

# PERSENDA s.n.c.

10024 - MONCALIERI (IT)

[www.paginegialle.it/persenda](http://www.paginegialle.it/persenda)  
[persenda@virgilio.it](mailto:persenda@virgilio.it)



***SOLDERING ALLOYS***

# PERSENDA

di Giorgio Persenda & C. s.n.c.

Via Kennedy, 6 – 10024 Moncalieri (TO)  
Tel.: +39 011 642678 – Fax: +39 011 645560  
E-mail: [persenda@virgilio.it](mailto:persenda@virgilio.it)



## TECHNICAL SHEET

### PRODUCT: SOLID SOLDER WIRES **"LEAD FREE ALLOY"**

**DESCRIPTION:** made in "ecological" alloys, free from Lead, have been formulated as a good alternative to the traditional Tin/Lead alloys for soft solder. Composed from raw materials having high grade of purity, corresponding to EN 29453 Norm.

**USE:** these wires, **that require a suitable external flux**, find typical use in mechanical and electromechanical fields, for manual or automatic soldering application. Their characteristics of wetting force and capillarity are similar to the Sn/Pb alloys, with a greater tensile and creep strength, especially at warm temperature. Because of melting range a little higher than the traditional Sn/Pb alloys, check and eventual new setting machine is recommended.

<b>Alloy: SN96 AG4</b>	<b>Alloy: SN96,5 AG3 CU0,5</b>	<b>Alloy: SN97 CU3</b>
Melting Range: 221 °C.	Melting Range: 230 °C.	Melting Range 230/250 ° C.
Typical assay (%):		
<b>Silver (Ag) from 3,5 to 4</b>	<b>from 2,85 to 3,15</b>	<b>0,05 max</b>
<b>Tin (Sn) rem.</b>	<b>rem.</b>	<b>rem.</b>
Lead (Pb) 0,10 max	0,10 max	0,10 max
Antimony (Sb) 0,10 max	0,10 max.	0,05 max
Bismuth (Bi) 0,10 max	0,10 max.	0,10 max
Cadmium (Cd) 0,002 max	0,002 max	0,002 max
<b>Copper (Cu) 0,05 max</b>	<b>from 0,3 to 0,5</b>	<b>from 2,5 to 3,5</b>
Indium (In) 0,05 max	0,05 max	0,05 max
Aluminium (Al) 0,001 max	0,001 max	0,001 max
Arsenic (As) 0,03 max	0,03 max	0,03 max
Iron (Fe) 0,02 max	0,02 max	0,02 max
Zinc (Zn) 0,001 max	0,001 max	0,001 max

**SIZES and PACKING :** wire from 3,0 to 1,0 mm. on spools from 10 Kg. to 0,5 Kg in carton-box

For any further information and warnings on the use, handling, toxicity, etc, see the relative Safety Cards

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## TECHNICAL SHEET

### PRODUCT: FLUX CORED SOLDER WIRE *RAPIDOL* TYPE

**DESCRIPTION:** the flux cored wire "*Rapidol*" is a high quality product, made with an internal core consisting of a lightly acid hydro-soluble flux, corresponding to DIN 8511-F SW 21 norms. It's expressly formulated for soldering applications in mechanical, electromechanical and thermo-sanitary fields. The flux contained in the wire is in standard measure of 2,4% on the weight of the alloy, elevating until 3% for particularly hard applications.

**USE:** thanks to high deoxidising force, this product makes possible fast and flowing soldering in various industrial productions and it's suitable for manual as automatic applications. It finds typical use in the production of heat-exchangers, tanks, condenser, electromechanical equipment and in the low thickness copper-tubes soldering.

**AVAILABLE ALLOYS:** Sn60 Pb40 – Sn50 Pb50 – Sn40 Pb60  
(corresponding to EN 29453 norm)

**Sn Ag3/4 - Sn Cu1/3 - Sn Sb5 (LEAD-FREE)**

**Melting Range: from 188 to 250 °C.**

**SIZES AND PACKING:** wire from 3,0 to 1,0 mm.  
Kg. 5 / 3 / 1 / 0,5 plastic spools in carton box.

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## TECHNICAL SHEET

### PRODUCT: FLUX CORED SOLDER WIRE *SOLTIN* TYPE

**DESCRIPTION:** the flux cored wire "*Soltin*" is produced from raw materials with a high grade of purity, with an internal core consisting of a hydrogenated-rosin basis flux, activated with a very low addition of organic chemical substances, that volatilize during the soldering process. It's expressly formulated to be used in the electronic field. The flux contained in the wire, in measure of 2.2% on the weight of the alloy, corresponding to 8511 DIN - F SW 26 norms.

**USE:** the product is specially suitable for all the applications in the electronic field, allowing fast soldering: the light protective residue remaining is neutral and non-corrosive. Suitable to be used on copper, , brass, nickel or cadmium-plated parts and on silver-plated parts, for which the alloy Sn Pb Ag is advised.

