White Paper: What is cyanoacrylate adhesive blooming, and what can you do about it?

What is cyanoacrylate adhesive (CA) blooming, and what can you do about it? That is the subject of our latest White Paper, entitled ***Managing blooming in an adhesives process***.

The article discusses what is blooming, how it happens, and methods to reduce or eliminate it. Importantly, blooming does not affect the integrity of the adhesive bond, but it will be undesirable if aesthetics are important to you, or if the presence of blooming might imply a quality problem to your customer.

If cyanoacrylate adhesive blooming is an issue, consider changing to one of the latest innovative technologies, which can alleviate the problem without conceding adhesive performance. Low odour, low bloom CAs are now available which are fast cure or offer an additional light cure property. Dispensing and environmental control are also important to help get consistent results. Manufacturers who have previously avoided CAs due to their downsides may be able to benefit from these new options, and manufacturers who have struggled to manage blooming may finally have a solution.

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Managing blooming in an adhesives process

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Introduction

Cyanoacrylates (CAs) are a popular adhesive choice for many applications. They are easy to use, single-part adhesives that cure quickly at room temperature, offer good throughput and are suitable for bonding a range of substrates including metals, plastics, elastomers and porous materials. One downside of their fast curing speed is that they are quite volatile, which can cause blooming.

If you have ever used a cyanoacrylate adhesive (often known as "instant adhesive" or "superglue"), you may have seen blooming — a chalky, white residue usually around the edge of the bondline on the surface of your part. Importantly, blooming does not affect the integrity of the adhesive bond, but it will be undesirable if aesthetics are important to you, or if the presence of blooming might imply a quality problem to your customer. If you are making medical devices, jewellery, electronic instrumentation, consumer electronics or loudspeakers, for example, you may understandably be concerned about blooming compromising the appearance of your products.

Figure 1 – Example of blooming or frosting formed on an exposed fillet of cyanoacrylate adhesive

Read it here.

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