

## Casting alloys

# SILAFONT®-21

### GBD-AISi10MgMnCr

#### Properties and application

SILAFONT®-21 is a low-iron aluminium die casting alloy. Modification with strontium gives components high ductility. Manganese and chromium used as alloying elements prevent sticking and improve deformation behaviour. The mechanical properties can be adjusted to the respective requirements by varying the magnesium content.

High ductile yield values are achievable when cast, which can be further improved in low-pore and low-oxide cast parts through heat treatment. The newly developed, patented SST heat treatment process allows the manufacture of particularly ductile parts with good strength and sharply reduced heat treatment costs. Please let us know if you are interested!

#### Composition in the block in % by mass:

Si	Fe	Cu	Mn	Mg	Cr	Ti	Sr
9.0-11.5	0.15	0.03	0.3-0.45	0.10-0.60	0.1-0.3	0.01-0.15	0.01-0.03

#### Mechanical properties

These values show the potential of the alloy, taking into consideration the scatter range caused by casting.

Casting process condition	0.2 Yield strength $R_{p0.2}$ [N/mm <sup>2</sup> ]	Tensile strength $R_m$ [N/mm <sup>2</sup> ]	Ductile yield A 5 [%]	Brinell hardness HB 5/250
F	110 - 150	240 - 290	4 - 11	75-100
T 5	150 - 240	260 - 330	3 - 10	90 - 110
T 6	200 - 280	290 - 350	6 - 12	100 - 115
SST	180 - 270	270 - 340	8 - 17	95 - 110

Alloy SILAFONT®-21 is delivered exclusively in the form of pigs produced through horizontal continuous casting (HCC). In this way, we offer the following advantages:

- Less scrap through maximum metal purity and uniformity
- Clean pigs without oxide inclusions
- No hard non-metallic inclusions
- Low gas content in the pigs 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