



TRANSPORT

ELIMINOX

Working Towards a Cleaner World

ElimiNOX - The Story so Far



Inventor - Jimmy Redman Jr



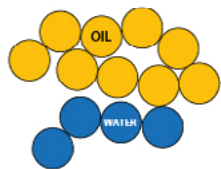
Initial Testing - Hiesher Ultrasonics Laboratory - Germany, declared ElimiNOX to be 'Game Changing' and immediately referred to then Akzo Nobel for comprehensive testing



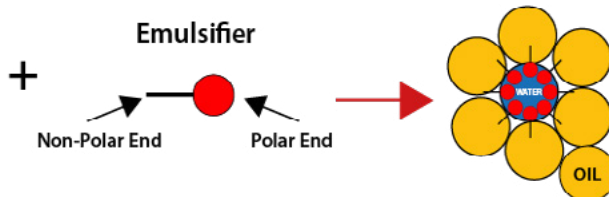
IP Holder - SuINOx Group PLC, licensed Nouryon to manufacture ElimiNOX on a global basis



Manufacturer - Nouryon BV (formally Akzo Nobel) licensed to manufacture ElimiNOX HFO emulsifier and Fuel conditioner



Water growth medium



Growth medium eliminated & trapped in fuel



“A Game Changer for All Diesel Engines”

Tested by: -






- Millbrook Proving Ground UK
- Socotec Laboratories UK
- Hiescher Ultrasonics Laboratories Germany
- Unergy Laboratories SA



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ElimiNOX - The Product

-  ElimiNOX Eco™ dramatically reduces all the environmental pollutants produced by diesel engines
-  The product has been rigorously and successfully tested by world renowned fuel laboratories
-  The test results have been declared as 'game changing' for the diesel engine, environmental pollution and the health problems associated with diesel engine pollutants
-  Not only does ElimiNOX Eco™ dramatically reduce diesel engine pollutants, it enables diesel engines to perform far more efficiently
-  ElimiNOX Eco™ will also clean all stored fuel when added to fuel storage tanks, and ensure diesel bug is both eliminated and prevented



CARBON REDUCTION

Per Litre	384g
Per 1000 Litres	384 kgs
Per 100,000 miles	97 tons

Based on 20 short tons of cargo







Carbon Monoxide :	30% + reduction
Carbon Dioxide :	30% + reduction
Nitric Oxide :	35% + reduction
Nitrogen Dioxide :	20% + reduction
Oxides of Nitrogen :	23% + reduction
Sulphur Dioxide :	20% + reduction



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ElimiNOX - The Product

-  ElimiNOX Eco™ emulsifies free water into the fuel and maintains stability, increasing the CV (cetane value) ensuring a cleaner, more powerful burn
-  ElimiNOX Eco™ is unique when compared to other fuel additives as it emulsifies, not demulsifies free water
-  Easily added to existing fuel storage tanks, no special equipment required
-  A typical 20,000 litre storage tank would require 10 litres of ElimiNOX Eco™ at a mix ratio of 1:2000
-  A spend of £0.01 per litre of ElimiNOX Eco™ relates to a saving of £0.05 of fuel (5% saving, Besblock has shown 8% improvement)
-  By using ElimiNOX Eco™ a reduction of 97 tonnes of carbon can be achieved per vehicle, per 100,000 miles

FUEL SAVINGS - 2% saving @ £1.20/L

Per Litre	£0.02
Per 1000 Litres	£20.00
Per 100,000 Kms	£1,819

ElimiNOX Eco™ is unique in the fact it emulsifies free water into the fuel unlike others that demulsify, separating the water which causes corrosion, rust and diesel bug growth

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ElimiNOX - The Results

WHAT ARE THE ENVIRONMENTAL BENEFITS OF USING ElimiNOX Eco™ ?

