

Welcome to
the presentation on
Methanol

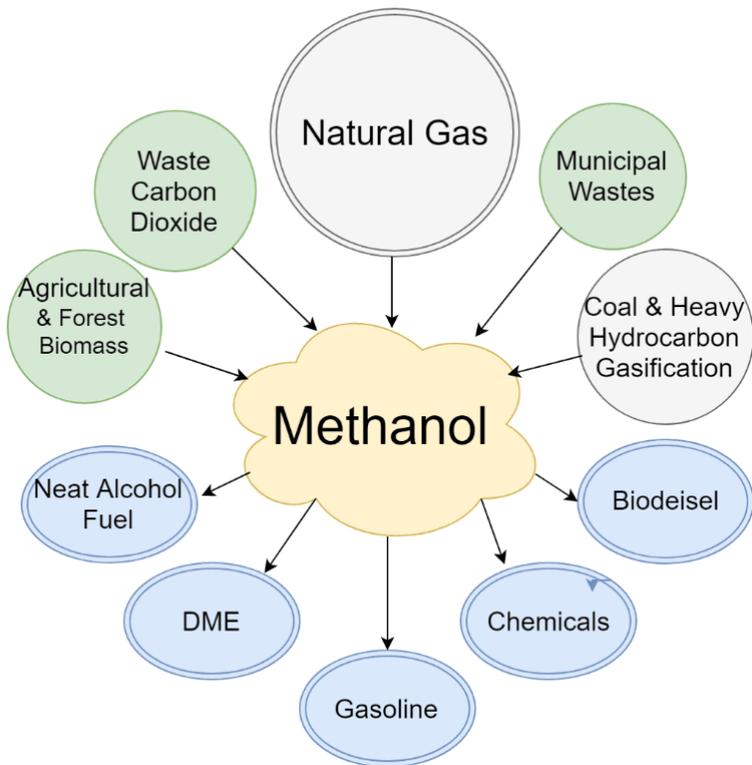
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Methanol



Presentation by

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METHANOL IS THE SIMPLEST ALCOHOL, CONSISTING OF A METHYL GROUP LINKED TO A HYDROXYL GROUP. IT IS A LIGHT, VOLATILE, COLORLESS, FLAMMABLE LIQUID WITH A DISTINCTIVE ODOR SIMILAR TO THAT OF ETHANOL (DRINKING ALCOHOL). METHANOL IS HOWEVER FAR MORE TOXIC THAN ETHANOL. AT ROOM TEMPERATURE, IT IS A POLAR LIQUID.

What is Methanol ?

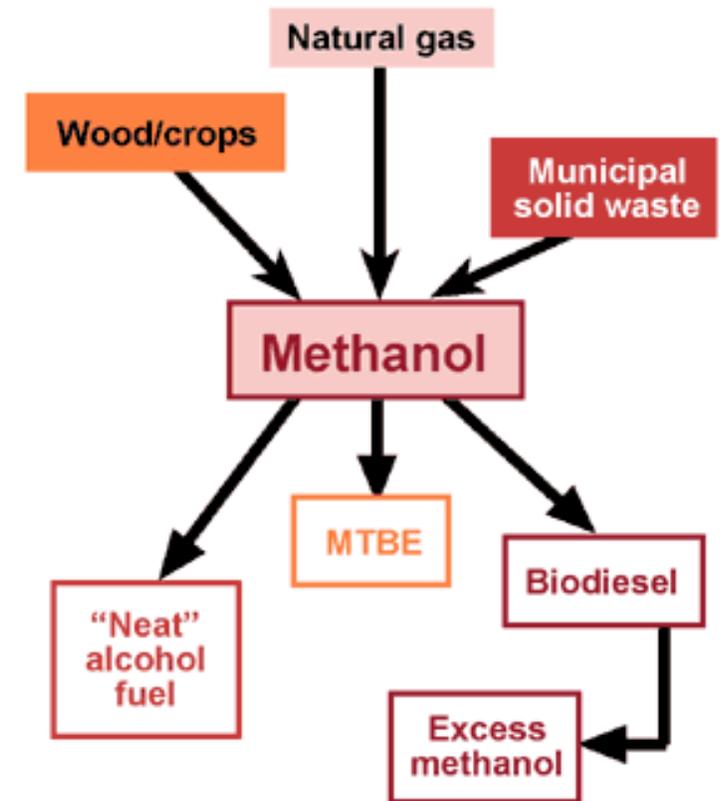
Methanol (MeOH, CH₃OH)



What are the main uses of methanol?

Its principal uses are in organic synthesis, as a fuel, solvent, and antifreeze. Methanol is a polar liquid at room temperature. It is used as antifreeze, solvent, fuel, and as a denaturant for ethanol. The chemical is also used to produce biodiesel via transesterification reaction.

