

Casting material

SILAFONT[®] - 70

EN AB-AISi12CuNiMg / EN AB-48000

Area of application

SILAFONT[®] - 70 is a nearly eutectic, hardenable alloy with good casting properties for sand and coquille casting as well as die casting. It is characterised by high hardness after heat treating, high heat resistance and good running and gliding properties both in gliding against steel and for running cast parts of SILAFONT[®] - 70 against each other, if dry running is avoided (in fluid pumps, for example).

The high heavy metal content makes the alloy unsuitable for use in highly corrosive environments. However, the corrosion resistance is sufficient for most technical purposes – including for open air use. The machining properties are good. The most important areas of application for SILAFONT[®] - 70 are: pistons for combustion engines, gears, slide bearings, pump parts, wear-resistant and heat-resistant parts of all kinds.

Composition in the block in % by mass:

Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Other
11.0 – 13.5	0.15	0.8 – 1.3	0.05	0.9-1.3	0.10	0.10	0.8 – 1.3	0.03 each

Mechanical properties

The values not in parentheses were determined on separately cast test rods and indicate the material and casting-related variance. The values in parentheses can be achieved in cast parts of up to 20 mm wall thickness assuming proper design for casting as well as correct melting and heat treatment techniques.

Casting process condition	0.2 Yield strength R _{p0.2} [N/mm ²]	Tensile strength R _m [N/mm ²]	Ductile yield A 5 [%]	Brinell hardness HB 5/250
S F	120 – 170 (70)	130 – 180 (120)	0,5 – 1,5 (0,5)	80 – 90 (80)
S T6	200 – 300 (190)	220 – 300 (200)	0,3 – 1,0 (0,3)	140 – 160 (140)
S T5	140 – 190 (140)	160 – 190 (160)	0,2 – 1,0 (0,2)	80 – 90 (80)
K F	190 – 260 (180)	200 – 270 (190)	1,0 – 2,4 (0,5)	90 – 105 (90)
K T6	320 – 390 (280)	350 – 400 (300)	0,5 – 2,0 (0,5)	150 – 165 (145)
K T5	185 – 210 (150)	200 – 230 (180)	0,5 – 2,0 (0,5)	90 – 110 (90)
D T5	250 – 280	280 - 320	0,5 – 1,0	110 - 130

Alloy SILAFONT® - 70 is delivered exclusively in the form of ingots produced through horizontal continuous casting (HCC). In this way, we offer the following advantages:

- Less scrap through maximum metal purity and uniformity
- Clean ingots without oxide inclusions
- No hard non-metallic inclusions
- Low gas content in the ingots thanks to inline degassing during production
- Lower costs through
 - Reduced metal loss during melting
 - Good and safe stackability
 - Low space requirements thanks to compact pig bunches

Contact: