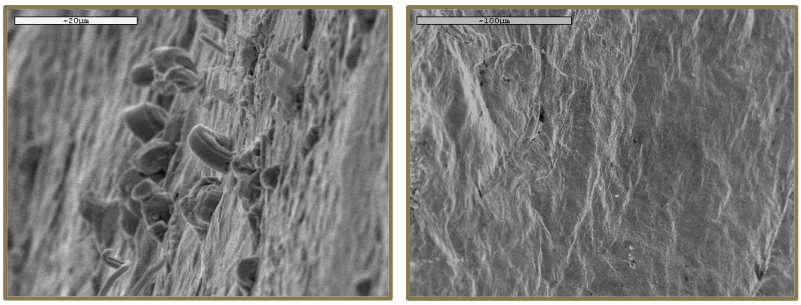
REL61 LEAD-FREE SOLDER ALLOY

FEATURES

- Reduces Tin Whisker Formation
- Lower Reflow/Solder Pot Temperature
- Low-Cost SAC Alloy
- Improved Wetting Versus All Low/No-Silver Alloys
- For use in Lead-Free Process Only
- Complies with IPC J-STD-006



SAC305 REL61

@3100 hours

DESCRIPTION

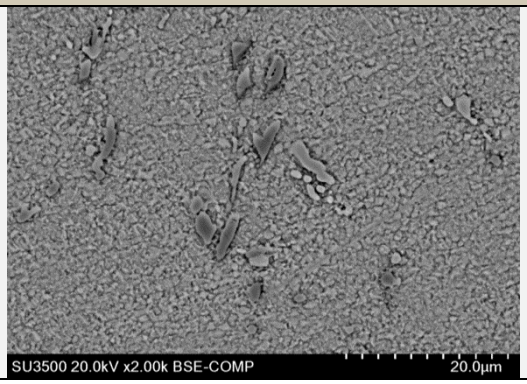
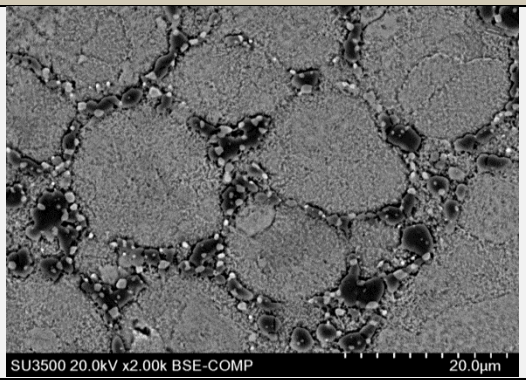
AIM's REL61TM is comprised of tin, bismuth, silver, copper micro-element grain structure refiners. REL61 provides the electronics assembly marketplace a low-cost alternative to SAC alloys that has reliability and performance characteristics equal to SAC305 and greater than other low/no-silver solder alloys. REL61 has shown to reduce tin whisker formation as well as outperforming low/no-silver alloys in thermal shock, vibration and drop shock resistance. Lower reflow and solder pot temperature can be used with REL61 versus other low/no silver alloys.

AVAILABILITY

REL61 is available in bar (1.1 kg / 2.5 lb.), solid feeder wire (diameters of 3.175 mm /.125"), and no clean solder paste (M8 T4 500 gr jar). Other product options are available upon special request.

PHYSICAL PROPERTIES

PARAMETER	RESULTS	
	REL61	SAC305
Melting Range	208-215°C	217-220°C
Density	7.38 g/cm^3	7.38 g/cm^3
Wetting Time	0.9/sec	0.9/sec
Wetting Force	4.4/mN	4.4/mN
Hardness	26/HV10	14/HV10
Thermal Conductivity	65 W/ m· K	58 W/ m· K
CTE	25.49 ppm/°C	24.0 ppm/°C
Electrical Resistivity	0.156 μΩ*m	0.132 μΩ*m
Electrical Conductivity IACS	11%	16.6%
Tensile Strength (aged 150°C for 24 hours)	70 MPa	34 MPa
Elastic Modulus @ 23ºC	54 GPa	NP
Yield Strength @ 23ºC	56 MPa	NP

PARAMETER	RESULTS	
	REL61	SAC305
Microstructure Analysis (aged) **150° for 24 hours**		

HANDLING & STORAGE

Solid wire and bar solder products have a shelf life of 7 years under proper storage conditions. For other product categories, refer to those product specific TDS's. Consult the SDS for specific handling procedures.

SAFETY

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

CLEANING

Refer to data sheets provided by the flux manufacturer.