

ADTOOL Newsletter

Special Interest Articles:

- MS2 dross eliminator
- Lead Free Solutions
- Weller – Performance by design
- Selective Soldering

MS2 is available for the following alloys:

63/37
SAC305
SN100C
SACX

PK Metal's MS2 Dross Eliminator

Unlike conventional powders, oils, mechanical separators and even nitrogen blankets, MS2™ molten solder surfactant doesn't just reduce solder dross in wave soldering machines—it actually eliminates it.

By eliminating dross, MS2™ molten solder surfactant allows manufacturers to reduce their solder usage by as much as 70%, depending on production volume, resulting in significant cost savings.

Dross is formed when molten solder comes into contact with oxygen. Dross consists of metal oxides plus otherwise good solder metal that is bound up with the oxides and is thus unavailable for soldering. This bound-up metal makes up as much as 70% or more of the total amount of dross, which in a typical wave solder machine can amount to as much as 3 lbs. or more per hour.

Immediate ROI

* Reduces solder usage 40-75% based on production volume

*Eliminates dross-related soldering defects and rework

* Greatly reduces the cost of managing hazardous waste

MS2™ molten solder surfactant, which is available for both leaded and lead-free processes, is a nontoxic, nonvolatile, organic liquid that is poured onto the surface of the solder bath.

About 200–300 ml is the average amount for an initial charge; a smaller amount of fresh product is usually added once or twice per shift.

MS2™ molten solder surfactant does not mix with the metal but forms a thin floating layer that covers areas of the solder surface excluding the wave, which it does not disturb. There are no fumes or odor and no residue is deposited on boards or components.

When MS2™ molten solder surfactant is added to the solder bath, it prevents dross from forming on the surface, and any dross generated by the exposed solder wave is immediately converted back into usable metal, so no dross accumulates.

Furthermore, MS2™ molten solder surfactant keeps on removing metal oxides as solder is pumped through the system, cleansing and purifying the bath. The result is lower surface tension; enhanced wetting and fewer solder-related defects have also been observed.

As the layer of MS2™ molten solder surfactant continues to convert dross back to metal, it will become thicker and more viscous, and can be easily removed with a supplied skimmer. The small volume of spent material can then be inexpensively shipped back to P. Kay Metal for recycling.

Visit PK's website at www.pkaymetal.com or contact us for your free ROI calculation.





"At \$32 per tip, my estimated costs would have been \$20,000. By switching to Koki, I reduced my tip consumption by an estimated 45% and saved \$8,000!"

The alloy composition of the lead-free resin flux cored solder is now dominated by SAC305, resulting in a much higher Sn Content compared to SnPB wire. While soldering, Sn enters the crevices of the plated surface eroding the Cu in the center of the tip and the Cu flows out of the bit. When the Cu in the center becomes thinner, the external pressure in

exerted and the plating surface gets damaged.

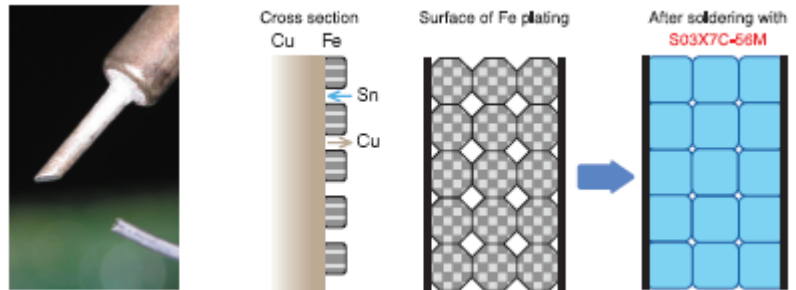
A solution is thickening up the plating surface. However, this is not a complete solution.

By adding 0.03% of Co, we are able to relieve the internal pressure since it replaces what the Pb use to do, hence extending tip life.

Koki Solder Wire offers many advantages over conventional lead free wire.

Namely:

- Extended tip life.
- Less flux splattering.
- Less heat.
- Better flow characteristics.
- Better thermal fatigue resistance.



Lead Free: Generation 8 Flux development!



Pillow defect

When you want to have dinner in a strange country, who do you ask? A local of course!

Looking at the industry, we can see that the Japanese have been assembling lead free product since the 90's.

