

The Knowledge Bank at The Ohio State University
Ohio State Engineer

Title: A New Solid Fuel : Metaldehyde

Issue Date: Apr-1923

Publisher: Ohio State University, College of Engineering

Citation: Ohio State Engineer, vol. 6, no. 3 (April, 1923), 19.

URI: <http://hdl.handle.net/1811/34197>

Appears in Collections: [Ohio State Engineer: Volume 6, no. 3 \(April, 1923\)](#)

A NEW SOLID FUEL: METALDEHYDE

Recently a new fuel has been put out on the market that is of both commercial and chemical interest. There are many types of solid fuels on the market which use as their heat producing medium alcohol dissolved in a non-volatile solvent. Such solvents as agar-agar, collodion and cellulose acetate have been used with some success. However, due to the volatility of the alcohol, these fuels must be kept in air-tight vessels.

A Swiss concern, the "Usines Electriques of Basel," seems to have solved the problem. The new fuel metaldehyde is a polymer of acetaldehyde, which is made through a synthetic process from calcium carbide. It is made by cooling acetaldehyde to a low temperature and then adding dilute sulphuric acid. Metaldehyde crystallizes out and can be separated by filtration. Metaldehyde does not melt under atmospheric pressure. It starts to sublime between 112 and 115 degrees C. and is decomposed by heat into acetaldehyde, under which form it burns. The fuel itself is kept so cool that it is possible to extinguish the flame with the palm of the hand.

—Towne Scientific Journal.