



## Technical Data Sheet

### STANNOL® solder wire ALU-SOL

- aluminium and aluminium-alloys
- improved corrosion resistance
- no additional flux required
- suitable for all other metals including stainless steel

#### Description

Soldering of aluminium and aluminium alloys is not possible with conventional fluxes. **STANNOL® ALU-SOL** solder wire contains a special designed flux for aluminium.

Soldering does not require high temperatures like brazing or welding of aluminium. Lower temperatures will cause less stress and less deformation on the work pieces, which arise when metals with different thermal expansion are heated. Solder joints made with **STANNOL® ALU-SOL** are not so strong as brazed or welded joints. Therefore it is recommended that they must be designed that that only shear stress will apply to the joint. When solder joints are exposed to humidity, there is danger of electrolytic corrosion. The corrosion is dependent on the environmental conditions an also dependent on the metals which were joined to aluminium. **STANNOL® ALU-SOL** solder wire will give joints which are relatively resistant to corrosion.

#### Application

All parts must be cleaned thoroughly before soldering. Dust, grease and other contaminants must be removed with suitable cleaners.

Soldering temperature should be adjusted to a minimum of 350°C. Consider that aluminium has a lower thermal conductivity compared to copper. Heat transfer is more difficult also because of the insulating aluminium oxide skin. The heating of the solder joint ca be done with a soldering iron as well as a flame, avoiding excessive heat. Welding equipment is not suitable.

**Flux residues are corrosive and must be removed after soldering.**

aluminium-alloys	solderability
pure aluminium to 1% impurities Al-Mn	very good
Al with 1.5%Mg +1.5%Si (max.)	good
Al -Cu	good
Al with magnesium >3%	bad

Aluminium cast alloys	solderability
pure aluminium to 0.5% impurities	good, when thoroughly cleaned
Al-Cu	good
aluminium-silicon	not solderable

#### Properties und Data

General properties	STANNOL® solder wire ALU-SOL
Flux type:	ORH1 (IEC 61190-1-3) / 2.1.2.B (DIN EN 29454-1)
Flux content:	2.2 weight %
Flux cores:	4 cores
Standard alloys:	Pb80Sn18Ag2 (45D) (melting range 179-275°C)
Available diameters:	1.0 mm
Available reel sizes:	500g

**Note: The ALU-SOL solder wires are subject to a minimum order quantity!**

#### Health and Safety

Before using please read the material safety data sheet carefully and observe the safety precautions described.

The above values are typical and represent no form of specification. The Data Sheet serves for information purposes. Any verbal or written advise is not binding for the company, whether such information originates from the company offices or from a sales representative. This is also in respect of any protection rights of third parties, and does not release the customer from the responsibility of verifying the products of the company for suitability of use for the intended process or purpose. Should any liability on the part of the company arise, the company will only indemnify for loss or damage to the same extent as for defects in quality.