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United States Patent

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(12) **United States Patent**
Shi

(10) **Patent No.:** **US 8,505,840 B2**
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(54) **METHOD FOR MODIFYING NOMAL CLAY
AND A METHOD FOR PRODUCING
COMPOSITE ELASTOMER FROM THE CLAY**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 947 days.

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(52) **U.S. Cl.**

USPC **241/21**; 241/22; 241/23

(58) **Field of Classification Search**

USPC 241/21–23

See application file for complete search history.

(56) **References Cited**

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(57) **ABSTRACT**

A method for modifying soil and a method for producing composite Elastomer of the soil are disclosed. The method for modifying soil includes drying, pulverizing, sieving, and purifying the soil to obtain soil powder, then dynamically heating the powder and adding surfactant, which includes coupling agent, polysiloxane having reactive functional, emulsifier of organosilicon and aliphatic amine, and water, and then drying the above obtained powder to obtain modified soil. The modified soil and acrylic acid copolymer emulsion are mixed with plasticizer, foaming agent, etc. to form a composite body which is used to produce elastomer floor board, elastomer wall brick, composite soil skin material, and so on. No emission of toxic gas and evaporation of organic solvent can be attained during production and use of the invention, and performance of the product is same as or has superiority over rubber in compression deformation rate, rebound elasticity and durability.

11 Claims, 2 Drawing Sheets

