

**PACK SIZES
AVAILABLE**

20 LITRES
200 LITRES
1000 LITRES
10,000 LITRES
20,000 LITRES

**TECHNICAL
SUPPORT**

Chemiphase will offer on-site technical support during all stages of production. Technical support includes on-site testing and results.

PRODUCT SAFETY

All Chemiphase products are thoroughly researched and tested. All products are also COSHH registered and come complete with delivery.

For more information on any of our products or services please visit us on the Web at:

www.chemiphase.co.uk

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Bioboost 1000

Biodiesel Cetane Improver for increased performance and MPG



PRODUCT DESCRIPTION

Chemiphase are proud to launch our latest development in biodiesel technology, a biodiesel performance enhancer – Bioboost 1000. Biodiesel has been proven to offer a lower MPG return in comparison with standard mineral diesel, because Bioboost 1000 increases the cetane rating of the fuel this leads to a cleaner, more efficient burn of the fuel which in turn will improve MPG and performance.

Bioboost 1000 will improve biodiesel Performance + Power by increasing the Cetane rating of your biodiesel. Users will feel a definite increase in throttle and starting in mornings where previous untreated biodiesel felt sluggish. Bioboost 1000 is effective with all types of biodiesel and users will feel the improved performance when Bioboost is added. Bioboost is a very effective additive for the biodiesel producer as they will now be able to offer a premium grade Biodiesel that is just as powerful as standard diesel at Biodiesel prices.

KEY BENEFITS

- Increased Power + Performance from produced biodiesel
- Increased Cetane Rating
- Increased Lubricity and therefore reduced engine wear
- Reduced foaming when transferring
Improved Fuel stability
- Corrosion inhibition of engine and tank
- Aids in dispersing insoluble gums
- Knocks water out of fuel rapidly



CHEMIPHASE
INTERNATIONAL

PRODUCT RANGE :

BIODIESEL ADDITIVE'S

ALLKLEAR 400

Biodiesel antioxidant to control oxidation levels in biodiesel which can cause degradation and damage to tank storage.

BIO-CONTROL 41

Biodiesel biocide to control micro-biological growth in biodiesel.

COLDFLOW 350

Pour point additive designed for heavy oils like Rapeseed, Used Cooking Oils etc.

PH CORRECT

pH correction agent to control the pH of the biodiesel after the reaction stage.

COLDFLOW 402

Pour point additive designed for heavy oils like Palm Oils, Tallow Oils and Yellow Grease.

CITRACLEAN

Excellent cleaning detergent for areas where oil staining and greasy floors are a problem.

Bioboost 1000

How biodiesel is made

MIXING OF METHANOL AND CATALYST

A catalyst, typically sodium hydroxide, is dissolved in methanol (wood alcohol).

REACTION

The methanol/catalyst mix and oil or fat are added together and heated, producing a reaction called "transesterification," which results in two major products: glycerin and biodiesel. Technically, biodiesel is methyl esters.

SETTLING

Glycerin is much more dense than biodiesel, and the two can be gravity-separated, with glycerin simply drawn off the bottom of the settling vessel.

WASH

Biodiesel must be washed with water to remove contaminants. Water is heavier than biodiesel and absorbs the excess methanol, sodium hydroxide and soap suspended in it. After washing and settling, the water can be drained from the bottom of the container. Several wash cycles are generally needed.

