

Besides the lead-free alloys required by the RoHS legislation ELSOLD also offers a wide range of cored solder wires made of SnPb solder alloys, including the high-melting point soft solder alloys with lead contents > 85% which are – for the time being – still exempt from the restrictions imposed by the RoHS Directive.

The fluxes used for the production of the solder wires guarantee optimum wetting of the surface and spreading of the solder.

■ Areas of Use

ELSOLD Cored Wires are used for automatic and manual soldering as well as for solder repair work in all areas of the electrical and electronic industry, especially in automotive electronics, telecommunication and general industrial electronics. As the only European manufacturer ELSOLD is listed as approved source for 3 SnPb-type solder materials (Sn63Pb37, Sn60Pb40, Sn62Pb36Ag2) the catalogue of qualified construction materials of the ESA (European Space Agency).

■ The Alloys

All ELSOLD alloys are made exclusively from carefully selected virgin base metals from first melt. The following standard alloys are supplied. Other alloys can be manufactured on special request.

Alloy Designation	Sn	Pb	Ag	Sb	Cu	Density (g/cm ³)	Melting point / range (°C)
Sn60Pb39Cu1	60 ± 0,5	Rest			1,4 ± 0,2	8,9	183 - 190
Sn60Pb40	60 ± 0,5	Rest				8,5	183 - 190
Sn63Pb37	63 ± 0,5	Rest				8,4	183
Sn60Pb36Ag4	60 ± 0,5	Rest	4 ± 0,2			8,5	178 - 183
Sn62Pb36Ag2	62 ± 0,5	Rest	2 ± 0,2			8,5	178
Pb91Sn8Sb1	8 ± 0,5	Rest		1 ± 0,3		10,6	280 - 305
Pb93Sn5Ag2	5 ± 0,5	Rest	1,3 ± 0,3			10,8	296 - 301

Alloy tolerances, if not stated otherwise, for elements up to 5% : ± 0,2 %, over 5% ± 0,5 %.
Impurities per EN 61190-1-3 / ISO 9453 and ELSOLD house norms

■ The Fluxes

Type	Classification per DIN EN		Halide content	No clean	Short Description
	29454	61190-1-1			
105	2.2.3	ORLO	-	X	Free from resin/rosin and halides, very active, low residues
ELTIN 3030	1.1.2	ROM1	1,40%	(X)	Activated flux, especially for solders with high lead content
ELTIN 3064	1.1.2	ROM1	1,15%	(X)	For surfaces which are difficult to solder, also suitable on nickel, brass, and bronze.
ELTIN 3066	1.1.2	ROM1	1,68%	(X)	Higher degree of activation than ELTIN 3064
A3	1.1.2	ROH1	0,75%	X	Standard Flux for soldering work with SnPb where an active flux is required (effective on brass, nickel, bronze)
C3	1.1.3	ROM0	-	X	Halide-free flux for all electronic applications.
C3P	1.1.3	ROM0	-	X	Plasticized version of C3
C5	1.1.3	ROM0	-	X	Stronger activation than C3 for difficult soldering tasks, e.g. components stored for extended time periods.
FS28	1.1.3	ROLO	-	X	Strongly activated, halide-free flux for difficult soldering tasks with reduced rosin content and low residues.
H	2.1.3	ORM0	-	X	Urea-based, very effective flux without addition of rosin, e.g. for the production of transformers or capacitors
K	1.1.1	ROLO	-	X	Non-activated rosin. For easy-to-solder surfaces with highest demands on reliability.

■ Available Alloy / Flux Combinations with Relevant Flux Content

(Tolerances of the flux content meet the requirements of norm EN ISO 12224-1)

	105	ELTIN 3030	ELTIN 3064	ELTIN 3066	A3	C3	C3P	C5	FS28	H	K
Sn60Pb39Cu1	0,7% 1,5%		1,4% 2,2%	2,2%	1,5% 2,5% 3,5%	1,5% 2,5% 3,5%	1,5% 3,5%		1,0%	3,5%	
Sn60Pb40			2,2%		2,5%	1,5% 2,5% 3,5%		1,25%			3,5%
Sn63Pb37			2,2%			2,5% 3,5%				2,0% 2,5%	3,5%
Sn60Pb36Ag4			1,4% 2,2%			3,5%					
Sn62Pb36Ag2			2,2%	2,2%		1,5% 2,5% 3,5%	3,5%				3,5%
Pb91Sn8Sb1					2,5%	2,5%			1,0%		
Pb93Sn5Ag2		2,2%									

The table shows the combinations which are at present in frequent use. In case of sufficient demand other combinations are possible at any time. Please ask your sales agent or contact our sales department.

■ Core Design

The cored wires are normally available in single core versions. Multi-core versions (3) are available upon special request.

■ Diameter and Tolerances (per EN ISO 12224-1)

Diameter mm	Tolerance mm
0,30	± 0,03
0,50	± 0,05
0,75	± 0,05
1,00	± 0,05
1,20	± 0,05
1,50	± 0,05

■ Spool Dimensions:

	250 g Spool	500 g Spool	1000 g Spool
Flange Diameter	69 mm	69,5 mm	70 mm
Barrel Diameter	33,5 mm	33,5 mm	33 mm
Bore	30 mm	30 mm	30 mm
Total Width	21 mm	21 mm	78 mm
Traverse Width	18 mm	41,5 mm	68 mm

■ Shelf Life

We guarantee a minimum shelf life of 12 months if the material is stored properly in a clean environment. In many cases the cored wires can be used without problems beyond the guaranteed shelf life. However, the user should check this under his own responsibility by making appropriate trials.

■ Safety and Health

For safety and health information please refer to the relevant material safety data sheets.

Important information: The above information was put together based on the data available to the producer at the time of print. The technical data contained herein are consistent with the properties of the material but should not be used for the preparation of specifications as it is intended for reference only.