

Material specification sheet

Saarstahl - C35EC (Cq35)

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

Hot forming and heat treatment:
 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_m [N/mm ²]	-	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_m [N/mm ²]	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)

Diameter d [mm]	> 2 - 5	> 5 - 10	> 10 - 40
Tensile strength R_m [N/mm²]	max. 590	max. 580	max. 580
Reduction of area Z [%]	min. 60	min. 60	min. 60

Spheroidized annealed + cold drawn (+AC+C)

Diameter d [mm]	> 2 - 5	> 5 - 10	> 10 - 40
Tensile strength R_m [N/mm²]	-	max. 660	max. 670
Reduction of area Z [%]	-	-	-