METHANOL RECOVERY

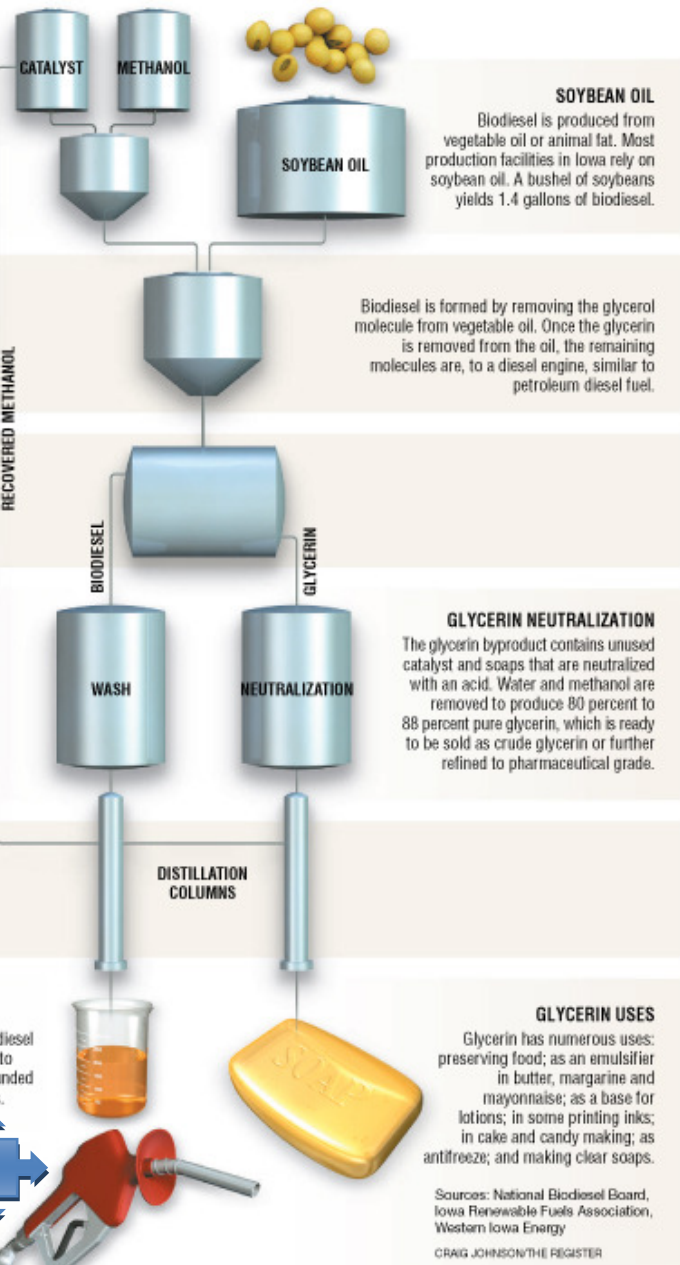
Excess methanol remaining in the biodiesel and glycerin are removed through distillation and recycled for reuse.

PRODUCT QUALITY AND REGISTRATION

Prior to use as a commercial fuel, the finished biodiesel must be analyzed using sophisticated equipment to ensure it meets ASTM specifications. ASTM was founded as the American Society for Testing and Materials.

FINAL PRODUCT

The finished biodiesel is shipped to fuel distributors by rail or truck, to be sold as pure biodiesel or blended with petroleum diesel.

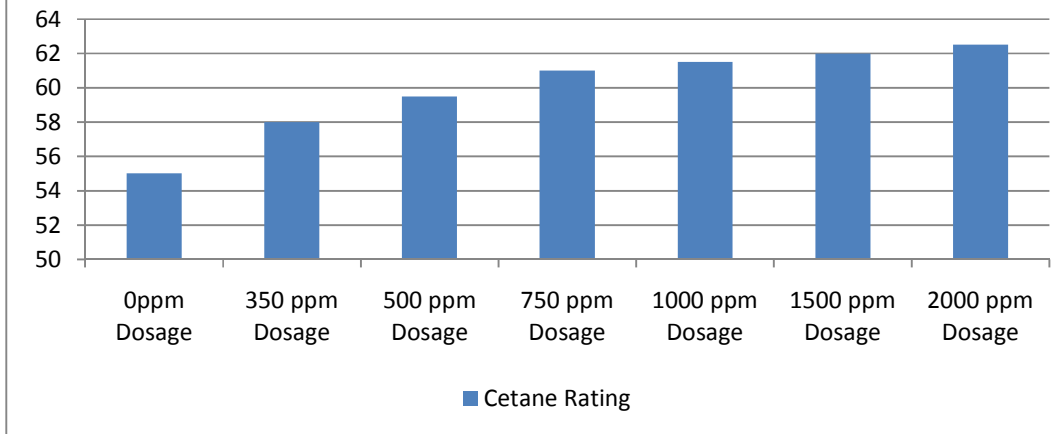


Bioboost 1000 Application

We suggest 750 ppm of Bioboost1000 is added to your fuel for normal operations. If necessary, it can be used at stronger concentrations, as high as 1000 ppm where an initial clean up is required. Bioboost1000 should be added, prior to delivery of fuel to ensure good mixing is achieved in bulk tank quantities. Should you need to add the Bioboost 1000 to the vehicle, it is simple, just pour in the correct amount and allow agitation of the vehicle to do the mixing.

