Title: SACX™ Anti-Oxidant Additive

Dross reducing Elements

SACX™ alloy contains an Anti-Oxidant Additive. This additive reduces the oxidation of the solder, but due to preferential oxidation over Tin, Silver and Copper it is consumed in the process. For most medium/high volume operations the level of this dross reducing additive is naturally kept in equilibrium by the regular addition of fresh solder. For some lower volume operations where the wave is on for extended periods and the alloy usage is low the levels may need to be replenished by the small addition of SACX™ Anti-oxidant Additive. The need for this can be reduced by following the guidance on the Reference Bulletin "Wave Set up to Minimize Dross".

How do I know if I need to make this adjustment?

As part of the pot rite service our laboratories are set up to check the concentration of the Anti-Oxidant Additive on all SACX™ pot analysis. If they find that the concentration has dropped below the minimum then they will automatically advise the addition of the SACX™ Anti-oxidant Additive.
Other signs that can indicate that adjustment is required are:

- A change in the appearance of the dross from dry grey/black powdery oxide to an emulsified mix of powder and metal ("wet dross").
- Yellow coloration on the surface of the metal.
- Dross appearing on the surface of the wave.
- More dross than normal being removed from the solder pot.

If any of these symptoms occur, take a sample and send this to your local Cookson Electronics Assembly Materials laboratory for a full analysis. They will confirm if you need to take action.

What is the SACX™ Anti-Oxidant Additive?

This is an alloy of Tin and the anti oxidant elements, it is <u>not a powder or oil</u> and must alloy with the solder to be effective.

How much SACX™ Anti-Oxidant Additive should I add?

For every 100kg (lb) of alloy in the pot add 0.6kg (lb) of item No. 150244 SACX™ Anti-Oxidant Additive

How do I add the SACX™ Anti-Oxidant Additive?

1. Temperature of Pot should be no less than 260C (500F)
2. Turn off pumps.
3. De-Dross the pot and remove all the oxides from the surface
4. Add pellets to the solder pot at approx 1lb (500g) at a time, stir with a ladle while adding.
5. Ensure that all the pellets have dissolved before switching on the pumps.
6. Turn on pumps and circulate for 15 min to ensure full mixing.
7. Remove any oxide formed.
8. Take base line sample.
9. Commence production.

Can I use Dross reducing powders and oils with SACX™?

We do not recommend the use of these products with SACX, there is a risk that these products will react with the Anti-Oxidant Additive in SACX and effectively remove the active ingredients from the solder.

If you have any questions regarding this subject, please contact your local sales office for advice.