Methanol: A Life Cycle

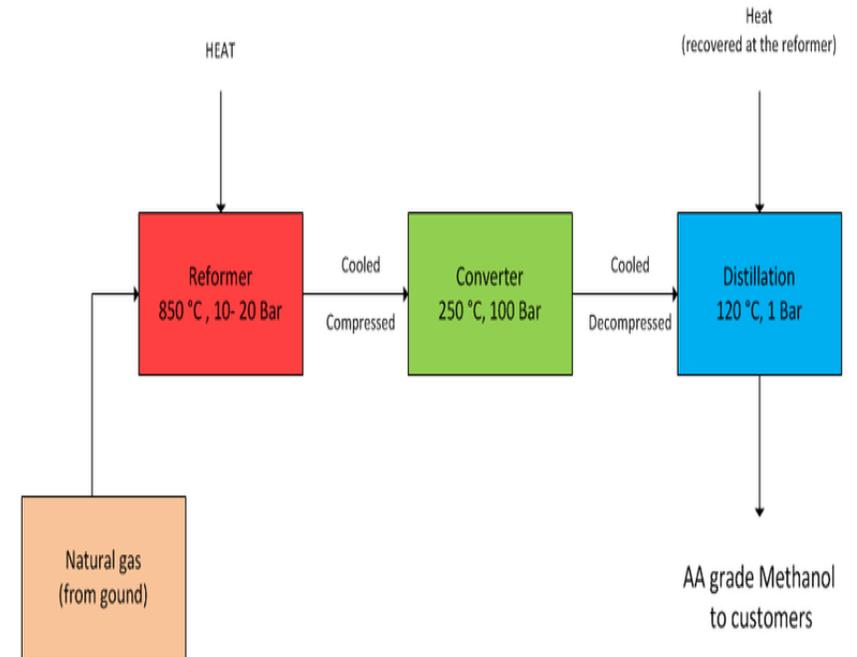


Conventional production

Methanol

The conventional production of methanol consists of 3 main steps :

1. Synthesis gas production,
2. Catalytic conversion of synthesis gas,
3. Distillation of raw methanol.





From Co2

Methanol

Methanol synthesis reactors

Technology Sources



The reactor used for methanol synthesis is the most crucial part of the process, as it is not only responsible for the reaction itself, but also for removal of heat generated during the process . Current reactor designs for methanol synthesis are mostly fixed-bed gas phase technologies, which can be either characterized thermodynamically, by cooling type, or by flow design . Fluidized-bed gas phase, liquid phase and membrane based technologies are emerging



Commercialization of methanol synthesis via CO₂ hydrogenation is driven by political and ecological considerations as its main attractiveness is the reduction in CO₂ emissions, which can be achieved only if hydrogen is produced from renewable sources and if clean CO₂ can be produced economically

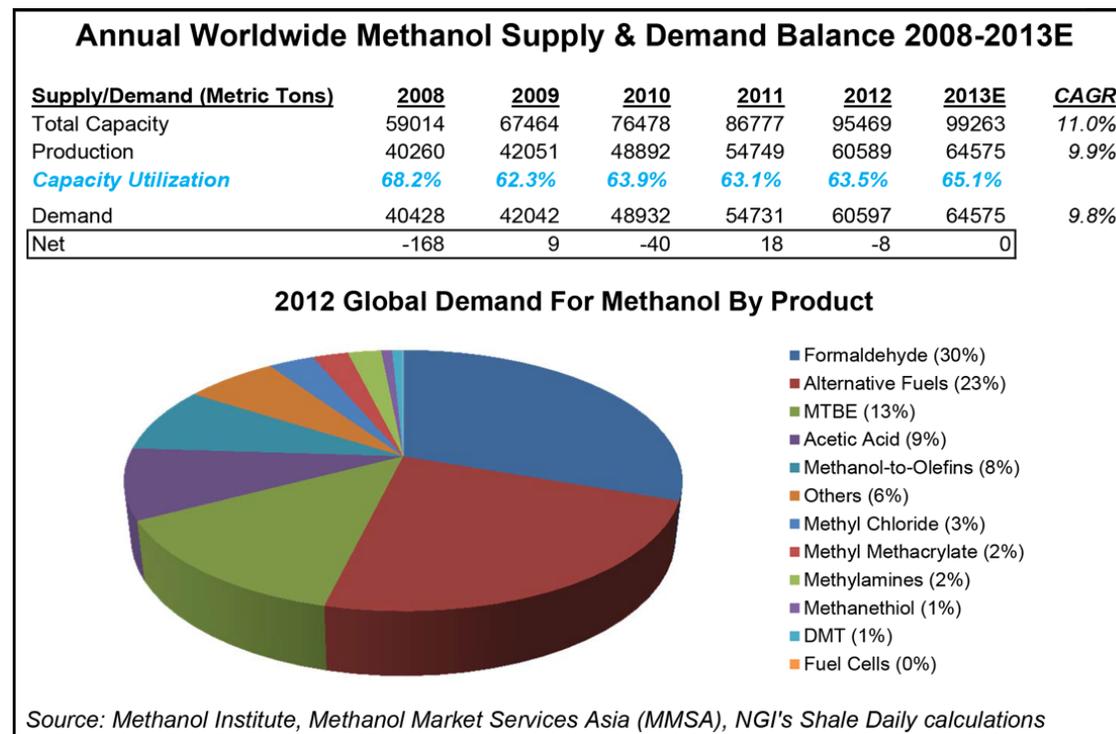
GREEN CHEMICAL PROCESS

World Production

According to Consultants

Methanol is a globally traded chemical that reached 75 million tons production last year.

The global production is expected to reach 90 million tons by 2020



Methanol Databases





Questions?

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