

HIGH PERFORMANCE WATER-BASED PRESSURE SENSITIVE ADHESIVES AS SOLVENT-BASED REPLACEMENTS FOR AUTOMOTIVE TAPES

Conventional emulsion acrylic pressure sensitive adhesives (PSAs) usually fall short in reaching the high temperature resistance and cohesion of solvent based adhesives. Also, they often exhibit poor chemical resistance and durability. Therefore, solvent based products remain key technology used to produce tapes for the automotive industry. However, increasingly tight regulations and environmental and health concerns, are strong drivers in favour of a water-based alternative that meets the technical performance of a solvent based product.

This talk will discuss some of our recent work to elevate emulsion acrylic PSAs to new performance heights. Special functional monomers boost the adhesion and cohesion of emulsion polymers to levels normally achieved only with solvent based acrylic PSAs. The addition of tackifiers and adhesion promoters can be used to enhance the peel adhesion to low surface energy substrates. In addition, both chemical and physical means can be used to produce adhesives with uniquely low volatile organic compounds (VOC) levels, which is of great importance in many applications.