

Casting material

SILAFONT® - 20

EN AB-AISi11 / EN AB-44000

SILAFONT® – 20 is a near-eutectic and hardenable alloy made from virgin aluminium with very good mould filling and flow properties. The casting properties are comparable with those of alloy AISi12 (SILAFONT® – 13). It can be processed using all known processes of die casting, but preferably in coquille and low-pressure die casting due to the better mechanical values that can be achieved.

SILAFONT® – 20 is also available with a permanent modification for processing in coquille casting.

Cast parts made from SILAFONT® - 20 are noted for their high strength and (thanks to the low iron content) good elongation values. Corrosion resistance is very good. SILAFONT® – 20 is therefore excellently suitable for the casting of complicated parts and for the manufacture of parts exposed to high mechanical loads. The weldability of SILAFONT® - 20 is excellent, machinability is good after heat treatment.

Composition in % by mass:

Si	Fe	Cu	Mn	Mg	Zn	Ti
10.0 – 11.8	0.15	0.01	0.05	0.10 – 0.45	0.07	0.15

SILAFONT® – 20 can be delivered ex-works with a permanent strontium modification on request.

Mechanical properties:

The values not in parentheses were determined on separately cast test rods.

The values in parentheses can be achieved in cast parts of up to 20 mm using an appropriate melting and casting technique.

Process condition	0.2% Yield strength R _{P0.2} [N/mm ²]	Tensile strength R _M [N/mm ²]	Ductile yield A [%]	Brinell hardness HB
Coquille	80 – 130 (80)	180 – 230 (180)	5 – 16 (5)	55 – 75 (55)
Coquille T6	125 – 320 (120)	210 – 350 (210)	4 – 15 (3)	70 – 125 (70)
Sand	80 – 140 (70)	170 – 220 (170)	2 – 4 (1,5)	50 – 60 (50)
Sand T6	120 – 300 (110)	200 – 320 (200)	1 – 3 (0,5)	65 – 120 (55)

Alloy SILAFONT® - 20 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
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Contact: