

SAC305 Solder Bar: Sn96.5/Ag3.0/Cu0.5

Product Highlights

- Precision Cast High Purity/High Reliability Solder Bar
- Manufactured specifically for High Quality Electronics Manufacturing (EMS, ECM, OEMs)
- Excellent wetting and drainage which reduced bridging and shorts.
- Designed for solder pots, wave solder machines and selective soldering machines.

Purity Specifications

Element	IPC J-STD-006C	HMT SAC305
Silver (Ag)	3.0 % ±0.2	3.0% ±0.1
Aluminum (Al)	0.005%	< 0.002 %
Arsenic (As)	0.030%	< 0.030 %
Gold (Au)	0.050%	< 0.030 %
Bismuth (Bi)	0.100%	< 0.030 %
Cadmium (Cd)	0.002%	< 0.002 %
Copper (Cu)	0.5% ±0.1	0.5 % ± 0.1
Iron (Fe)	0.020%	< 0.020 %
Indium (In)	0.100%	< 0.030 %
Nickel (Ni)	0.010%	< 0.010 %
Lead (Pb)	0.070%	< 0.050 %
Tin (Sn)	96.5% ±0.5	96.5 % ± 0.5
Zinc (Zn)	0.003%	< 0.002 %
Antimony (Sb)	0.200%	< 0.050 %

Application Data

Wave Solder Parameters	Sn63/Pb37	HMT SAC 305
Immersion depth in wave	1/2 to 2/3 of the board thickness	1/2 to 2/3 of the board thickness
Top side preheat temperature	80 – 100 °C	90 – 120 °C
Bottom side preheat temperature	25 - 35°C higher than top side	25 - 35°C higher than top side
Preheat ramp rate maximum	2 °C/second maximum	2 °C/second maximum
Conveyor speed	4 – 6 ft/min (1.2 – 1.8 m/min)	3– 6 ft/min (0.9 – 1.8 m/min)
Contact time in wave	2-4 seconds	3-6 seconds
Solder pot temperature	230-260 °C	250-260 °C

Selective Solder Parameters	Sn63/Pb37	HMT SAC 305
Top side preheat temperature	80 – 100 °C	90 – 120 °C
Bottom side preheat temperature	25 - 35°C higher than top side	25 - 35°C higher than top side
Preheat ramp rate maximum	2 °C/second maximum	2 °C/second maximum
Movement Rate while soldering	5-15 in/min	5-15 in/min
Contact time	1-3 seconds	1-4 seconds
Solder pot temperature	280-310 °C	290-310 °C

Technical Specifications

Test	Sn63/Pb37	HMT SAC 305	Test Method
Melting Temperature (°C)	183	217-219	DSC
Specific Gravity	8.4	7.4	S.G. Measuring Apparatus
Thermal Conductivity (J/m*s*K)	50	58	Estimated
Tensile Strength (M*Pa)	44	41.4	10mm/min (25°C)
Elongation (%)	25	41	10mm/min (25°C)
Thermal Shock	>1000 Cycles	>1000 Cycles	-40/+80°C 1 Hour

Storage and Shelf Life

Shelf life is 5 years when stored between 50-90 °F (10-32 °C) in a standard warehouse environment. Store product in original packaging top prevent contamination from dust or moisture.

Packaging

Container Sizes	25 lb and 50 lb boxes
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Health and Safety

Please refer to the Safety Data Sheet (SDS) before use. Safety data sheets can be found at www.hmtsolder.com

This data is based on information that the manufacturer believes to be reliable and offered in good faith. In no event will HMT be responsible for special, incidental and consequential damages. The user is responsible to the Administrative Authorities (regulations for the protection of the Environment) for the conformity of his installation.