



## Castasil®-21 *Ductile HPDC alloy for the highest demands on the conductivities*

**Ductile HPDC alloy with high elongation and excellent thermal conductivity and electrical conductivity at as cast state F.**

Very good physical and mechanical properties are achieved already at the as cast state F.

Treatment condition	0.2% YTS	UTS	Elongation A
F	90 - 100 MPa	200 - 230 MPa	6 - 9%
O	80 - 90 MPa	170 - 190 MPa	9 - 14%

- **Very good electrical conductivity:** 25 to 28 m/Ωmm<sup>2</sup> (43,5 to 45 % IACS)
- **Very good thermal conductivity:** 1,6 to 1,7 W/K\*cm
- Annealing of castings for the state O leads to the highest conductivities under the AlSi HPDC alloys.
- **Very good values for the elongation at state O:** Elongation A up to 14%.
- **Advanced application range for die casting work pieces with high demands on electrical and/or thermal conductivity:**  
Automotive industry / E-mobility, electric motors, LED lamp construction, air conditioning engineering, electric and electronic housings, mechanical engineering etc.
- **Very good corrosion resistance to water and weather.**  
Coatings are often not necessary.
- Excellent machinable and very suitable for welding processes.
- Suitable for crimping processes.
- **Excellent castable HPDC alloy.**  
Solidification range, shrinkage behavior and expected die casting die endurance are comparable to that of AlSi9 and AlSi10Mg alloys.
- Existing die casting cells for AlSi alloys must not be modified.
- Well suited for castings with minimum wall thickness (from 1.5 mm).
- Very low heat cracking tendency and very good release properties.



**DISCLAIMER:**

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