

## Abstract

### **Functional Diene Polymer, Preparation Method thereof, and Rubber Composition Comprising the Same**

The present invention provides a functional diene polymer, a preparation method thereof and a rubber composition comprising the functional diene polymer. The functional diene polymer comprises at least one type of conjugated diene structural units and silane coupler functional units represented by formula (I) in its molecular chain, and the number-average molecular weight of the functional diene polymer is 50,000~1,000,000; R<sub>1</sub>-R<sub>4</sub> are C<sub>1</sub>-C<sub>20</sub> linear or branched hydrocarbon radical or heteroatom-containing C<sub>1</sub>-C<sub>20</sub> linear or branched hydrocarbon radical, and the heteroatom is selected from one or more of halogen, oxygen, sulfur, silicon, and phosphorus. Not only the relationship between the wet slip resistance and the rolling resistance of the functional diene polymer is effectively improved, but also the offensive odor produced in the rubber mixing process owing to the addition of the silane coupler is reduced.

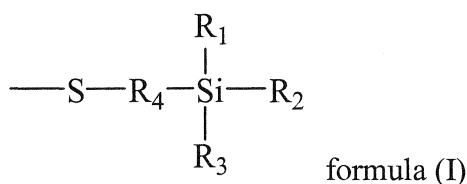


Figure for publication: None