

# Technical Product Information

## Flux-Cored Solder Wire Type C3

<b>Flux classification:</b>	<b>DIN EN 61190-1-1:</b>	<b>ROL0</b>
	<b>DIN EN ISO 9454-1:</b>	<b>1131</b>
<b>Flux content versions available:</b>	<b>1.5 % - 2.5 % - 3.5 %</b>	

### Description

TAMURA ELSOLD flux type C3 is based on a modified rosin with a halide-free activator system on the basis of dicarboxylic acids. A standard flux content version of 2.5 % has been selected for lead-free soldering. Other flux content versions are available for special applications. Flux type C3 is a no clean flux and the residues can remain on the solder joints in most cases. TAMURA ELSOLD flux-cored wire type C3 is suitable for clean surfaces where halide-based activators are not desired.

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 TAMURA ELSOLD house norms.

### Standard SnPb Alloys

Alloy	Sn [%]	Pb [%]	Ag [%]	Cu [%]	Density [g/cm <sup>3</sup> ]	Melting Point / Range [°C]
Sn60Pb40	60	Rest			8.5	183 – 190
Sn60Pb39Cu1	60	Rest		1.2-1.6	8.5	183 – 190
Sn62Pb36Ag2	62	Rest	2		8.4	178 – 180
Sn60Pb36Ag4	60	Rest	4		8.5	178 – 180
Sn63Pb37	63	Rest			8.4	183

### Standard Lead-free Alloys

Trade Name	Sn [%]	Ag [%]	Cu [%]	Density [g/cm <sup>3</sup> ]	Melting Point / Range [°C]
ELSOLD SC07	99.3	-	0.7	7.32	227
ELSOLD SA35	96.5	3.5	-	7.35	221
ELSOLD SAC305	96.5	3.0	0.5	7.37	217 – 219
ELSOLD SAC3507	95.8	3.5	0.7	7.40	217 – 219
ELSOLD SAC0307	99.0	0.3	0.7	7.33	217 – 227
ELSOLD SAC3807	95.5	3.8	0.7	7.40	217

### Special Alloys

Trade Name	Sn [%]	Ag [%]	In [%]	Sb [%]	Density [g/cm <sup>3</sup> ]	Melting Point / Range [°C]
Sn95Sb5	95.0			5.0	7.25	232 – 240
ELSOLD W2	95.0	4.88	0.12		7.3	220 – 235

**Other alloys available on request. ELSOLD solder wire C3 is also available with TAMURA ELSOLD micro-alloyed Solders SN100(Ag) MA and SN100(Ag) MA-S.**

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		ELSOLD SN100 MA-S	ELSOLD SN100Ag0,3 MA-S	ELSOLD SN100Ag1 MA-S	ELSOLD SN100Ag3 MA-S
Composition [wt.-%]	Sn	99.3	99.0	98.3	96.5
	Ag		0.3 ± 0.2	1.0 ± 0.2	3.0 ± 0.2
	Cu		0.7 ± 0.2		0.5 ± 0.2
	Ni			0.03 - 0.06	
	Ge			0.003 - 0.007	
	P			0.001 - 0.005	
Melting Range [°C]		227 – 230	217 – 227	217 – 223	217
Density [g/cm <sup>3</sup> ]		7.32	7.33	7.36	7.38

### Diameter and Tolerances

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 [mm]

	500 g spool	1000 g spool
Flange diameter	69.5	70
Barrel diameter	33.5	33
Bore diameter	30	30
Total width	41.5	78
Traverse	38	68

The standard wire type has 1 flux core.

### Packaging Units

Spools of 500 g – 1000 g

Colour coding: SnPb alloys: teal

Lead-free alloys: neon yellow

Other spool types are available on special request.

### Shelf Life

We guarantee a minimum shelf life of 36 months if the products are stored with due care in a clean environment. Most likely the flux-cored solder wires can still be used beyond that period. However, we recommend the user to make relevant tests before using the material at his own risk in production.

### Health and Safety

Please refer to the relevant information in the respective material safety data sheet.

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.