

Formaldehyde

A Key Methanol Market

The Basics

Methanol is a principal ingredient used in the production of formaldehyde, a colorless, flammable, odorous gas. Formaldehyde is produced by the catalytic oxidation and dehydrogenation of methanol using either a silver catalyst or a metal oxide catalyst. The wide range of uses for formaldehyde make it essential for the operations of nearly 50,000 product manufacturing facilities in the U.S. alone. Worldwide, one-third of the demand for methanol is for formaldehyde production. At about 10 million metric tons, this is the largest single market for methanol.

Health Effects

Formaldehyde is produced naturally in small amounts in plants, animals and even the human body, through normal metabolic processes. However, formaldehyde metabolizes at a rate fast enough to prevent it from accumulating in the body. At exposures of more than 0.1 ppm, some individuals may experience symptoms including watery eyes, burning sensation of eyes, nose and throat, coughing, nausea or skin irritation.

On June 10 2011, the National Toxicology Program (NTP) released a report for the U.S. Dept. of Health and Human Services adding formaldehyde, among other chemicals, to the list of known carcinogens. The formaldehyde industry has argued that typical exposure levels do not pose a risk to the general population, nothing that the NTP report disregards other world regulatory bodies that have deemed the chemical safe. Also defending the chemical, the American Chemistry Council (ACC) claims that HHS made unfounded classifications that will harm consumers. ACC CEO Calvin Dooley said the report, "ignores the finding from the independent, government-mandated National Academy of Sciences report which strongly questioned whether the scientific evidence supports a connection between formaldehyde and leukemia."

As the single largest market for methanol, rising demand for formaldehyde means a growing market for methanol.

Formaldehyde Uses

Consumer Products

- Paper Towels
- Cosmetic
- Paint
- Furniture
- Cabinets
- Carpeting
- Photographic Film

Automotive Industry

- Under-the-hood Components
- Brake Pads
- Fuel System Components

Health Care Applications

- Vaccine Manufacturing
- Hard Gel Capsule Manufacturing
- Pharmaceutical Research

Construction Industry

- Structural Wood Panels
- Particle Board
- Carpet Underlay
- Plywood