ElimiNOX Eco™ dramatically reduces the following environmental pollutants: Here are the average results taken from recent tests on an MWM 6 Ltr diesel engine, carried out by Unergy Laboratories: -

Carbon Monoxide :	30% + reduction
Carbon Dioxide :	30% + reduction
Nitric Oxide :	35% + reduction
Nitrogen Dioxide :	20% + reduction
Oxides of Nitrogen :	23% + reduction
Sulphur Dioxide :	20% + reduction

EURO 5 TO EURO 6 FUEL EMISSIONS COMPLIANCE

THE EUROPEAN STANDARDS SPECIFY THAT THE EMISSIONS LIMIT FOR PARTICULATE MATTER IS:

EURO 5 - 0.005 G/km (Introduced 1st September 2009)

EURO 6 - 0.0045 G/km (Introduced 1st September 2014, a mandatory decrease of 10%)

By adding 0.05% ElimiNOX Eco™ to a tank of fuel, it is possible for a vehicle that would normally just meet the Euro 5 Standard to comfortably meet the Euro 6 Standard, without any modification.

Location	Vehicle	PM Total %	PM 10 %	PM 2.5 %	NOx %	CO %
Haverford West (Socotec UK)	Case Engine	-8.39	-52.28	-61.43		-15.9
Millbrook Proving Ground	Mercedes Euro 6	-14.8			-23.6	-72.8

WP Group and SulNox Group Plc commissioned Millbrook Proving Ground to undertake trials for a period of three weeks on Mercedes Euro 6 HGV's and that drivers reported increased acceleration, less engine vibration, and a smoother operating experience throughout the test period with no detriment.

**All test results and reports mentioned in this presentation are fully available in their entirety upon request*

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ElimiNOX - In the Field

“After using ElimiNOX Eco™ since May 2020, we have been pleasantly surprised with the results. showing an 8% improvement in MPG and an extended period of the particulate warning light not illuminating, which confirms a reduction in PM emissions.

As a forward-looking innovative company, we believe ElimiNox Eco™ will undoubtedly reduce the carbon footprint of Besblock in the future. The fleet of 27 trucks have not suffered any detrimental effects during the period, nor suffered any fuel related problems. We can recommend ElimiNox to any fleet owner.”

Mervyn Smith - Transport Manager Besblock Ltd



- Besblock run a fleet of 27 Trucks
21 Scania + 6 Volvo - All Euro 6 Models
- Tested and used without any detriment in John Deere Tractors at Harper Adams Agricultural College - Newport, Shropshire
- Used across large, mixed fleet of Construction Vehicles - S J Roberts
- Distributed via U.K. wide Motor Factor Chain

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Bureau Veritas certifies ElimiNOX Eco™

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CERTIFICATE OF QUALITY No. L 53229-1

Vessel/Operation: **Sample and Analysis** Job Number: **IM 44596**
 Product/Grade: **Diesel - EN590** Sample Number: **85136**
 Location: **Immingham** Date of Sampling: **08/01/2021**
 Sample Origin: **Service Station Pump Fuel with the addition of SulNOxEco™** Date Received: **08/01/2021**
 Fuel Conditioner Date Tested: **08-18/01/2021**

Test	Method	Unit	Specification	Result
Density @15 Deg C	IP365 ISO 12185	kg/ltr	0.8200 - 0.8450	0.8392
Appearance @ 15 Deg C	* D4176	-	-	Clear & Bright
CFPP	IP 309 EN116	Deg C	Minus 15	Minus 20
Viscosity @ 40 Deg C	IP71 ISO 3104	cSt	2.000 - 4.500	2.465
Derivat Cetane Number	sc IP 498	-	51.0 Min	51.5
Cetane Index	* IP380 ISO 4264	-	46.0 Min	49.1
%Recovered @ 260 Deg C	IP123 ISO 3405	%Vol	65 Max	40.9
%Recovered @ 350 Deg C	IP123 ISO 3405	%Vol	65 Min	96.3
95% Recovered	IP123 ISO 3405	Deg C	360 Max	356.4
Energy Martens Flash Point (Method A)	IP34 (A) ISO 2719 (A)	Deg C	55.0 Min	85.0
Carbon Residue 10% Bottoms	* EN10370	%wt	0.30 Max	0.05
Water Content	IP438 ISO12937	mg/kg	200 Max	51
Lubricity @ 60 Deg C	* ISO12156-1	um	460 Max	220
Poly Aromatic Hydrocarbons	* IP391	%wt	0.0 Max	3.0
Oxidation Stability	* D2274 ISO 12205	g/m ³	25 Max	<1
Oxidation Stability	* EN 15751	Hours	20 Min	>40
Ash Content	IP4 ISO 6245	%wt	0.010 Max	<0.001
Sulfur Content	IP490	mg/kg	10.0 Max	6.2
Copper Corrosion 3 hr @ 50 Deg C	* IP154 ISO2160	Class	Class 1	1a

