

C45R

W.Nr. 1.1201

General size range Ø 5,5 – 1000 mm

Chemical composition	C=0,42-0,50	Si=max.0,40	Mn=0,50-0,80	P=max.0,030	S=0,020-0,040
	Cr=max.0,40	Al=min.0,020	Cu=max.0,30	Ni=max.0,40	Mo=max.0,10

Cr+Mo+Ni=max.0,63%

Also available: C45E (S=max.0,035%), C45 (S=max.0,045%)

Grade equivalents
Similar grades

080M46	45	3C45	S50C	12050
BS	GB	AFNOR	JIS	CSN
1045	C45	1660	45	
SAE	UNI	SS	GOST	

Hot rolled wire rod Ø 5,5–32 mm

Tolerances	DIN 59110	or	specific tol.
Coils	min. 1,5 tons	or	specific weights
Heat treatment	+AR		
Surface defects	for cold drawing		

Hot rolled bars Ø 16–310 mm

Tolerances	EN 10060	or +/- 1,3% of dN	or	specific tol.	
Lengths	6 m +200/-0 mm	or	3 – 6 m	or	specific lengths
Heat treatment	+AR EN 10083-2	or	+N EN 10083-2	or	+A EN 10083-2
Surface defects	EN 10221/B	or	max. 1,5%	or	specific value
US test	SEP 1921 3C/c	or	EN 10308	or	specific FBH eq.

Forged black Ø 250–1000 mm

Tolerances	DIN 7527/6	or	specific tol.
Lengths	3 – 6 m	or	specific lengths
Heat treatment	+N EN 10250-2		
Surface defects	max. ½ the tol.	or	specific depth
US test	SEP 1921 3C/c	or	specific FBH eq.

Peeled Ø 16–100 mm

Tolerances	EN 10278 h9	or	EN 10278 h11	or	specific tol.
Lengths	6 m +200/-0 mm	or	specific lengths		
Heat treatment	+AR h9/ h11	or	+N h9/ h11	or	+A h9/h11
Surface defects	max. 0,2 mm	or	specific depth		
US test	SEP 1921 3C/c	or	specific FBH eq.		

Forged turned Ø 250–850 mm

Tolerances	+3/-0 mm	or	+4/-0 mm	or	+5/-0 mm	or	specific tol.
Lengths	3 – 6 m	or	specific lengths				
Heat treatment	+N EN 10250-2						
Surface defects	technically free	or	specific depth				
US test	SEP 1921 3C/c	or	specific FBH eq.				

Other available products

squares- flats-hexagons rolled, squares-flats-hexagons cold drawn, squares-flats forged, squares- flats forged and milled, square billets rolled, square billets CC cast

Mill's test certificate

EN 10204/3.1 with all relevant data reg. chem. composition, mech. properties and results of testing

- supply range file - issued: 20.02.2009 rev. 1