

ABSTRACT OF THE DISCLOSURE

Disclosed are a modified conjugated diene-based polymer capable of providing a polymer composition improved in tan δ balance, a polymer composition containing the modified conjugated diene-based polymer and silica, and a process for producing the modified conjugated diene-based polymer. The modified conjugated diene-based polymer is obtained by melt-kneading a conjugated diene-based polymer and 0.01 to 2 parts by weight of a Bunte salt per 100 parts by weight of the conjugated diene-based polymer, in the presence of water whose amount is from 0.1 to 1,000 parts by weight per one part by weight of the Bunte salt.