

Material specification sheet

Saarstahl - 11SMn30 (9SMn28)

Material No.:	German standard:	International steel grades:
1.0715	DIN EN 10087 DIN EN 10277-3	SAE: ~ SAE 1213, ~ SAE 1215 JIS: ~ SUM 22, ~ SUM 23

Material group: Free-cutting steel

Chemical composition: (typical analysis at Saarstahl in %)	C	Si	Mn	P	S
	0,08	<0,05	1,10	0,07	0,30

Deviation in chemical composition on request

Application: Free-cutting steel for bulk applications for joining elements in mechanical engineering and automotive components.

Mechanical properties:

Condition of delivery: Rolled and peeled (+SH)

Thickness [mm]	>5 - 10	>10 - 16	>16 - 40	>40 - 63	>63 - 100
Hardness [HB]	-	-	112 - 169	112 - 169	107 - 154
Tensile strength R_m [N/mm²]	-	-	380 - 570	370 - 570	360 - 520

Condition of delivery: Cold drawn (+C)

Thickness [mm]	>5 - 10	>10 - 16	>16 - 40	>40 - 63	>63 - 100
0,2% proof stress $R_{p0,2}$ [N/mm²]	min. 440	min. 410	min. 375	min. 305	min. 245
Tensile strength R_m [N/mm²]	510 - 810	490 - 760	460 - 710	400 - 650	360 - 630
Fracture elongation A_5 [%]	min. 6	min. 7	min. 8	min. 9	min. 9