

Casting alloys

ANTICORODAL[®] - 04

G-ALSi0.5Mg

ANTICORODAL[®] - 04 is a hardenable aluminium-silicon casting alloy that has been especially developed for applications requiring high electrical conductivity. The advantage of the material compared to rotor aluminium is the much improved casting properties and the ability to harden through heat treatment. The alloy is manufactured using virgin metal in order to keep the concentration of trace elements that have a negative influence on the electrical conductivity as low as possible. 29 – 32 m/Ωmm² can be used as achievable guiding values for the electrical conductivity.

ANTICORODAL[®] - 04 can be processed in all known die casting processes.

Composition in % by mass:

Si	Fe	Cu	Mn	Mg	Zn	Ti
0.4 – 0.5	0.8	0.01	0.1	0.4 – 0.5	0.07	0.01

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
Sand F	60 – 100 (50)	90 – 130 (80)	15 – 20 (10)	35 – 40 (35)
Sand T7	160 – 180 (150)	190 – 210 (180)	3 – 5 (3)	70 – 75 (70)
Coquille F	80 – 120 (70)	100 – 140 (90)	18 – 22 (12)	40 – 45 (40)
Coquille T7	170 – 190 (150)	200 – 220 (190)	3 – 6 (3)	70 – 80 (70)
Die casting	80 - 120	100 - 140	7 - 12	40 - 45

Alloy ANTICORODAL[®]-04 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



Materials Group
Aluminium Lend GmbH & Co KG

A Member of the Salzburger Aluminium Group

Progress in Aluminium