



An Improved Method for Measuring Surface Roughness to Indicate Filler Dispersion.

Abstract

Surface roughness as an indicator of filler dispersion has typically been measured by mechanical or optical methods. Optical methods provided both a direct measurement and a fast determination of surface roughness. Actual percent carbon black dispersion has been approximated by applying transmitted light microscopy according to the Leigh Dugmore calculation. An optical reflected light method has been developed that gives a percent dispersion by a means similar to the transmitted light method by using the size and frequency of the surface disturbances. The new method will be discussed comparing the results to the Leigh-Dugmore calculation and looking at a variety of compounds and fillers.

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