

## Dicing Tape Suitable for Use with Inline Systems (Active Surface)



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### Summary

In recent years, changes have occurred in semiconductor wafer manufacturing processes as wafers have become progressively thinner. In order to reduce the risk of damaging these thin wafers, inline systems are being introduced featuring integrated wafer grinders and dicing tape applicators to ensure that wafers can be safely moved between processes. On account of such changes in the manufacturing process, problems have arisen as dicing tape and wafers become strongly adhered, meaning that pickup and release can no longer successfully take place. We discovered that this was due to the fact that oxidation of the surface immediately after backgrinding was not progressing, meaning that it remained active. We therefore set out to develop a dicing tape that would solve this problem. As part of our investigations we considered an adhesive that used an acrylic polymer as its main ingredient and which did not have to rely on adding a substance with a low molecular weight in order to achieve low peel strength characteristics. The product we developed had good pickup characteristics with minor levels of contamination, which enabled us to incorporate it into our basic design for dealing with the active surface.