

ABSTRACT

TITLE OF PAPER: The Reactions of Pentaborane-11 With Unsaturated Hydrocarbons

AUTHORS: A. Levy and E. A. Lawton

PLACE WORK WAS DONE: Battelle Memorial Institute
Columbus 1, Ohio

Conditions have been established for reacting pentaborane-11 with olefinic and acetylenic compounds. Depending upon the reaction conditions, gel-like and liquid products are obtained from reactions with olefins, while the acetylenes yield only gel-like products. The liquid products have been examined with respect to physical properties, molecular weight, elemental analysis, methanolysis, mass spectrographic and infrared analysis, thermal stability, pyrophoricity, and heat of combustion. A structure is proposed from this evidence for the new product.