

PROCESS FOR PRODUCING A MODIFIED CONJUGATED
DIENE-BASED COPOLYMER, MODIFIED CONJUGATED
DIENE-BASED COPOLYMER OBTAINED BY THE PROCESS,
RUBBER COMPOSITION AND TIRE

5

ABSTRACT

A process for producing a modified conjugated diene-based copolymer comprising bringing a modifier into reaction with the active
10 end of a copolymer of a conjugated diene compound and an aromatic vinyl compound having the active end, wherein a compound having (i) a hydrolyzable functional group having silicon and (ii) a group which can be converted into a protonic amino group or a protonic amino group protected with an eliminable functional group after the reaction is used as the
15 modifier, a step of adding a condensation catalyst is conducted after the modifier is brought into the reaction, and the content of the unit of the aromatic vinyl compound and the structure of the chain of the aromatic vinyl compound are specified. The process provides a modified conjugated diene-based copolymer which is a modified product of a
20 copolymer of a conjugated diene and an aromatic vinyl compound, provides excellent interaction between the rubber component and carbon black and/or silica, can further improve dispersion of the fillers and provides a tire exhibiting excellent low heat buildup property, fracture properties and abrasion resistance.

25

No Figure