

45 (1.0530)	stock sizes [mm]
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sheets and plates	plates from 1 to 250 mm thickness; plates to 1000 mm width and 400 mm thickness
round bars	from Φ 16 mm to Φ 650 mm diameter
flat bars and squares	from 20 mm to 520 mm width

Description:

Carbon toughening steel, weldable, easily machinable,

Application:

for moderately loaded machine components, axles, shafts, gear wheels, discs, rods, rolls, pump rotors

Chemical composition [%]

C	Mn	Si	P	S	Cr	Ni	Mo	W	V	Al	Cu
0,42-0,5	0,5-0,8	0,1-0,4	max 0,04	max 0,04	max 0,3	max 0,3	max 0,1	-	-	-	max 0,3

Equivalents

PN	W. nr	EN	AISI	Russia (GOST)	Other
45	1.0503	C45	1045	45	12050

Processes

welding	YES	
forging	YES	
rolling	YES	
nitriding	NO	
hardening	YES	temp. 820 – 860 [°C]
tempering	YES	temp. 550 – 660 [°C]

Hardness

after softening	250 HB
Rm	650-800 MPa
Re	430 MPa