



Tensor-HTD Series

DICING/BACK-GRINDING COOLANTS/LUBRICANTS with ANTI-CORROSION and ESD SUPPRESSION ADDITIVES

As Back-End IC processing and packaging becomes more integral to the performance of electronic devices, optimization of legacy back-end processes becomes critical.

Intersurface Dynamics historically has helped to extend an array of legacy processes for use in the production of these more value added parts through the development complex chemistry that solves process and material issues. Different more complex wafers/die/package design and materials can be more easily processed with defect reduction and yield improvement through the simple integration of one of the four TENSOR HTD Series Products.

TENSOR HTD, HTD-2, HTD-3 and HTD-4 are each a specially formulated chemical product performing as a combination coolant/lubricant/corrosion inhibitor for dicing/back-grinding semiconductor devices and packaging. Four product variations exist to enable a precise match to different process requirements and parameters.

Benefits:

- Simplify/eliminate post-process cleaning by reducing saw dust/debris from the wafer/die/package surface.
- Reduce IC defects caused by chipping during dicing.
- Reduce de-lamination through package stress reduction during dicing.
- Reduce bonding defects caused by metal oxide formation on bond pad surfaces by eliminating corrosion/oxidation of exposed metals during dicing/back-grinding
- Extend saw blade/grinding wheel life by keeping the bond/diamond matrix clean.
- Increase grind uniformity and reduce surface roughness of wafers TSV/TWV by allowing uniform and proper wear of the grinding wheel.
- Eliminate electrical defects through prevention of galvanic corrosion.
- Eliminate electrostatic discharge during dicing for the most ESD sensitive devices while inhibiting oxide growth.



Figure 2: Aluminum bond pads showing corrosion after dicing

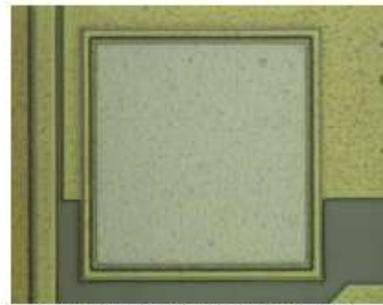


Figure3: Bond pad exhibiting no corrosion

Directions:

Mix TENSOR HTD at a dilution between 200:1 and 1000:1 in the saw/grind water using an injection pump. Insure enough of the mixture floods the interface of the blade/wheel wafer/ package interface.

Additional Information:

Intersurface Dynamics manufactures 3 product lines, TENSOR, VECTOR and CHALLENGE Series Products. Visit our web site at www.isurface.com for more information.

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