

Material specification sheet

Saarstahl - 36CrB4

Material No.:	German standard:	International steel grades:
1.7077	DIN EN 10263-4	SAE: JIS:

Material group: Cold heading and cold extrusion steel according to DIN EN 10263-4

Chemical composition: (typical analysis at Saarstahl in %)	C	Si	Mn	P	S	Cr	Cu	B
	0,35	0,10	0,76	0,009	0,008	1,10	0,02	0,0030

Deviation in chemical composition on request

Application: Chromium und boron-alloyed steel for cold heading and cold extrusion with subsequent quenching and tempering.

Hot forming and heat treatment: Quenching: 845 - 855°C

Mechanical properties: Core hardness after quenching: 48 HRC (850°C / min. 30min; max. Ø 30mm)

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

Diameter d [mm]	> 2 - 5	> 5 - 40
Tensile strength R_m [N/mm²]	-	max. 570
Reduction of area Z [%]	-	min. 61

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

Diameter d [mm]	> 2 - 5	> 5 - 40
Tensile strength R_m [N/mm²]	max. 570	max. 550
Reduction of area Z [%]	min. 63	min. 63

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

Diameter d [mm]	> 2 - 5	> 5 - 40
Tensile strength R_m [N/mm²]	max. 610	max. 590
Reduction of area Z [%]	min. 61	min. 61

Spheroidized and cold drawn (+AC+C)

Diameter d [mm]	> 2 - 5	> 5 - 40
Tensile strength R _m [N/mm ²]	-	max. 690
Reduction of area Z [%]	-	min. 56

