

Accelerated Tin Whisker Testing

Procedure:

Test conditions follow September 2003 NEMI guidelines.

- **Ambient Storage:** Test and control components shall be stored at $21^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and 30-80% RH for 1000 hours.
- **High Temp / RH Storage:** Test and control components shall be stored at $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and 93% +2 / -3% RH for 1000 hours.
- **Thermal Cycle:** Test and control components shall be thermal cycled from -55°C (+0 - 10°C) to $+85^{\circ}\text{C}$ (+10 -0) for 500 cycles.

Results:

Testing was completed on 7/23/2004

No whiskers were detected on any of the products.

Images of the parts following each test are provided in the following Appendices:

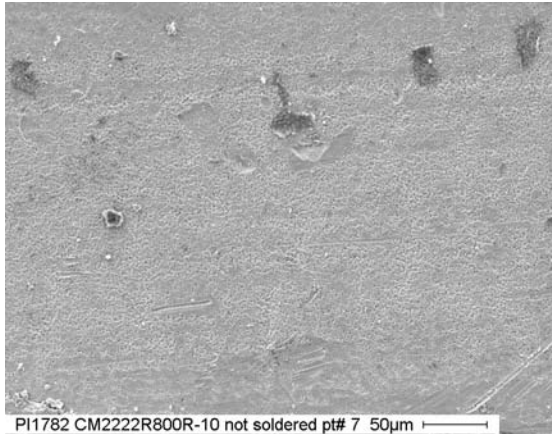
- A – Ambient Storage
- B – High Temperature / RH Storage
- C – Thermal Cycle

Note: The lead-free version is in the left column and is denoted by the -10 suffix. The standard 90/10 Sn/Pb part is in the right column and is denoted by the -00 suffix.

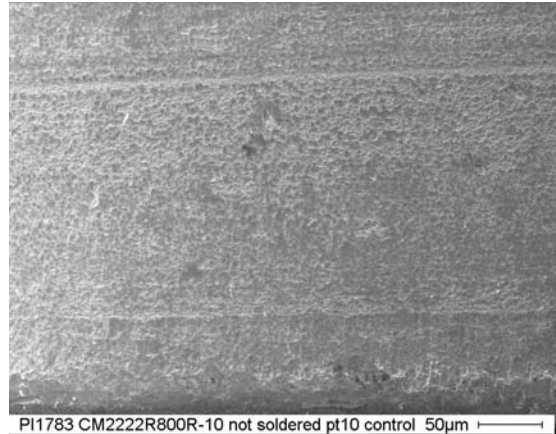
Aaron Fitzsimmons
Process Engineer – Board Level Products

