



Lead-Free Solder Alloy

Features:

- Low Cost Sn-Ag-Cu Alloy
- Excellent Fatigue Resistance
- Excellent Solder Joint Reliability
- Compatible with all Flux Types
- Fast Wetting Comparable to SAC305
- Melting Point is 217 ° - 227° C

Description:

SAC0307 is a lead-free alloy that contains 99.0% tin, 0.3% silver, 0.7% copper. SAC0307 is similar to SAC305, the JEIDA recommendation for lead-free soldering. When used in wave soldering, AIM's SAC0307 bar solder offers far superior fluidity as compared to other alloys and makes of bar, resulting in excellent flow. AIM's SAC0307 bar solder with two additional elements, also produces less dross than other bar solders, wets well, provides superior joint strength, and offers superior copper dissolution rates. AIM's SAC0307 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. SAC0307 may be used with most existing equipment, processes, coatings, and flux chemistries.

Temperature Requirements:

- Wave soldering pot temperature of 255-270°C (490-518°F).
- Refer to the flux data sheet for specific pre-heat instructions.

Physical Properties:

- Specific Gravity: 7.3 g/cc
- Hardness: 14 HV (137.3 MPa)
- Melting Temperature: 217°C (solidus) - 227°C (liquidus)
- Elongation to Failure: about 22%
- Specific Heat Capacity: 0.17 J/kg C
- CTE: 2.3 (10-5 mm/mm/°C)

Alloy Composition:

<i>Alloy Composition in Percent</i>			
SAC0307	Sn: Balance	Ag: 0.3 ± 0.1	Cu: 0.7 ± 0.1

Typical Impurity Levels:

	Ag	Al	As	Au	Bi	Cd	Cu	Fe	In	Ni	Pb	Sb	Sn	Zn
Percentage %	0.2-0.4	0.005	0.03	0.05	0.10	0.002	0.6-0.8	0.02	0.10	0.01	0.05	0.10	Balance	0.003

Flux Compatibility:

SAC0307 bar solder is compatible with all major no-clean and water soluble electronic grade fluxes on the market today. Recommended AIM fluxes include: WS735 or WS715M water soluble fluxes, NC265 or NC266-3 no clean fluxes and NC270WR or NC275 VOC-Free no clean fluxes.

Cleaning:

- Please refer to the AIM cleaner matrix for a list of compatible cleaning materials for AIM fluxes.
- Refer to data sheets provided by the flux manufacturer for others.

Handling and Storage:

- If this alloy is used in water soluble cored wire, the product will have a shelf life of 3 years. All other cored wire, solid wire, and bar solder products have an indefinite shelf life.
- 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.

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AIM IS ISO9001:2008 & ISO14001:2004 CERTIFIED

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