

Vitronics Soltec

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Residues on the soldermasks after wavesoldering

Introduction

After wavesoldering sometimes residues on the board remain on the solderresist coating. The origing of these residues can be different, but are always related to the behaviour of the resist in relation to the flux that is used. Also the soldertemperature has an effect on the process of residue formation.

Different types of residues

Residues on the solderside of soldermasks can be solderballs, solderwebbing or gummy residues perspiring from the solderresist material.

The cases for solderballs and solderwebbing are often related to the combination of solderresist and flux and are described in Information Sheets 33 and 101 respectively.

The case of the gummy residues perspiring from the solderresist material becomes more prominent when soldering at higher solder temperatures. With lead-free solderprocesses the soldertemperature is often 10 - 15 degrees higher set than for tin-lead solder. So the effect of perspiring residues that was not visible with a tin-lead solderprocess may show up with the lead-free wave soldering.

This perspiring residues are coming out from solderresist base material that was not properly cured during production. These residues are not related to solder like dross and should therefore be called "perspiring solderresist residues".

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