

## Material specification sheet

### Saarstahl - 36CrB4

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

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

<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>Cr</b>	<b>Cu</b>	<b>B</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)

<b>Diameter d [mm]</b>	> 2 - 5	> 5 - 40
<b>Tensile strength R<sub>m</sub> [N/mm<sup>2</sup>]</b>	-	max. 570
<b>Reduction of area Z [%]</b>	-	min. 61

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

<b>Diameter d [mm]</b>	> 2 - 5	> 5 - 40
<b>Tensile strength R<sub>m</sub> [N/mm<sup>2</sup>]</b>	max. 570	max. 550
<b>Reduction of area Z [%]</b>	min. 63	min. 63

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

<b>Diameter d [mm]</b>	> 2 - 5	> 5 - 40
<b>Tensile strength R<sub>m</sub> [N/mm<sup>2</sup>]</b>	max. 610	max. 590
<b>Reduction of area Z [%]</b>	min. 61	min. 61

Spheroidized and cold drawn (+AC+C)

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

