

Technical Product Information

ELSOLD Al-S Flux Cored Solder Wires

Direct soldering of Aluminum and Aluminum mixed joints

No need of additional equipment and process technology. Use of conventional soldering irons

RoHS-Conformity

Improves protection against corrosion: First flux cored solder wire with protective effect by rosin based flux

Innovative technology

Al-S

Due to the dense and stable oxide layer, soldering of Aluminum is only possible when using very corrosive fluxes or special process technologies. ELSOLD Al-S lead-free flux cored solder wires now offer the possibility for direct soldering of Aluminum alloys and further difficult to solder materials - without special pretreatments or any special equipment. This makes direct changing from Copper to Aluminum much easier, using the existing processes and tools.

For the first time, due to the innovative composition and new developed production processes the ELSOLD Al-S flux offers both a good and fast wetting and an improved corrosion behavior, which is normally the most critical point of soldered Aluminum joints due to the electrochemical potentials of the different metals and the high aggressiveness of the fluxes. By the use of modified Colophony as a basis ELSOLD Al-S forms a protection shield on the joint surface and reduces the risk of corrosion in the case of imperfect cleaning - for uncritical applications even using ELSOLD Al-S as a no clean flux is possible.

ELSOLD SN100(Ag) MA-S additionally improves the wetting on Aluminum due to the high purity and the positive, scientifically proven effect of the micro-alloying elements. Further alloys as SAC305 are available on request.

Property		ELSOLD SN100 MA-S	ELSOLD SN100Ag0.3 MA-S	ELSOLD SN100Ag3 MA-S	ELSOLD SAC305
Composition [wt.-%]	Sn	99.3	99.0	96.5	96.5
	Ag		0.3	3.0	3.0
	Cu	0.7		0.5	0.5
	Ni		0.03 – 0.06		-
	Ge		0.003 – 0.007		-
	P		0.001 – 0.005		-
Melting Range [°C]		227 – 230	217 – 227	217	217
Density [g/cm ³]		7.32	7.33	7.38	7.38

Classification

ROH1

Flux Content

Standard: 2.5% or 3.5%. Other flux contents available on request.

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ELSOLD AI-S Flux Cored Solder Wires

Application

Manual or automatic soldering by iron, recommended iron temperature: ~ 380 °C.

In case of a higher demand of flux, liquid flux ELSOLD AI-L, which consists of the same effective components solved in alcohol, can be applied before soldering.

ELSOLD AI-L is available in 1 L bottles. Shelf life is 12 months.

AI-L

Cleaning

Isopropanol or common cleaning agents for rosin based fluxes. Necessity of cleaning depends on application and has to be evaluated by user.

Packaging

Neon-yellow spools with 500 g or 1000 g with 1-core flux cored solder wire

Diameter [mm]	0.50	0.75	1.00	1.20	1.50
Tolerances [mm]	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05

Shelf Life

We guarantee a minimum shelf life of 12 months if the material is properly stored in a clean environment.

Safety

Consider SDS. Wear personal protective equipment and use exhaustion.

The information contained herein is based on technical data that we believe to be reliable and is intended for use by persons having technical skill at their own risk. Users of our products should make their own tests to determine the suitability of each product for their particular process. TAMURA ELSOLD will assume no liability for results obtained or damages incurred through the application of the data presented.