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Effect of Phase Compatibilisation on the Surface Stability of PP/filler Compounds

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Surface stability of multiphase polymer systems (e.g. PP/rubber) depends very strongly on the phase separation behaviour in the surface region. The role of interface management between PP and rubber phases in this region e.g. control of miscibility between the components is a major factor affecting the ability of the moulded part to resist surface damage cased by external forces. Stresses applied to PP/rubber part in often results in cohesive debondment due the week interface of the systems. By applying Borealis' proprietary modification technology utilising the chemical reaction during melt processing PP compounds with excellent surface stability and paint adhesion capability have been developed. Investigation of the morphology of surface region gives an inside view in the surface stability/damage mechanism.