

OVER-BASED SULFURIZED ALKALINE EARTH METAL PHENATE AND PROCESS FOR
PRODUCING THE SAME

Disclosed are a process for producing an over-based sulfurized alkaline earth metal phenate which comprises reacting either a mixture of reaction materials comprising a phenol, a dihydric alcohol, an alkaline earth metal reagent which is an alkaline earth metal oxide or hydroxide or a mixture of both, and sulfur or a mixture of these reaction materials with water, distilling off an excess amount of the dihydric alcohol and at least excess amount of water, and subsequently treating the resulting distillation residue with carbon dioxide, wherein the carbon dioxide treatment is carried out (A) in the presence of 0.001 to 0.7 mol of a fatty acid or a fatty amine per 1 mol of the alkaline earth metal reagent and (B) in the presence of either (i) 0.01 to 0.9 mol of water per 1 mol of the alkaline earth metal reagent or (ii) 0.05 to 5.0 mol of a lower alcohol containing 1 to 4 carbon atoms per 1 mol of the alkaline earth metal reagent or (iii) both of (i) and (ii); and an over-based sulfurized alkaline earth metal phenate having a base number of 250 to 400 mgKOH/g, a viscosity of 40 to 1,000 cSt at 100°C and a color of L3.0 to 8.0Dil (by ASTM), and contains 0.1 to 50 wt% of the fatty acid or the fatty amine based on the total amount thereof, which is produced by the above-mentioned process.