



# TECHNICAL DATA SHEET

CATEGORY:  
NAME:

**LEAD-FREE BAR SOLDER**  
**SAC305 (Sn/Ag3.0/Cu0.5)**

## FEATURES

- LOWEST COST SN-AG-CU ALLOY
- BEST WETTING SN-AG-CU ALLOY
- EXCELLENT SOLDER JOINT RELIABILITY
- LOW MELTING POINT FOR A PB-FREE ALLOY (217°C -218°C)
- COMPATIBLE WITH ALL FLUX TYPES
- EXCELLENT FATIGUE RESISTANCE

## DESCRIPTION

SAC305 is a lead-free alloy that contains 96.5 % tin, 3% silver, and 0.5% copper. This alloy falls under the JEIDA recommendation for lead-free soldering. When used in wave soldering, AIM's SAC305 bar solder offers far superior fluidity as compared to other alloys and makes of bar, resulting in excellent flow. AIM's SAC305 bar solder also produces less dross than other bar solder, wets well, provides superior joint strength, and offers superior copper dissolution rates. AIM's SAC305 bar solder is alloyed in the proprietary Electropure™ method that results in a low drossing, high wetting solder. The Electropure™ process reduces suspended oxides in the solder, thus reducing drossing, improving flow and reducing bridging during soldering. SAC305 may be used with most existing equipment, processes, coatings, and flux chemistries.

## PHYSICAL PROPERTIES

- Specific Gravity: Approx. 7.38
- Melting Temperature: 217°C -218°C

### ALLOY COMPOSITION BY WEIGHT in Percent

Sn: Balance	Ag: 3.0 ± 0.2	Cu: 0.5 ± 0.1
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### TYPICAL IMPURITY LEVELS in Percent

Al: < 0.003	Sb: < 0.1	Cd: < 0.001	Fe: 0.01	In: 0.10
As: < 0.01	Bi: 0.01	Zn: < 0.001	Ni: < 0.003	Pb: < 0.05

## PACKAGING

- AIM's SAC305 bar solder is extruded in a triangle shape to provide easy differentiation from tin-lead alloys.
- Bars are approximately 1 kg each.
- Dimension of bars : 35x3x2.5cm
- Packaging : 20kg /Box

## HANDLING

Refer to the specific Material Safety Data Sheet and the handling section of the individual Technical Data Sheets for the chemistry type of SAC305 solder paste being used.

## FLUX COMPATIBILITY

AIM's SAC305 bar solder is compatible with all major no-clean and water soluble electronic grade fluxes on the market today.

## CLEANING

Refer to the liquid flux manufacturer's data sheet for specific cleaning information.

## TEMPERATURE REQUIREMENTS

- Wave soldering pot temperature of 265-270°C (520-530°F)
- Refer to the flux data sheet for specific pre-heat instructions.

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## ***SAFETY***

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- Use with adequate ventilation and proper personal protective equipment.
- Refer to the accompanying **Material Safety Data Sheet** for any specific emergency information.
- Do not dispose of any hazardous materials in non-approved containers.

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