



# SWP-Super

## Free Cutting Mild Steel (Steel Black Forest)

**Distinctive feature & main attribute**

A non-alloyed free cutting mild steel with sulphur and lead, marked by a high machinability and an easy fragmentation of chips. Due to its high sulphur and phosphorus content it is not recommended for heat treatment nor for welding

**Use & application range**

This material is designated for the automobile industry, high precision parts, appliance construction and apparatus engineering.

**Material No. and norms**

Material No.	1.0737
DIN Abbreviation	9SMnPb36
AFNOR	S300Pb
AISI/SAE/ASTM	AISI ~ 12L14
ISO	~ 12SMnPb35
Euro Standard EN	11SMnPb37
Others	

**Reference analysis %**

C	Si	Mn	P	S	PB	Fe
max.	max.	1.00	max.	0.34	0.20	balance
0.14	0.05	1.50	0.11	0.40	0.35	

**Execution, delivery form, standard sizes and availability**

- Execution in 3 m round or hexagonal bars as well as in coils for Escomatic
- Standard size in stock: [see Product range](#)
- Other sizes on request

**Tolerances**

- Ø < 12.00 mm, cold drawn h8, on request also tighter tolerances available
- Ø > 12.10 mm, cold drawn h9
- Out of roundness standard: ½ of diameter tolerance

**Mechanical properties**

At delivery status:  
 • Tensile strength (Rm): 570 – 820 MPa, size depending

**Heat treatment**

This quality is not made for hardening purposes, unless the carbon content is at the upper limit it is possible to do an edge hardening or nitridization process.

**Cutting rates**

vc ~ 100 – 140 m/min, value depending on the lubrication oil, cutting tools and shape of parts.