Appendix A

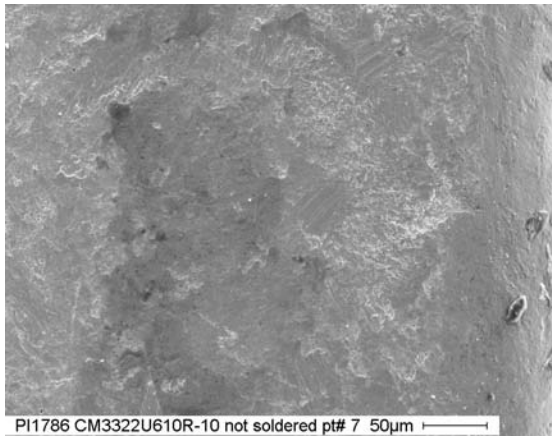
Ambient Storage Test



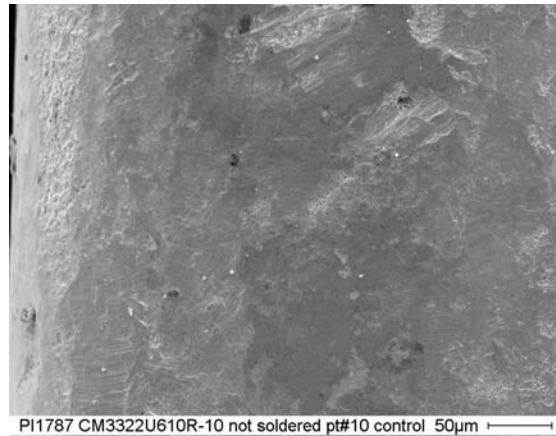
CM2722R800R-10



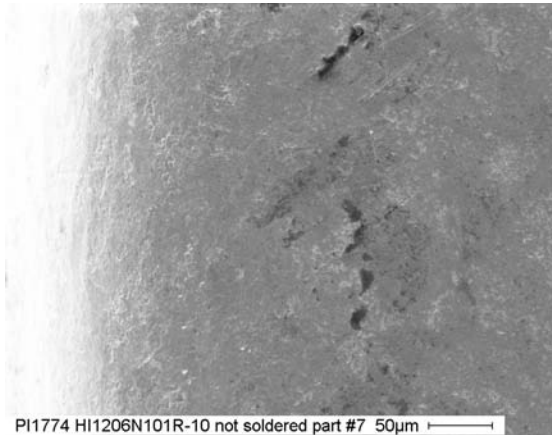
CM2722R800R-00



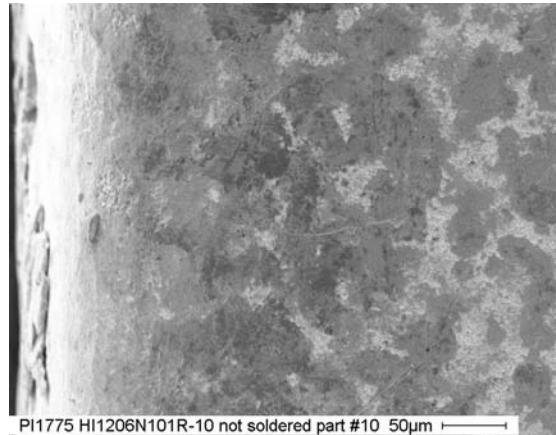
CM3322U610R-10



CM3322U610R-00

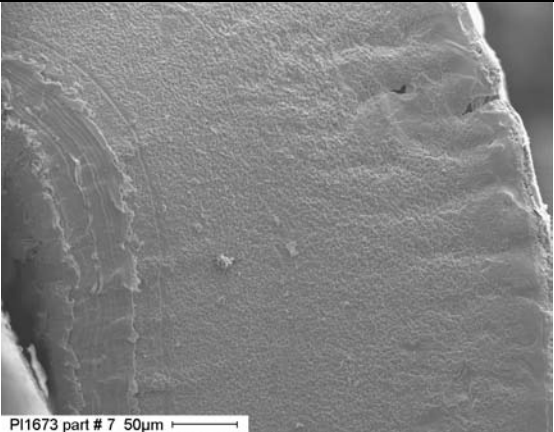
