

Material specification sheet

Saarstahl - C10C

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

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

Chemical composition: (typical analysis at Saarstahl in %)	C	Si	Mn	P	S	Al
	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)

Diameter d [mm]	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
Tensile strength R_m [N/mm²]	-	max. 430	max. 430	max. 430
Reduction of area Z [%]	-	min. 60	min. 60	min. 60

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

Diameter d [mm]	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
Tensile strength R_m [N/mm²]	-	max. 380	max. 380	max. 380
Reduction of area Z [%]	-	min. 70	min. 70	min. 70

Untreated + cold drawn (+U+C)

Diameter d [mm]	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
Tensile strength R_m [N/mm²]	-	max. 520	max. 510	-
Reduction of area Z [%]	-	min. 58	min. 58	-

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

Durchmesser d [mm]	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
Zugfestigkeit R_m [N/mm²]	max. 370	max. 360	max. 360	-
Brucheinschnürung Z [%]	min. 72	min. 72	min. 72	-

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

Durchmesser d [mm]	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
Zugfestigkeit R_m [N/mm²]	max. 410	max. 400	max. 400	-
Brucheinschnürung Z [%]	min. 68	min. 68	min. 68	-

Spheroidized + cold drawn (+AC+C)

Durchmesser d [mm]	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
Zugfestigkeit R_m [N/mm²]	-	max. 470	max. 460	-
Brucheinschnürung Z [%]	-	min. 63	min. 63	-