

## Material specification sheet

### Saarstahl - C35EC (Cq35)

Material No.:	Former brand name:	International steel grades:
1.1172	RKS32, RKS37	BS: AFNOR: SAE:

**Material group:** Steel for cold extrusion according to DIN EN 10263

Chemical composition: (Typical analysis in %)	C	Si	Mn	P	S	Cu
	0,35	0,20	0,70	<0,025	<0,025	<0,25

**Application:** Plain carbon cold heading steel for screws and nuts.

<b>Hot forming and heat treatment:</b>	Soft annealing:	680 - 710°C
	Hardening:	860 - 890°C/water
	Tempering:	530 - 670°C

#### Mechanical Properties:

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

Diameter d [mm]	> 2 - 5	> 5 - 10	> 10 - 40
Tensile strength R <sub>m</sub> [N/mm <sup>2</sup> ]	-	max. 560	max. 560
Reduction of area Z [%]	-	min. 60	min. 60

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

Diameter d [mm]	> 2 - 5	> 5 - 10	> 10 - 40
Tensile strength R <sub>m</sub> [N/mm <sup>2</sup> ]	max. 550	max. 540	max. 540
Reduction of area Z [%]	min. 62	min. 62	min. 62

Untreated + cold drawn + spheroidized annealed + stretch reduced by roll drawing (+U+C+AC+LC)

<b>Diameter d [mm]</b>	> 2 - 5	> 5 - 10	> 10 - 40
<b>Tensile strength R<sub>m</sub> [N/mm<sup>2</sup>]</b>	max. 590	max. 580	max. 580
<b>Reduction of area Z [%]</b>	min. 60	min. 60	min. 60

Spheroidized annealed + cold drawn (+AC+C)

<b>Diameter d [mm]</b>	> 2 - 5	> 5 - 10	> 10 - 40
<b>Tensile strength R<sub>m</sub> [N/mm<sup>2</sup>]</b>	-	max. 660	max. 670
<b>Reduction of area Z [%]</b>	-	-	-