



Castaduct®-42 for next Generation of Automotive Structural Application

The requirements for crash relevant parts are fulfilled without heat treatment.
Easy handling generally.

Mechanical properties are measured in the as cast state F:

Wall thickness	YTS R _{p0,2}	UTS R _m	Elongation A
2 - 3 mm	125 - 135 MPa	245 - 265 MPa	11 - 15%
3 - 4 mm	120 - 130 MPa	245 - 265 MPa	12 - 16%

- **Castaduct®-42 is an easy to handle alloy for BIW parts like structure casts.**
- **Innovative and plain alloy composition.**
Developed on base of AlFe-eutectic composition.
- **No T5, T6 or T7 heat treatment required:**
Cost cutting is possible due skipping heat treatment and straightening of distortion.
- **Excellent resistance to sea water atmosphere.**

- **Excellent suitable for BIW automotive structural applications**
with requirements of medium strength, but highest deformability
- High percentages of in-house scrap can easily be remelted.
- Easy melt preparing without any modifying or grain structure treatment.
- **Very low sticking behavior in the die,**
due the high Fe-content.
- **Easy castability in HPDC process,**
moderate casting temperature, low tendency for pre-solidifications and hot cracks.
- **High resistance against high temperature ageing,**
up to 350 °C no influence to the mechanical strength at RT.
- **Well suitable for self-piercing rivets, clinched joints and crimping.**
High values of deforming in a bending test are constantly measured. Much better than with AlSi10MnMg in the as cast state.
- **Well weldable,** with welding technique similar to 5xxx-series.
- **Very well suitable for anodizing,**
due to the low Silicon content a bright surface image can be achieved.
- Well suitable for adhesive bonds.
- **Keep in mind the higher shrinkage behavior in comparison to AlSi alloys during the die design process.**



IMPRINT:

For the composition of the alloy Castaduct-42 a pending patent exists by RHEINFELDEN ALLOYS GmbH & Co. KG .

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