Latest issue of test methods used unless stated otherwise.
 The above results relate only to the item tested.
 Please refer to ASTM D3244-07 and to IP method 367 Appendix E for utilisation of test data for conformance with specifications.
 No Measurement Uncertainty (MOU) has been applied to the reported results. The MOU is available via the reference standard or via request directly from the Laboratory.
 Where sampling performed by Bureau Veritas, it is outside the scope of UKAS accreditation
 * denotes test is outside laboratories scope of UKAS accreditation
 Product meets EN 590 specification based on tests performed and results obtained only with no MOU applied

Chemist: Richard Byth
Tom Drewery
Jacob Linaker

M. Hollingsworth UK Laboratory Manager
 Authorised Signatory for Bureau Veritas

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- Bureau Veritas has issued ElimiNOX with certificates that confirm fuel treated with ElimiNOX Eco™ retained EN590 Compliance. This removes any question about manufacturers warranty
- Additionally, they measured as 30% increase / improvement in lubricity following dosing the fuel to the recommended 1:2000 ratio

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CERTIFICATE OF QUALITY No. L 53228-1

Vessel/Operation: **Sample and Analysis** Job Number: **IM 44596**
 Product/Grade: **Diesel - EN590** Sample Number: **85133**
 Location: **Immingham** Date of Sampling: **08/01/2021**
 Sample Origin: **Service Station Forecourt Pump** Date Received: **08/01/2021**
 Fuel Conditioner Date Tested: **08-18/01/2021**

Test	Method	Unit	Specification	Result
Density @15 Deg C	IP365 ISO 12185	kg/ltr	0.8200 - 0.8450	0.8392
Appearance @ 15 Deg C	* D4176	-	-	Clear & Bright
CFPP	IP 309 EN116	Deg C	Minus 15	Minus 20
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95% Recovered	IP123 ISO 3405	Deg C	360 Max	354.6
Pensky Martens Flash Point (Method A)	IP34 (A) ISO 2719 (A)	Deg C	55.0 Min	85.0
Carbon Residue 10% Bottoms	* EN10370	%wt	0.30 Max	0.05
Water Content	IP438 ISO12937	mg/kg	200 Max	48
Lubricity @ 60 Deg C	* ISO12156-1	um	460 Max	325
Poly Aromatic Hydrocarbons	* IP391	%wt	0.0 Max	3.1
Oxidation Stability	* D2274 ISO 12205	g/m ³	25 Max	<1
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The Worldwide Fuel Charter recommends using Additives



The Worldwide Fuel Charter - www.acea.be

Last updated in October 2019 and is written on behalf of the vehicle and engine manufacturers from around the world.

The full list of members is published within the charter.

The charter's purpose is :-



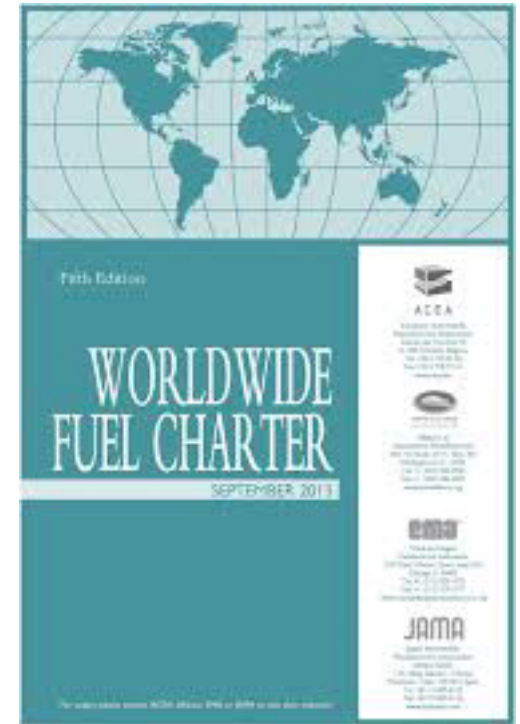
1. To inform policymakers and other interested parties of the key role of fuel quality in engine and vehicle operation, durability and emissions



2. To promote harmonised fuel quality throughout the world in accordance with vehicle, engine and emission control system needs for the benefit of consumers and the general environment

With specific reference to diesel fuel the charter stresses the need for maintaining good fuel quality and recommends the use of additives that are compatible with engine oils and the use of good housekeeping practices throughout the distribution chain to minimise contamination from amongst other things water and other foreign matter such as microbiological growth (the “diesel bug”)

The use of ElimiNOX Eco™ within the distribution chain will assist with these recommendations.



