

White Paper: Adhesive considerations at the design stage

When it comes to the design and development of new products, and choosing an adhesive to bond them together, an adhesive supplier often finds themselves as the last port of call.

This approach can leave you in a position where your list of requirements severely limits the adhesives suitable for your application. Bondline design, substrate compatibility and environmental resistances sometimes mean there isn't an adhesive that fits without major compromise, which could result in critical design changes, and delayed projects. Leaving development of the bonding process too late can often prove expensive.

In our whitepaper, '[*Adhesive considerations at the design stage*](#)', Peter Swanson explains some of the benefits of considering adhesives early on in your projects and how these can mitigate the risk of many future complications, saving you both time and money.

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Introduction

Though it may seem initially like a simple task, adhesive bonding is a vital and challenging part of product design. Every application is different and establishing what works best for your application involves detailed discussions and testing. For design engineers without specialist adhesives experience, consulting with an adhesives supplier early on will avoid complications later down the line, saving time and money.

In many cases, manufacturers contact adhesives providers once most of the design work is done – once they have finalised and assessed bondline design, substrate selection, environmental resistance, and more. The difficulty with this approach is, with much of the design finalised, there will be a particular set of requirements the adhesive needs to meet – a very specific gap in the jigsaw for the adhesive to fill. There may not be an adhesive that meets the criteria without major compromise, or a suitable adhesive may not be available in the specified packaging or quantities. If this is the case, the design may need to be changed, delaying the project and increasing the costs.

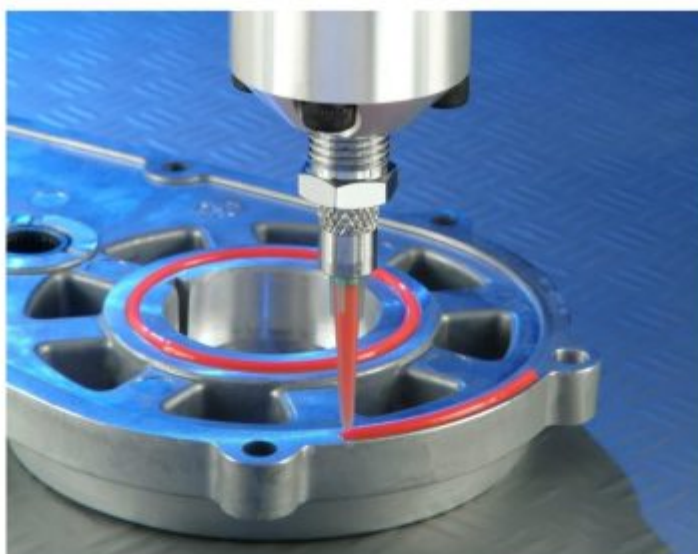


Figure 1 – Considering the role of adhesives during the design stage can mitigate the risk of future complications

It is much easier to make changes to the design earlier, while the process is fluid. We therefore recommend contacting an adhesives specialist at a stage where the substrates and bondline geometry could still be changed. Your supplier can lean on previous experience to recommend suitable adhesive candidates for testing – and explain why.

Prototype to production

Adhesive applications are complex and can easily become unstuck. A small change to a

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