

Ethanol: Keeping Our Air Cleaner

Ethanol is an earth-friendly biofuel. Corn ethanol reduces greenhouse gas emissions by 43 percent, and advanced biofuels can reduce emissions by 100 percent or more over gasoline. These percentages continue to increase with ongoing innovations in biofuel production.

Ethanol also replaces harmful carcinogens and toxic additives like benzene, toluene, xylene, and butadiene that can be found in petroleum-based fuels, while providing higher octane. Ethanol also helps to reduce ozone precursors that contribute to smog in urban communities.

Thanks to ethanol, there's less toxic, dirty stuff in your fuel, and in turn, in our air. That's a benefit we can all breathe a little easier about.

Get the Facts:

Nearly 97 percent of U.S. gasoline contains ethanol, typically E10 (10% ethanol, 90% gasoline), to oxygenate the fuel and reduce air pollution. ([U.S. Department of Energy](#))

As more ethanol is blended into fuel, particulate emissions decrease. With ethanol blends above 30 percent, there can be as much as a 45 percent reduction in particle emissions. ([Ford Motor Company](#))

Ethanol also displaces known carcinogens and harmful aromatic pollutants in gasoline such as benzene, toluene and xylene. These toxic aromatics, make up as much as 39 percent of the unleaded gasoline that comes out of the pump. ([International Agency for Research on Cancer](#))

Adding higher levels of ethanol to fuel also reduces the potential to form ozone or photochemical smog. ([Life Cycle Associates](#))

Higher ethanol blends yield even greater environmental and health benefits, and nine out of ten cars on the road today can safely and legally run on E15, a 15 percent ethanol-blended fuel now available in 29 states. ([Ethanol Retailer](#))

Why it Matters:

Thanks to strong EPA standards and [clean fuels like ethanol](#), hazardous air pollutants from mobile sources in the U.S. have fallen by half since 1990, [according to the EPA](#). But 57 million Americans still live in areas with unhealthy levels of air pollution, and the worst impacts are felt by those who live close to highways and ports.

Ethanol is vital to achieving further gains in air quality because it allows engines to burn cleaner and cooler, reducing emissions of toxic chemicals and smog-forming pollutants.

Call-Out Quotes:

Harold Wimmer, National President & CEO, American Lung Association:

"Using [high ethanol blends] in a flex fuel vehicle can significantly reduce lifecycle carbon dioxide emissions, carbon monoxide pollution, and many other harmful pollutants, including benzene, a known human carcinogen." ([American Lung Association](#))

Dr. Andy Randolph, Technical Director, ECR Engines:

"As we move towards the future and higher-performing engines that have to get better fuel economy, octane has to go up. ... If you get there by adding aromatic hydrocarbons or MTBE or tetraethyl lead, those are all very effective octane increasers but in each case there's something about them that has very serious adverse health consequences. From that standpoint, ethanol is something that you would expect to be increased as we move forward." ([Digital Trends](#))