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Environmental Policy - ELimiNOX = Immediate Advantages

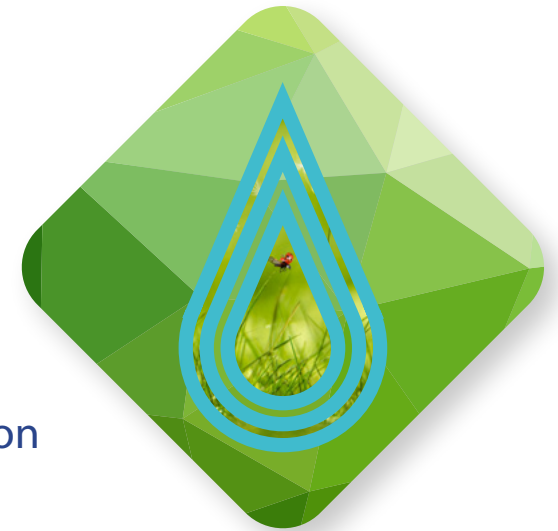
Report on Environmental Policy Relating to Reducing Greenhouse Gases and Gaining Carbon Credits – Prof Tony Granger

Net Zero targets for GHG emissions - 2030 -2050 and carbon budgeting



Carbon pollution

- Main focus for Governments is Climate Change - Carbon and GHG reduction to meet targets
- ESG – Environmental, Social, (Corporate) Governance drivers for countries and companies – example: Pension Funds and Investment Funds divesting from fossil fuels related companies to reduce carbon impact
- Road haulage, transportation accounts for 20% of carbon pollution in the UK & 21% in the EU
- The European parliament recently voted on laws that would force lorry makers to cut carbon emissions from new trucks by 15% by 2025 and by 30% by 2030. Lorries, buses and coaches produce more than a quarter of the EU's CO2 emissions from road transport and about 6% of total CO2 emissions, according to EU data. (Guardian 17.4.2019)



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Environmental Policy - ElimiNOX = Immediate Advantages



Carbon Taxes

- Studies show increased carbon taxes results in increased compliance and carbon offsets
- Sweden has highest carbon tax – Euro 103 per metric ton of CO2
- France Euro 44.60, Germany Euro 25 to increase to Euro 55 in 2025
- World Bank – to achieve goals of Paris Agreement -taxes should be Euro 40 - 73 range
- Carbon taxes are not uniform across countries but will increase



Carbon Credits

- Can offset carbon taxes
- Using ElimiNOX EcoTM has an immediate advantage over long-term carbon offsets



Company Compliance

- Helping Businesses set Environmental Policy relating to Climate Change and GHG reduction (ElimiNOX Limited and Preferred Partners)



Carbon Registry Project

- Helping businesses maximise Carbon Credits, reporting and monitoring carbon emissions and carbon reductions assists with ESG objectives



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ElimiNOX - Q+A's

 **Is it safe to use ElimiNOX Eco™ in my fleet? What happens if there are any issues?**

ElimiNOX Eco™ has been widely tested and used in Euro 5 & Euro 6 vehicles across multiple engine manufacturers without any detriment. ElimiNOX has a third party indemnity insurance of up to £5,000,000

 **What is the difference between ElimiNOX Eco™ and Ad Blue?**

Add blue is added post combustion, ElimiNOX Eco™ is added pre combustion. They can be used simultaneously with no adverse effect



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ElimiNOX - Q+A's

 **What is the anticipated spend to save ratio, when using ElimiNOX Eco™ ?**

£0.015 spent saves approximately £0.05. With Besblock the savings have proven to be significantly higher at £0.08

 **How much will a litre of ElimiNOX Eco™ cost?**

Product for trial periods of 3 months would cost £25/l. Thereafter cost is based on volume

 **What is the mix ratio of ElimiNOX Eco™ ?**

1:2000

 **How would I use ElimiNOX Eco™ ?**

Can be added to fuel storage tanks prior to vehicle filling or directly into vehicle fuel tank. Product automatically mixes and remains stable



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