
The Influence of the Activity of Water on the Phase Composition of Aluminum Hydroxides Formed by Reaction of Amalgamated Aluminum with Water

O. Lahodny-Šarc, Z. Dragčević and D. Došen-Šver

Mining, Geology and Petroleum Engineering Department, University of Zagreb, Yugoslavia
Technological Department, University of Zagreb, Yugoslavia

Abstract: The influence of the activity of water on the phase composition of aluminum hydroxides obtained by reaction of amalgamated aluminum with water has been studied. The reaction was carried out in solutions of water and dioxane, and in sodium chloride solutions of different concentrations; amorphous aluminum hydroxide was precipitated initially. The aging of this primary product to bayerite, pseudoboehmite, or an amorphous gel was controlled by the water content of the system. The pseudoboehmite has shown a significant reactivity when used as a source of alumina in the hydrothermal syntheses of kaolinite at relatively low temperature and pressure.

Key Words: Alumina • Aluminum • Bayerite • Hydroxide • Pseudoboehmite • Water

Clays and Clay Minerals; April 1978 v. 26; no. 2; p. 153-159; DOI: [10.1346/CCMN.1978.0260211](https://doi.org/10.1346/CCMN.1978.0260211)

© 1978, The Clay Minerals Society

Clay Minerals Society (www.clays.org)
