**Enhanced Mechanical Properties of Graphite filled EPDM Composites**

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**Abstract**

Today's daily life involves rubber in many different ways. For the high-tech sector of today, it is essential to develop a multitude of high-performance rubber variations. Rubber can be greatly improved in several ways by graphite, an excellent filler. Researchers from all around the world are delving deeply into graphite/rubber composites to improve rubber's performance and expand its practical uses. Finding a uniform distribution of graphite throughout the rubber matrix is the main challenge in producing high-performing graphite/rubber composites. Investigating how graphite might improve rubber's properties is another thing we believe is crucial.

Graphite and Graphene are used as fillers, and solvent blending is used to create EPDM matrices without compatibilizing chemicals. Studies on morphology have demonstrated the blend's exceptional compatibility. Mechanical analysis was used to examine the shape and mechanical properties of EPDM/Graphite composites. Samples with Graphite added exhibit characteristics that steadily increase with concentration.

**Keywords**

Rubber composites, EPDM, Graphite, Mechanical Properties