

## U.S. Department of Energy - Energy Efficiency and Renewable Energy Alternative Fuels Data Center

### Ethanol

Ethanol is an alcohol-based alternative fuel produced by fermenting and distilling starch crops that have been converted into simple sugars. Feedstocks for this fuel include corn, barley, and wheat. Ethanol can also be produced from "cellulosic biomass" such as trees and grasses and is called bioethanol. Ethanol is most commonly used to increase octane and improve the emissions quality of gasoline.



Ethanol can be blended with gasoline to create E85, a blend of 85% ethanol and 15% gasoline. E85 and blends with even higher concentrations of ethanol, E95, for example, qualify as alternative fuels under the [Energy Policy Act of 1992](#) (EPAAct). Vehicles that run on E85 are called flexible fuel vehicles (FFVs) and are offered by several vehicle manufacturers. See the [ethanol vehicles](#) page for more information on FFVs.

In some areas of the United States, lower concentrations of ethanol are blended with gasoline. The most common low concentration blend is E10 (10% ethanol and 90% gasoline). While it reduces emissions, E10 is not considered an alternative fuel under EPAAct regulations. For more information on E10, see the [ethanol blends](#) page.

- [What Is Ethanol?](#)
- [How Is Ethanol Made?](#)
- [Energy Balance of Ethanol](#)
- [Ethanol Market](#)
- [Ethanol Benefits](#)
- [Ethanol Research and Development](#)
- [E85 Fleet Toolkit](#)
- [Ethanol Incentives and Laws](#)
- [Ethanol Publications](#)
- [Ethanol Industry Contacts](#)
- [Ethanol Related Links](#)

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