

Independent Test #1 Less is More!





* Based on 3,000 gram input.



Study Puts Leading Brands to the Test

Mr. Don C. Porter, a nationally known metallurgist and solder expert, was commissioned to compare leading solders to determine dross generation levels and the amount of solder in generated dross. Two tests—a wave test and a beaker test for metal entrapped in dross—were performed in Pennsylvania under identical conditions on four nationally recognized brands of solder.

The wave test consisted of melting samples of each tested solder in separate Pilarhouse Mini-Wave Dipper solder pots and turning on the pump motor when temperatures stabilized at 500°F. The wave pump ran continuously for four hours, at which time the chimney was removed and the dross was collected and weighed.

The beaker test for metal entrapped in dross determines the actual amounts of solder discarded with typical dross removal. Generated dross was weighed and placed in a beaker at 500° F for five minutes. The liquid metal was poured off. The dross was then cooled and weighed, and the percentage of solder in the total dross weight was then calculated. A high percentage of solder in the dross would indicate a large loss and less solder usage.

Reduced Waste Means Higher Yields

Graph #1: Percent Dross, shows Metallic Resources' FOUR 9's[®] electrolytic solder generated 25 percent less dross compared to Alpha Hi-Flo[®] and 27 percent less dross compared to Kester Ultrapure[®] solders.

Graph #2: Grams of Solder in Dross, shows that Metallic Resources' standard electrolytic solder generated 15 percent fewer grams solder in the dross compared to Alpha Hi-Flo and 10 percent fewer than Kester Ultrapure. MRI FOUR 9's electrolytic solder generated 53 percent fewer grams solder in the dross compared to Alpha Hi-Flo, and 50 percent fewer than Kester Ultrapure.

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Graph #3: Percent Solder in Dross, shows that Metallic Resources' standard electrolytic solder generated 25 percent less solder in the dross compared to Alpha Hi-Flo and 15 percent less than Kester Ultrapure. MRI FOUR 9's electrolytic solder generated 40 percent less solder in the dross compared to Alpha Hi-Flo and 32 percent less than Kester Ultrapure.

Improved Efficiency Reduces Material Cost

Independent testing proves the superiority of Metallic Resources electrolytic solders since they generate less dross, and the solder content of generated dross is significantly reduced. Today's discerning electronics manufacturers realize that MRI electrolytic solders provide greater cost-effectiveness than competitive products since they generate less waste and yield more soldered joints per pound of solder.

Other benefits of Metallic Resources' electrolytic solders include operation at lower pot temperatures for energy savings, reduced thermal stress and extended pot life.

Lower viscosity improves fluidity, which increases the solder's

wetting capabilities.

Shouldn't your manufacturing operation be as cost-effective as possible? Call Metallic Resources today to experience the ultimate in solder purity at no cost.



Superior Quality Electrolytic Solders

Metallic Resources unique electrolytic solders outshine all others to provide greater cost effectiveness, higher finished goods quality, and superior production line performance.



® FOUR 9's is a registered trademark of Metallic Resources Incorporated.

- ® Hi-Flo is a registered trademark of Alpha Metals Incorporated.
- ® Ultrapure is a registered trademark of Kester Incorporated.

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