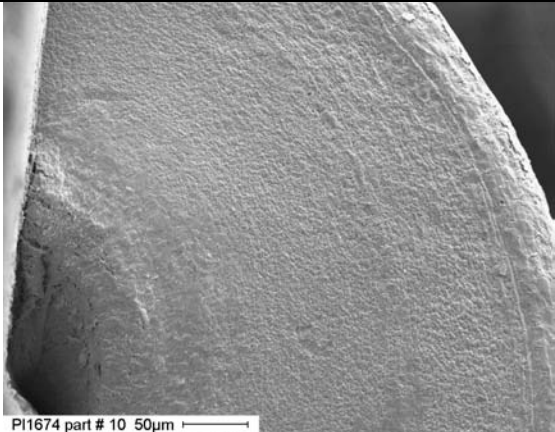
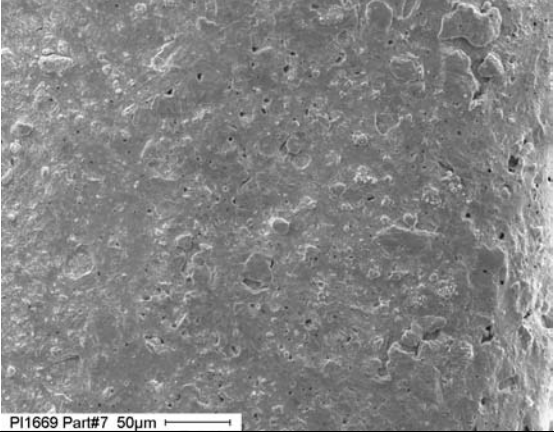
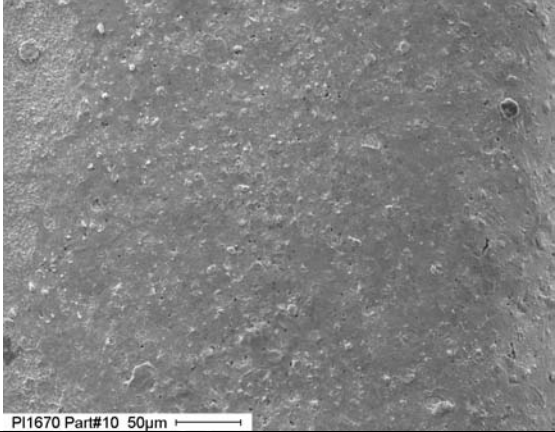
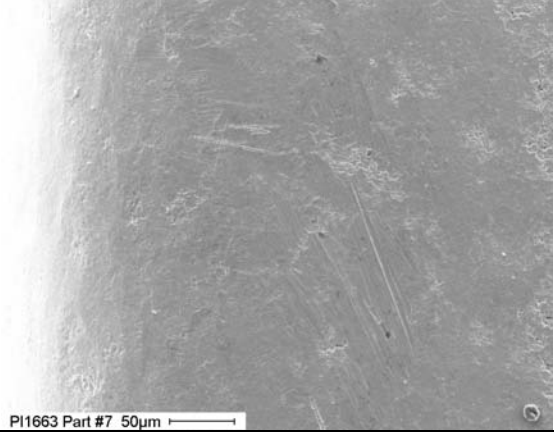
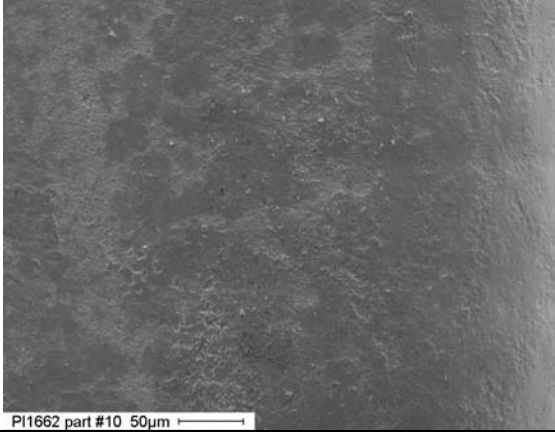


HI1206N101R-10



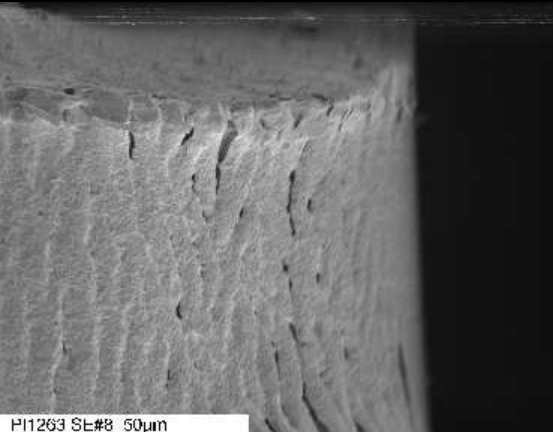
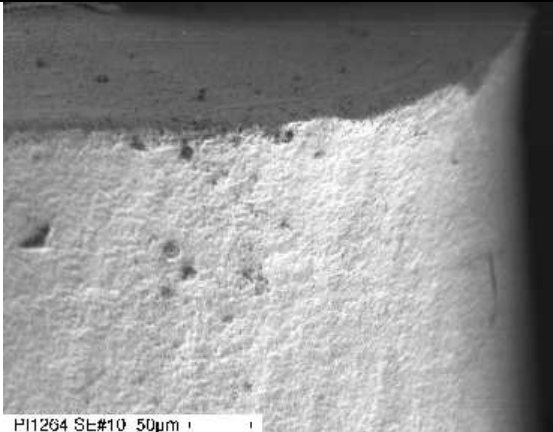

