

Mixing of Graphene Nanoplatelets in Rubber Products

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INTRODUCTION OF TECHNOLOGY

Manufacturing of water-dispersible graphene nanoplatelets

Electrochemical exfoliation of water dispersible graphene nanoplatelets is synthesized electro-exfoliation in a proprietary solution.

Besides, water-dispersible graphene nanoplatelets can also be synthesized via solid-state approach. The non-dispersible graphene nanoplatelets is ground with active materials until both of the materials mixed well and microwaved at high energy.

Preparation of graphene rubber compound

A latex compounding and co-coagulation method is adopted to prepare water-dispersible graphene nanoplatelets reinforced natural rubber composites. A designed amount of graphene aqueous suspension is added to the natural rubber latex compounding. After stirring vigorously for 4-8 hours, the graphene rubber compound is ready to be prepared as gloves, tyres, condoms and mats, but not limited to these items.

- Graphene nanoplatelets is synthesized via electrochemical exfoliation and solid-state approach at mild reaction condition.
- 10-50 kg of water-dispersible graphene nanoplatelets is produced in short processing.
- Graphene nanoplatelets is dispersible in polar and non-polar mixture.
- The rubber-based composite are the rubber include natural rubber, silicone rubber, styrene-butadiene rubber, butadiene rubber, butyl rubber, isoprene rubber as claimed in claim butoxy isoprene rubber, nitrile rubber, ethylene propylene rubber, chloroprene rubber of at least one



GLOVES
RM 14.2 Billion



CONDOMS
RM 30.1 Billion

MARKET POTENTIAL

To meet the market demand for large quantities of samples.



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