

Material specification sheet

Saarstahl - C8C

Material No.: German standard: International steel grades:

1.0213 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
	0,08	0,08	0,38	max. 0,020	max. 0,025	0,035

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/mm ²]	-	max. 410	max. 410	max. 410
Reduction of area Z [%]	-	min. 65	min. 65	min. 65

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

Diameter d [mm]	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
Tensile strength R_m [N/mm ²]	-	max. 360	max. 360	max. 360
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/mm ²]	-	max. 490	max. 480	-
Reduction of area Z [%]	-	min. 63	min. 63	-

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

Durchmesser d [mm]	> 2 - 5	> 5 - 10	> 10 - 40	> 40 - 100
Zugfestigkeit R_m [N/mm²]	max. 350	max. 340	max. 340	-
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. 390	max. 380	max. 380	-
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. 450	max. 440	-
Brucheinschnürung Z [%]	-	min. 65	min. 65	-