

## Material specification sheet

### Saarstahl - C10C

Material No.:	German standard:	International steel grades:
<b>1.0214</b>	<b>DIN EN 10263:2</b>	<b>SAE:</b> <b>JIS:</b>

**Material group:** Cold heading and cold extrusion steel according to DIN EN 10263-2

<b>Chemical composition:</b> (typical analysis at Saarstahl in %)	<b>C</b>	<b>Si</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Al</b>
	0,10	max. 0,10	0,40	max. 0,025	max. 0,025	0,04
Deviation in chemical composition on request						

**Application:** Steel rod, bars and wire for cold heading and cold extrusion; steel not intended for heat treatment after cold working

**Hot forming and heat treatment:**

**Mechanical properties:**

Untreated (+U) or untreated + peeled (+U+PE)

<b>Diameter d [mm]</b>	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
<b>Tensile strength R<sub>m</sub> [N/mm<sup>2</sup>]</b>	-	max. 430	max. 430	max. 430
<b>Reduction of area Z [%]</b>	-	min. 60	min. 60	min. 60

Spheroidized (+AC) or spheroidized + peeled (+AC+PE)

<b>Diameter d [mm]</b>	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
<b>Tensile strength R<sub>m</sub> [N/mm<sup>2</sup>]</b>	-	max. 380	max. 380	max. 380
<b>Reduction of area Z [%]</b>	-	min. 70	min. 70	min. 70

Untreated + cold drawn (+U+C)

<b>Diameter d [mm]</b>	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
<b>Tensile strength R<sub>m</sub> [N/mm<sup>2</sup>]</b>	-	max. 520	max. 510	-
<b>Reduction of area Z [%]</b>	-	min. 58	min. 58	-

Untreated + cold drawn + spheroidized (+U+C+AC)

<b>Durchmesser d [mm]</b>	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
<b>Zugfestigkeit R<sub>m</sub> [N/mm<sup>2</sup>]</b>	max. 370	max. 360	max. 360	-
<b>Brucheinschnürung Z [%]</b>	min. 72	min. 72	min. 72	-

Untreated + cold drawn + spheroidized + skin passed (+U+C+AC+LC)

<b>Durchmesser d [mm]</b>	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
<b>Zugfestigkeit R<sub>m</sub> [N/mm<sup>2</sup>]</b>	max. 410	max. 400	max. 400	-
<b>Brucheinschnürung Z [%]</b>	min. 68	min. 68	min. 68	-

Spheroidized + cold drawn (+AC+C)

<b>Durchmesser d [mm]</b>	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
<b>Zugfestigkeit R<sub>m</sub> [N/mm<sup>2</sup>]</b>	-	max. 470	max. 460	-
<b>Brucheinschnürung Z [%]</b>	-	min. 63	min. 63	-