further treatment at the customer, the customer should always state the intended use when placing an order.

Note

We also supply steel grades C25 – C60 or rather C25E - C60E as per DIN EN ISO 683-1 (Non alloy steels for quenching and tempering).

Chemical composition¹⁾

(in percent by weight)

	min.	max.
C	0.57 %	0.65 %
Si	0.10 %	0.40 %
Mn	0.60 %	0.90 %
P		0.045 %
S		0.045 %
Cr		0.40 %
Ni		0.40 %
Mo		0.10 %
Cu		0.30 %
Cr + Mo + Ni		0.63 %

1) Heat analysis

Available dimensions

Hot-rolled coils unpickled, mill edge

Thickness in mm	Width in mm
2.00 – 2.24	900 – 1,300
2.25 – 2.99	900 – 1,350
3.00 – 3.99	900 – 1,550
4.00 – 5.99	900 – 1,650
6.00 – 6.99	900 – 1,750
7.00 – 7.99	900 – 1,800
8.00 – 19.99	900 – 1,900

Thicknesses ≤ 25 mm on request.
Widths ≤ 2,000 mm on request.

Hot-rolled coils pickled, mill edge

Thickness in mm	Width in mm
2.00 – 2.24	900 – 1,300
2.25 – 2.99	900 – 1,350
3.00 – 3.99	900 – 1,550
4.00 – 5.20	900 – 1,650
5.21 – 12.49	900 – 1,530

Hot-rolled coils pickled, trimmed edge

Thickness in mm	Width in mm
2.00 – 2.24	900 – 1,280
2.25 – 2.99	900 – 1,330
3.00 – 3.99	900 – 1,530
4.00 – 5.20	900 – 1,630
5.21 – 5.99	900 – 1,510

Hot-rolled coils, slit lengthwise

Thickness in mm	Width in mm
2.00 – 2.99	100 – 640
3.00 – 4.60	100 – 690
4.61 – 6.00	140 – 740

Thicknesses ≥ 6 mm on request.

Widths < 100 mm on request.

Examples of application

Typical applications are link plates, belt buckles, springs, steel caps for safety shoes, saw blades, knives and scissors.

Condition of delivery, scope of testing and certificate

The provisions of DIN EN 10083-2, chapters 6.3.1 und 8 shall apply for delivery and inspection. All quenched and tempered steels are delivered in a hot-rolled and untreated condition.

Test certificates according to DIN EN 10204 can be supplied as follows: EDP, remote data transmission, fax, e-mail, paper.