

## ABSTRACT

Methods for producing a material containing modified sulfur and for preparing a binding material used for  
5 production of the material with easy control of reaction  
are disclosed. The material exhibits excellent  
mechanical strength, water sealability, ignition  
resistance, and resistance to sulfur-oxidizing bacteria,  
even when wastes and industrial by-products are used as  
10 aggregate, and fulfills properties required for materials  
for civil engineering and construction. The method  
includes the steps of (A) mixing in a molten state sulfur  
and dicyclopentadiene at 135 to 155 °C under hermetically  
sealed conditions to obtain a molten material; (B) after  
15 a viscosity at 140 °C of the molten material falls in a  
range of 0.05 to 1.2 Pa·s, cooling the molten material down  
to a temperature not higher than 135 °C to obtain a binding  
material containing modified sulfur; (C) mixing in a molten  
state the binding material with aggregate at a specific  
20 ratio at 135 to 155 °C while a viscosity of the binding  
material at 140 °C is maintained in a range of 0.05 to 1.2  
Pa·s to obtain a molten mixture; and (D) cooling the molten  
mixture down to a temperature not higher than 135 °C.