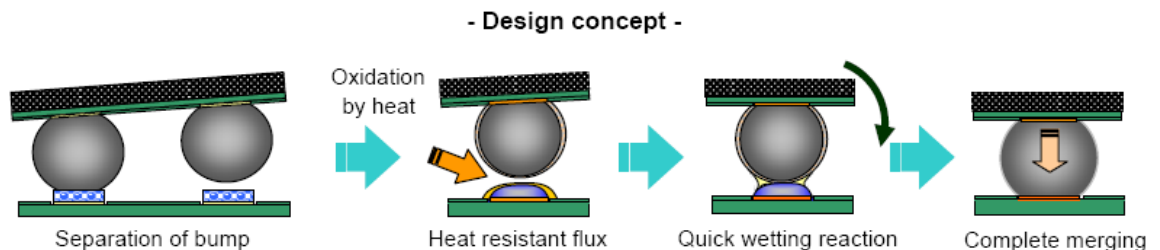
Koki have recently released their next generation solder paste featuring *not only anti-voiding but now anti-*

pillowing features.

Typically, we have seen our paste look similar to better than competitive products. However, a deep look inside the joints tells us a remarkably different tale which we have been living with until recently.

By switching to Koki paste, we now have the "magic pill" to solve our immediate issues and jump at lighting speed in lead free quality.

Further details and samples are available at Adtool (sales@adtool.ca).



The "Old Reliable" is even better now!

Product Features:

- New WP80 offers 80 watts of power with short tip-to-grip (52mm)
- Barrel can be exchanged with optional longer version to work at standard length (65mm)
- New WP80 has same performance characteristics as the WSP80
- Perfect for Lead Free solder
- Unique silver heater allows fast, efficient soldering
- 3 "radio buttons" allows pre-set of frequently used temp settings
- Setback, lockout, temp. window, F/C switching, standby, auto-off time
- Large high contrast LCD display displays more information at a glance
- ESD safe to protect sensitive components
- WD1M features a USB connection to allow data logging and station control via a PC (not included). This unit can also control the new WMRP iron and WMRT tweezers

Limited Time Offer

Buy a WD1000
and get a FREE
upgrade to a
WD1M



Promotional Price
\$275.00 CDN plus a 20\$
US mail in rebate

Selective Soldering – changeover in under 2 minutes!



The Spark 100 has a few new features but most importantly, the system will not only profile each and every solder joint but...

- ❖ Switch from eutectic to lead free in under 2 minutes.
- ❖ Soldering time of 1 - 3 seconds per joint
- ❖ Savings on electricity when not in operation
- ❖ No more dross, flux or bar to transport, store and dispose of.
- ❖ Programming is a snap using a standard library
- ❖ Inline operation
- ❖ Small footprint
- ❖ Uses standard industry solder wire

“Moving prototypes around? CCI have a wide array of solutions for you.”

Conductive Containers (CCI)

CCI announces its new **GREEN** Corstat Corrugated! All of CCI's products have always been "RoHS" compliant. And now you can also easily identify this compliance in the color **GREEN**. [Contact us](#) for more information.

- Recyclable
- Static Shielding
- Non-Charge Generating
- Low Sulfur
- Permanent
- Groundable
- Eliminate Bags
- Physical Protection
- Reusable



Lead Free Testing Using XRF

We have established an ESD safe environment not readily available at most labs.

Now available is XRF testing to detect Pb, Cd, Ca, Hg, and Br.

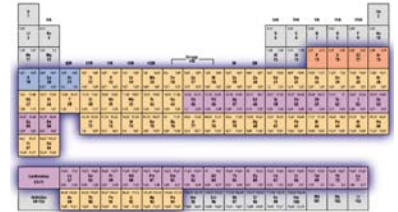
Unlike handhelds, our self contained unit uses a 2mm beam to isolate the questionable part and can be operated by almost anyone.

To date we have tested everything from pcb's and components to soldering tips and bar samples.

Have we caught anything?

To date we have discovered performs that contained lead along with mismatched

soldering tips along with a variety of other things.



Lead Free Products Available at Adtool

- Green ESD high Temp table mats
- Signs
- Weee & RoHS labels
- Tip identification rings
- Green Workstations
- Green Understencil wiping rolls
- Green Fancort Conductive Vertical Racks.

Looking for a deal?

We have old inventory we are getting rid of.

Here is a partial list of items:

- Ekin Keys of various sizes and packages
- Old rolls of labels of various sizes
- Assorted cutters
- Assorted sizes of understencil wiper paper.



Contact us:

Adtool Corporation 1-800-361-6727 or sales@adtool.ca