# SAC305

## Lead-Free Solder Alloy

### Features:

- Lowest Cost Sn/Ag/Cu Alloy
- Excellent Fatigue Resistance
- Compatible with all Flux Types
- Low Melting Point (217°C -218°C)
- Excellent Solder Joint Reliability
- Best Wetting Sn/Ag/Cu Alloy

### 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.

### Temperature Requirements:

Wave soldering pot temperature of 265° -270°C (510° -530°F).
Refer to the flux data sheet for specific pre-heat instructions.

### Physical Properties:

Specific Gravity: Approx. 7.38
Melting Temperature: 217° -218°C (423° -424°F)

### Alloy Composition:

| | | |
|---|---|---|
| Sn: Balance | Ag: 3.0 ± 0.2 | Cu: 0.5 ± 0.1 |

### Typical Impurity Levels:

| | | | | |
|---|---|---|---|---|
| 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:

- SAC305 is available in 1.1 kg (2.5 lb) triangular bars to easily distinguish it from traditional rectangular tin-lead bars.
- SAC305 is available in solid feeder wire diameters of 3.175 mm (.125"). Other sizes are available upon special request.
- SAC305 is also available in Glow Core, OAJ, WS482, RA and RMA cored wire on ½ lb. spools for .010 and .015 diameters, and 1lb. spools for .020, .032, .040, .050 and .062 diameters. Other diameters and spool sizes are available upon special request.

**Flux Compatibility:**

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

**Cleaning:**

Refer to data sheets provided by the flux manufacturer.

**Handling and Storage:**

Consult the MSDS for specific handling procedures.

**Safety:**

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



The information contained herein is based on data considered accurate and is offered at no charge. Product information is based upon the assumption of proper handling and operating conditions. All information pertaining to solder paste is produced with 45-micron powder. Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated. Please refer to http://www.aimsolder.com/terms.cfm to review AIM's terms and conditions.

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