

Preservation of water-based Adhesives

Tips & Tricks No. 4



Water-based adhesives must be protected from biological attack since they are, depending upon formulation, more or less biologically degradable products,. Preservatives are therefore added to such adhesive systems to guarantee good stability in storage. Because of regulations and also for environmental reasons, not every preservative can be used and there are also limitations on quantity. For these reasons cph has avoided the use of unsafe preservatives (e.g. formaldehyde, phenol derivatives and even metal-organic compounds) for over 20 years, although these are still to be found from time to time with cheap products.

But in places or at times when temperatures are high, less radical preservatives can also be stretched to their limits. Customers experience this themselves in Central European areas, if condensation washes out some of the adhesive and this mixture then appears as small water puddles on the shop floor. Because of the high dilution and summer temperatures the preservation provided by the product incorporated as storage preservative is not sufficient in these cases: depending upon species the number of spores doubles every 30 to 120 minutes, so that it can be easily appreciated that the storage preservative added to the product is not able to prevent the decomposition process further accelerated by the dilution.

This means, on the one hand, that it is not possible to test the effectiveness of the preservation of an adhesive by dilution, on the other hand, that one must start to prevent germination as early as possible because the biological laws are universally valid. For this reason cph Deutschland employs hygiene well above the normal standard in its production, approaching the food regulation requirements on modern equipment.

The adhesive is protected, but if it is diluted with contaminated water, the preservation will fail, since the effective threshold is reduced.