Abstract

Butyl Adhesive Containing Maleic Anhydride and Optional Nanoclay

An adhesive polymer comprising a maleic anhydride grafted butyl rubber and a polymer compound made from the adhesive polymer further comprising a functionalized siliceous nanoclay. The adhesive polymer and polymer compound exhibit greatly improved adhesion to certain substrate surfaces. Examples of substrate materials include stainless steel, glass, mylar or Teflon®. The greatest adhesion was observed in polymer compounds comprising maleic anhydride grafted butyl rubber produced according to a solution process and from 5 to 15 phr of a montmorillonite nanoclay. The adhesion is improved with increasing levels of nanoclay content in the compound up to a limit where filler-filler interactions occur.

Figure (None)