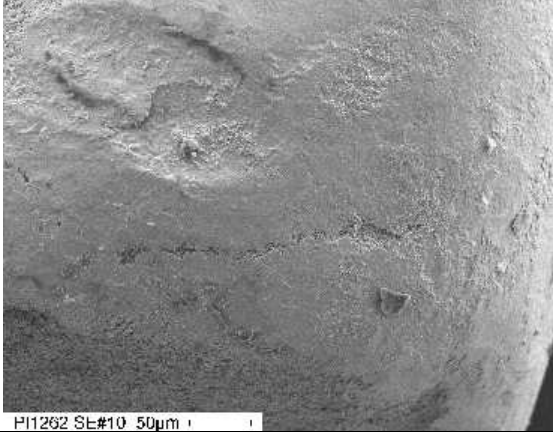
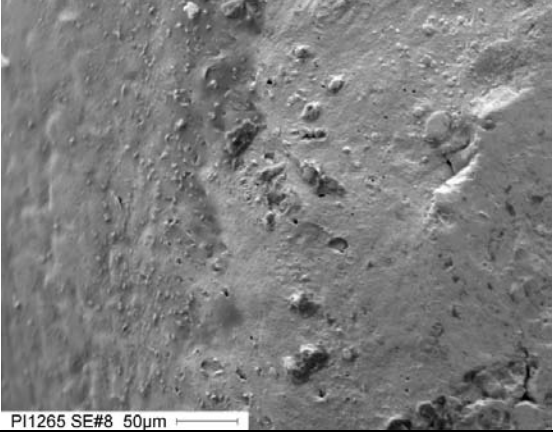
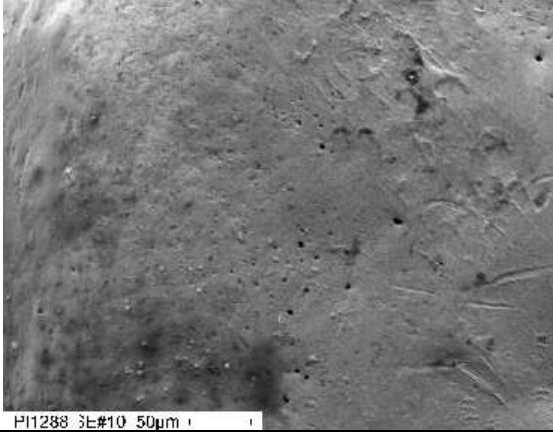
HI1206N101R-00

Appendix B
High Temperature & Humidity Test

 <p>PI1673 part # 7 50µm</p>	 <p>PI1674 part # 10 50µm</p>
CM2722R800R-10	CM2722R800R-00
 <p>PI1669 Part#7 50µm</p>	 <p>PI1670 Part#10 50µm</p>
CM3322U610R-10	CM3322U610R-00
 <p>PI1663 Part # 7 50µm</p>	 <p>PI1662 part #10 50µm</p>
HI1206N101R-10	HI1206N101R-00

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**Appendix C
Thermal Cycle Test**

 <p>P11263 SE#8 50µm</p>	 <p>P11264 SE#10 50µm</p>
CM2722R800R-10	CM2722R800R-00
 <p>P11261 SE#8 50µm</p>	 <p>P11262 SE#10 50µm</p>
CM3322U610R-10	CM3322U610R-00
 <p>P11265 SE#8 50µm</p>	 <p>P11288 SE#10 50µm</p>
HI1206N101R-10	HI1206N101R-00

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