



Synergy Between GF2 Fuel Enhancer Fuel Catalyst and Ethanol as a Transitional Fuel Supplement or a Transitional Fuel

Synergy is the interaction of multiple elements in a system to produce an effect different from or greater than the sum of their individual effects; i.e., working together. Thus, **GF2 Fuel Enhancer Fuel Catalyst**, used in conjunction with ethanol, is an effective and efficient means of transforming the latter for use as either a transitional fuel supplement or even a transitional fuel.

At the present time, ethanol has limited and cautious support, largely because as a renewable form of energy it requires a significant amount of energy to produce with its attendant prohibitive cost. The question of whether bio-fuels help or harm the climate and environment has also been the subject of scientific debate for some time. A study published last year (2012) in the journal *Science* found that “U.S. production of corn-based ethanol increases emissions by 93% compared with using gasoline, when expected worldwide land-use changes are taken into account.” By contrast, ethanol, when combined with GF2 Fuel Enhancer Fuel Catalyst, is capable of reducing those emissions, but the extent of which has yet to be fully tested and proven. (Note:



Total BTU generation is likewise reduced in the combustion chamber, which is also expected to correspond to a further reduction in emissions). However, the cost to produce ethanol is prohibitive.

Ethanol has been produced for a significant period of time. Other names for ethanol are ethyl alcohol, corn liquor, and etc. Ethanol is less volatile than gasoline and can be stored much more safely from that standpoint. However, ethanol is corrosive and tends to deteriorate non-synthetic and natural rubber fuel system parts (including corrosion-resistant barriers in fuel tanks). Ethanol contains 76,100 BTU's of energy per 1.5 gallons, as compared to 114,000 BTU's of energy per gallon of gasoline. Thus, overall fuel consumption increases correspondingly with an increase in the ethanol blend. For instance, E85 ethanol blend (85% ethanol, 15% gasoline) will cause a greater increase in fuel consumption than an E10 ethanol blend. At the present time, the United States and Brazil are the largest consumers of ethanol fuels. In most cases the ethanol blends consumed in the United States are rated E10. There is significant pressure from the corn cartel to increase the amount of ethanol to 15%. This being done will force many people to invest in flex-fuel vehicles to help negate the adverse affects of the



increased ethanol blend. Finally, it is estimated that an E85 ethanol blend will increase overall fuel consumption by as much as 34%.

GF2 Fuel Enhancer Fuel Catalyst is a sight propagation burn-rate modifier and lubricant consistent with combustion catalyst. As such, it is compatible with all hydrocarbon fuels. The organo-metallic chemistry design creates a sophisticated catalyst that helps derive energy from hydrocarbon molecules residing in normally confined quench zones. The chemistry behind GF2 Fuel Enhancer helps glean lost energy from any liquid hydrocarbon fuel as a result of deficient combustion-time cycles. GF2 Fuel Enhancer increases power and performance lost by the inclusion of ethanol in fuel blends. Importantly, GF2 Fuel Enhancer helps ethanol fuel users recover lost fuel efficiency due to the inclusion of ethanol in modern-day fuels. Finally, the demulsifiers contained in GF2 Fuel Enhancer help neutralize the adverse hygroscopic relationship between ethanol and atmospheric moisture, such as existing water accumulation in the bottom of bulk fuel storage tanks.