



Castasil®-37 *The die caster's "ductile" HPDC all-rounder for thick and thin*

Ductile HPDC alloy with excellent strength and elongation at as cast state F.

Very good mechanical properties are achieved already at the as cast state F.
(Small wall thickness influence in the elongation A).

Wall thickness	0.2% YTS	UTS	Elongation A
2 - 3 mm:	120 - 150 MPa	260 - 300 MPa	10 - 14%
3 - 5 mm:	100 - 130 MPa	230 - 280 MPa	10 - 14%
5 - 7 mm:	80 - 110 MPa	200 - 250 MPa	10 - 14%

- **Very high ductility and fatigue resistance through very finely refined structure** (the structure solidifying magnesium solid solutions do not exist).
- **No long-term ageing:** Even under the influence of heat the Castasil-37 alloy does not change the strength characteristics. High dimensional stability.
- **No T5, T4, T6 and T7 heat treatment required.**
Additional costs for heat treatment of a usual AlSi10Mg alloy could be saved.
- **No blistering and no distortions on casted parts**
by omission of the solution heat treatment process step.
- **Advanced application range for die casting work pieces in the as-cast-state F.**
- Excellent machinable and very suitable for welding processes.
- Well suitable for self-riveted joints, clinched joints and adhesive bonds.
- **Excellent corrosion resistance:** Coatings are often unnecessary.
- **Very suitable for applications in vehicle constructions.**
Meets crash relevant requirements already in the cast state.
- **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.
- Very low heat cracking tendency and very good release properties.
- Well suited for castings with minimum wall thickness (from 1.5 mm).
- No quenching of the casting in a water bath required: cooling at moving air is sufficient.
- **Further increase in ductility by up to 20% possible** by single-stage heat treatment:
State O = annealing 350 °C / 60 to 90 min.



DISCLAIMER:

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New alloy developments made as technology progresses after printing are included in later versions.

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