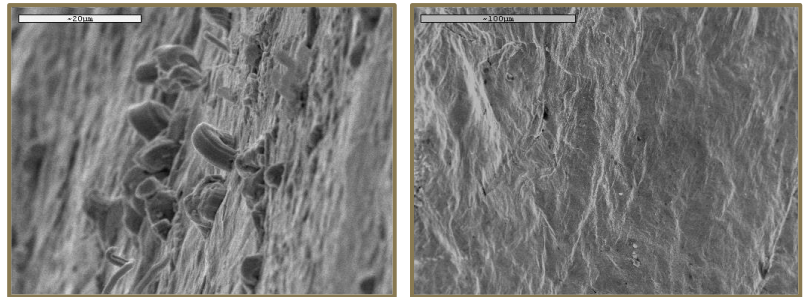


## REL61 LEAD-FREE SOLDER ALLOY

### 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

@3100 hours

REL61

### DESCRIPTION

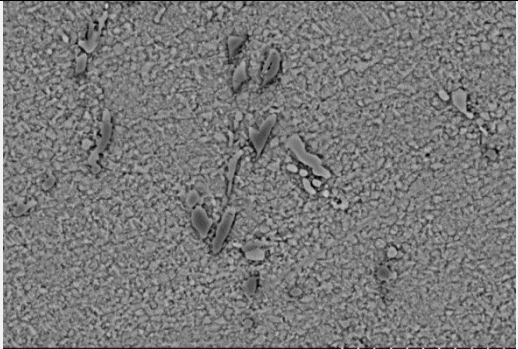
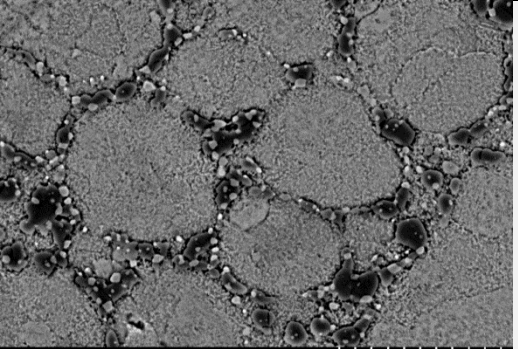
AIM’s REL61™ is comprised of tin, bismuth, silver, copper micro-element grain structure refiners. REL61 provides the electronics assembly marketplace a low-cost alternative to SAC alloys that has reliability and performance characteristics equal to SAC305 and greater than other low/no-silver solder alloys. 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.

### PHYSICAL PROPERTIES

PARAMETER	RESULTS	
	REL61	SAC305
Melting Range	208-215°C	217-220°C
Density	7.38 g/cm <sup>3</sup>	7.38 g/cm <sup>3</sup>
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 @ 23°C	54 GPa	NP
Yield Strength @ 23°C	56 MPa	NP

\*All information for reference only. Not to be used as incoming product specifications or for process design. Consult Certificate of Analysis for product specific information.

**DISCLAIMER** 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. 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-conditions> to review AIM’s terms and conditions.

PARAMETER	RESULTS	
	REL61	SAC305
Microstructure Analysis (aged)  150° for 24 hours	 <p>SU3500 20.0kV x2.00k BSE-COMP 20.0µm</p>	 <p>SU3500 20.0kV x2.00k BSE-COMP 20.0µm</p>

**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.

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