

FEATURES

- * **Low Silver Content 0.3%**
- * **Low operating temperature**
- * **No need for cleaning**
- * **Low Copper Erosion Rate**
- * **Low Surface Tension Alloy**
- * **Strong and Ductile Joints**

DESCRIPTION

SACX 0307 NC Flux Core Solder wire is a 98%tin, 0.3% silver and 0.7% copper based solder, manufactured in accordance with latest customer requirements available, from only virgin raw materials to meet international specifications. Therefore consistency and quality of the solder can be guaranteed.

The flux has an activity level, almost the same as RMA. The standard wire is offered with 1.5%flux. The residue is solvent soluble if cleaning is necessary.

The core is completely free of voids. The flux contains no halides, have no noticeable odour, and wet and spread as well as rosin cored solders.

Very little smoke is generated during soldering and with no unpleasant odour, oxides or hazardous gasses.

BENEFITS

- * **Lower Material Costs**
- * **Wide Process Window**
- * **Higher Alloy Utilization**
- * **Less Risk in Solder Faults**
- * **Fast Wetting and Hole Filling**
- * **Consistent Quality**

SPECIFICATION

Tin	98%
Lead	0.1% max
Silver	0.3%
Copper	0.7%
Melting point	217°C

ALLOY INFORMATION

Hardness HV	14.1
Density g/cc	7.33
Specific Heat Capacity J/kg °C	0.17
Stress at Max Load (n/mm ²)	29.5
Elongation at Failure	21.8
Thermal Expansion (30-100C)/Cx10-5	1.79
Coefficient (100 – 150C)/C x 10-5	2.30

Roll size:	500g per roll
Packing:	5kg boxes (10 rolls)



Key Points – SACX Lead Free Alloy

*Silver prices are at an all time high. Most PCB's can be adequately assembled using less costly soldering materials.

*SACX 0307 can be used at the same solder temperatures as higher silver alloys like SAC305. There is no need to increase the process temperatures in order to achieve acceptable wetting as is required by Ag free alloys.

I. Wave Option

*This alloy has been designed to produce less dross. This saves time and money by increasing the amount of the alloy that is actually used and then reduces the effort and expense related to managing the dross waste.

*This alloy has been designed to minimize Copper dissolution. It erodes copper traces at a significantly lower rate than SAC305.

*Molten tin based alloys are known to dissolve Copper slowly – this is known as Copper Dissolution of Copper Erosion. At the same time CuSn inter-metallic form both in the molten alloy and eventually at the interface with the Copper.

*By lowering the surface tension of an alloy, silver contributes to the repeated formation of Sn/Cu inter-metallic thereby increasing the amount of Cu erosion. That is why higher Silver alloys like SAC305 are known to have higher Cu erosion rates.

*Special materials (X ingredients) are added to SACX to inhibit and slow the dissolution of Copper.

*With a very low surface tension at normal operating temperatures, SACX exhibit excellent wetting characteristics compared to higher Silver alloys.

*With Silver and other proprietary additives, SACX forms strong, stress resistant joints delivering reliability that is better, in some areas, than higher Silver alloys (ie. SAC305/405)

*An optimized balance of Ag and other additives helps to lower the surface tension of SACX at standard Pb-free operating temperatures. This lower surface tension results in faster wetting contributing to better hole fill and SMD soldering at lower contact times.

