

# HYDRA EHN-99



(2-Ethyl Hexyl Nitrate) Fuel Additive  
Boosts Cetane Numbers in Diesel & MGO



# HYDRA®

## Features & Advantages

- ◆ Improves performance & economy.
- ◆ Increase cetane by up to 8 points.
- ◆ Improves cold start.
- ◆ Reduces white smoke.
- ◆ Improves fuel combustion by reducing the ignition delay period.
- ◆ Ideal for bio-fuel manufacturers
- ◆ Prevents from harmful emission.
- ◆ Reduces noise from engine.
- ◆ Reduces diesel engine knock.
- ◆ Dilution rate: 1:500 (2,000ppm) to 1:1000 (1,000ppm).

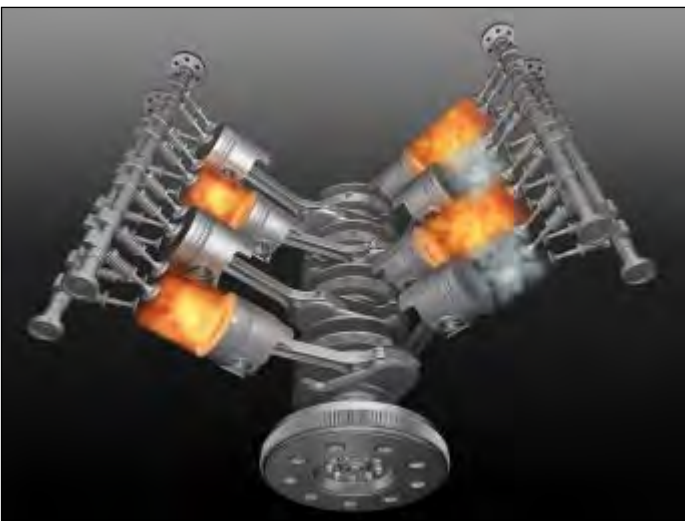
## Description

The overall quality of diesel fuel is dependent on a number of factors. These include BTU value, viscosity, pour flow point, aromatic and paraffinic content, and resistance to contaminant build-up such as water and bacteria. A diesel fuel's quality also is very dependent on its cetane number.

The cetane number (CN) is an index of the ignition point or combustion quality of diesel fuel and is measured using an ASTM D613 test.

Standard European BS EN590 diesel from the pump normally has a minimum cetane number of around 51, with premium diesel a little higher. Depending on engine design, driving conditions, and so on, the optimum cetane value for most vehicles is around the mid to high 50s.

Matching cetane to the engine is important in order to maximise the engine's performance. Biodiesel fuels in particular, especially the homemade brews, usually start with a much lower cetane number so cetane improvement for these fuels is essential.



A fuel with too low of a cetane number for a particular engine will result in reduced cold-start ability, rough running, excess engine noise/vibration and reduced combustion quality.

This leads to reduced performance, excess emissions, and carbon build-up throughout the engine and emission system components (intake, EGR, DPF etc.).



A higher cetane fuel that is a proper match for the engine will reduce ignition delay, improve overall combustion quality, liberate more BTU (energy) from the fuel, and improve performance and MPG. It also will reduce engine noise, deposit build-up, and exhaust emissions. Diesel and MGO fuels with cetane number lower than minimum engine requirements can cause rough engine operation. They are more difficult to start, especially in cold weather.

Many low cetane fuels increase engine deposits resulting in more smoke, increased exhaust emissions and greater engine wear. Using fuels which meet engine operating requirements will improve cold starting, reduce smoke during start-up, improve fuel economy, reduce exhaust emissions, improve engine durability and reduce noise and vibration.

Hydra EHN-99 delivers an increase in cetane number to your diesel and MGO fuel. It will increase cetane number by up to 8 points depending on quality of fuel being treated.

Hydra EHN-99 provides an economic route to meeting quality specifications and a platform for creating premium fuels. Improves fuel combustion by reducing



## Description



### What should I look for in a cetane booster?

Contrary to some propaganda, alkyl nitrates still offer the greatest improvement in cetane number, with measured increases of up to eight points.

When it comes to alkyl nitrates, 2-ethylhexyl nitrate (2-EHN) is the most popular and most respected.

It offers more consistent ignition quality whilst reducing unwanted and negative combustion conditions.

Fuel additive manufacturers recognise both the benefits of boosting the cetane number and using 2-EHN so much now that most offer cetane improvers.

### The question in this case is what are you getting for your money?

From close examination it appears many cetane boosters contain useless fillers. To maximise profits most manufacturers still insist on the single bottle per tank philosophy.

Some 200-300ml bottles that treat a single tank of fuel have as little as 20% active ingredients.

This is lucrative for the manufacturer but not a good value for the consumer. Therefore, it is important to understand what you are getting for your money.

The optimum amount of 2-EHN is around 30-100ml per tank of fuel, depending on the engine and base cetane level.

As 2-EHN can reduce lubricity it is important that the fuel contains sufficient lubrication.

Home made bio-diesel is perfect for this as it has more lubricity than normal diesel.

To ensure you are getting the best value, make sure the product contains at least 50% 2-EHN.

Hydra EHN-99 is ideal as it is 99% pure 2-EHN (2-Ethyl Hexyl Nitrate).

### So what do we recommend and why?

Active cetane improvers are essentially a form of fuel modification, or more accurately, combustion modification.

When combined with the correct fuel catalyst technology, latest Nano detergents, and lubricity additives, they can turn the most mediocre pump fuels and biodiesels into super diesel that will outperform the best premium pump fuels.

Rather than introduce another diluted cetane booster, Hydra decided to release a concentrated chemical product that contains 100% active ingredients.

It provides optimum increases in cetane whilst being able to treat multiple tanks of fuel, rather than just one.



Hydra EHN-99 contains a minimum 99% 2-EHN this ensures that your fuel receives the maximum cetane boost. Giving an optimum combustion condition to ensure a better fuel burn, smoother engine and more mpg.

### Usage:

Add to fuel tank then top up with new fuel. Fuel tanks being treated should be at least 10% full.

Dilution Rate: 1:500 (2,000ppm) to 1:1000 (1,000ppm).

All of our products are manufactured to the highest specifications at our UK plant, which is accredited to **ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007.**



## Laboratory Facilities

Hydra International Ltd.'s Research & Development Laboratories are a hub of activity where new products are developed and formulated. We have working relationships with our raw material suppliers, many of these suppliers are major world-wide chemical manufacturers with their own development laboratories.

As a company we are well known in the chemical industry for being receptive to cutting edge new chemicals which can be incorporated into our products to achieve performance advantages. An important part of the International Standards that we hold is that of constant improvement. We show that we have achieved this at every independent audit.



## Hydra International Limited

8 Carters Lane, Kilm Farm,  
Milton Keynes MK11 3ER, U.K.

+44 (0)1908-265889 | [sales@hydra-int.com](mailto:sales@hydra-int.com)

[www.hydra-int.com](http://www.hydra-int.com)