**AVAILABLE ALLOYS:** Sn63 Pb37 - Sn60 Pb40 – Sn50 Pb50 – Sn62 Ag2 Pb  
(corresponding to EN 29453 norm)

*Sn Ag3 - Sn Cu1/3 - Sn Ag3 Cu0,5 – Sn Sb5 (LEAD-FREE)*

**Melting Range:** from 183 to 250 °C.

**SIZES AND PACKING:** wire from 2,0 to 0,7 mm.  
Kg. 5 / 3 / 1 / 0,5 / 0,25 plastic spools in carton box.

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## TECHNICAL SHEET

### PRODUCT: FLUX CORED SOLDER WIRE *NO CLEAN* TYPE

**DESCRIPTION:** the flux cored wire "No Clean" is a very high quality product that contains, to its inside, a flux consist of totally no-corrosive halide-free substances, expressly developed for specific electronic applications. This flux, contained in the wire in quantity lesser than 1%, after the soldering process leaves a not visible very minimum residue.

**USE:** the product is specifically suitable for the electronic assembly; it's particularly advised for "re-covering" of printed circuits, previously soldered with No-Clean type fluxes. Evidently, because of very specific use of this product, the fluidity and soldering force are lower than using the traditional rosin-wire.

**AVAILABLE ALLOYS:** Sn60 Pb40  
(corresponding to EN 29453 norm)

**Sn Ag3 - Sn Cu1/3 - SnAgCu - Sn Sb5(LEAD FREE)**

**Melting Range:** from 183 to 227 °C.

**SIZES AND PACKING:** wire from 1,5 to 0,7 mm.  
Kg. 1 / 0,5 / 0,25 plastic spools in carton box.

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## TECHNICAL SHEET

**PRODUCT: SOLDER BARS “WAVE”**

**COMPOSITIONS: SN63 PB 37**

**DESCRIPTION:** the solder bars “Wave” are only composed of specific raw materials with the highest grade of purity. They are produced with a particular process to keep unchanged the quality level during all the working-steps, guaranteeing a final product free from oxides and dross.

**USE:** they find typical use in wave-soldering of the printed circuits.

**Melting Range: 183 °C.**

**Use average Range : 215/230 °C.**

**CONFORMITY’:** UNI EN 29453 - DIN 1707 - BS 219 – QQS 571

### Thipical assay :

	<b>Tin (Sn)</b>	<b>63 ± 0,5%</b>
	<b>Lead (Pb)</b>	<b>rem.</b>
Antimony (Sb)	0,05 %	max
Cadmium (Cd)	0,002 %	max
Zinc (Zn)	0,001 %	max
Aluminium (Al)	0,001 %	max
Bismuth (Bi)	0,05 %	max
Arsenic (As)	0,03 %	max
Iron (Fe)	0,02 %	max
Copper (Cu)	0,05 %	max

**SIZES AND PACKING :** Kg. 1,3. ab. bars in carton box of 25 Kg.

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## TECHNICAL SHEET

### PRODUCT: SOLDER BARS "WAVE" **"LEAD FREE ALLOY"**

**DESCRIPTION:** made in ecological" alloy, free from Lead, have been developed as one of the best alternatives to traditional soldering alloys Tin/Lead; the specific high grade raw materials used and the particular production- process adopted, guarantee a very high qualitative level of the final product, free from oxides and dross.

**USE:** they find typical use in the wave-soldering of the printed circuits, offering a good compatibility with the present technology; because of the slightly higher melting Range than the traditional alloy 63Sn-37Pb, check and eventual new setting machine is recommended.

<b>Alloy:</b>	<b>SN96 AG4</b> Melting Range: <b>221 °C.</b>	<b>SN96,5 AG3 CU0,5</b> Melting Range: <b>217 °C.</b>	<b>SN99,3 CU0,7</b> Melting Range: <b>227 ° C.</b>
Thipical Assay (%):			
<b>Silver (Ag)</b>	<b>from 3,5 to 4</b>	<b>from 2,85 to 3,15</b>	0,05 max
<b>Tin (Sn)</b>	<b>rem.</b>	<b>rem.</b>	<b>rem.</b>
Lead (Pb)	0,10 max	0,10 max	0,10 max
Antimony (Sb)	0,10 max	0,10 max.	0,05 max
Bismuth (Bi)	0,10 max	0,10 max.	0,10 max
Cadmium (Cd)	0,002 max	0,002 max	0,002 max
<b>Copper (Cu)</b>	<b>0,05 max</b>	<b>from 0,3 to 0,5</b>	<b>from 0,45 to 0,9</b>
Indium (In)	0,05 max	0,05 max	0,05 max
Aluminium (Al)	0,001 max	0,001 max	0,001 max
Arsenic (As)	0,03 max	0,03 max	0,03 max
Iron (Fe)	0,02 max	0,02 max	0,02 max
Zinc (Zn)	0,001 max	0,001 max	0,001 max

**SIZES and PACKING:** : Kg. 1 ab. bars in carton box of 25 Kg.

For any further information and warnings on the use, handling, toxicity, etc, see the relative Safety Cards