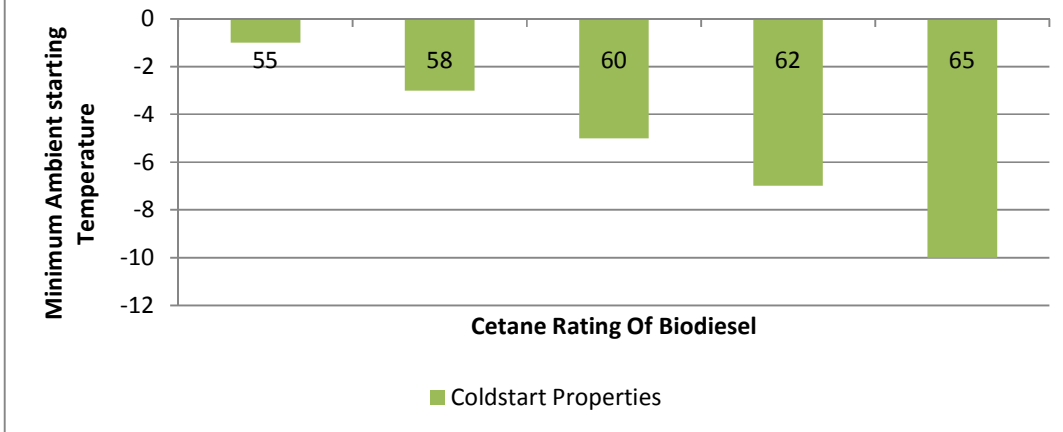
Bioboost 1000

Bioboost 1000 Performance Increase



*This graph shows the increased cetane rating of biodiesel as you increase the dosage rates of Bioboost 1000.

Coldstart Capabilities of UCO Biodiesel



*This graph shows as you increase the cetane rating of biodiesel using Bioboost 1000, the cold starting capability decreases down to much lower temperatures.

Test Methods :

Pour Point – ASTM D5950 (Deg C)

CFPP – ASTM D6371 (Deg C)

PACK SIZES AVAILABLE

20 LITRES

200 LITRES

1000 LITRES

10,000 Tanker

20,000 Tanker

TECHNICAL SUPPORT

Chemiphase will offer on-site technical support during all stages of production. Technical support includes on site testing.

DISCLAIMER :

The information and all further technical advice are based on our present knowledge and experience. However, they imply no liability or other legal responsibility on our part, including with regards to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied of guarantee of product properties is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out by qualified experts in the sole responsibility of the customer.

Revision date: March 2015

CHEMIPHASE LTD
SAFETY DATA SHEET
BioBoost 1000



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY UNDERTAKING

PRODUCT NAME: BioBoost 1000
PRODUCT Description: Biodiesel Enhancer
APPLICATION Biodiesel Additive
SUPPLIER Chemiphase International Ltd
PO Box 168
Ormskirk
L40 6ZX
Tel: 00 44 1744 886622
Fax: 00 44 1744 886633

EMERGENCY TELEPHONE (24 HR) 00 44 (0) 1744 886622

2. COMPOSITION INFORMATION ON INGREDIENTS

NAME	EC No	CAS No	CONTENT	CLASSIFICATION
MIXED-ETHYLHEXYL NITRATES	248-636-	24247-96-7	10-40%	Xn R20/21, r44, r51/53 S16, 36/37, 45, 7
Methanol	200-659-6	67-56-1	15-70%	R10 Xn, R10/R20/21 Xi, R38 & S16

The Full Text for all R- Phrases are displayed in Section 16

3. HAZARDS IDENTIFICATION

Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin. Risk of explosion if heated under confinement. Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

GENERAL INFORMATION

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

INHALATION

Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source of exposure. Rinse mouth thoroughly. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. DO NOT induce vomiting. Get medical attention immediately.

SKIN CONTACT

Remove affected person from source of contamination. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention immediately.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eyelids. Continue to rinse for at least 15 minutes and get medical attention.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Use: Powder, Carbon dioxide (CO2). Water spray or water Fog. Foam

SPECIAL FIRE FIGHTING PROCEDURES

Avoid water in straight hose stream; will scatter and spread fire. Use water to keep fire exposed containers cool and disperse vapours. Keep run-off water out of sewers and water sources. Dike for water control.

SPECIFIC HAZARDS

By heating and fire, irritating vapours/gases may be formed.

PROTECTIVE MEASURES IN FIRE

Wear personal protective equipment. Wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin and eyes. Provide adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not discharge into drains, sewers, watercourses or onto the ground.

SPILL CLEAN UP METHODS

Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Do not contaminate water sources or sewer.

7. HANDLING AND STORAGE

Usage precautions

Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level.

STORAGE PRECAUTIONS

Store in tightly closed original container in a cool dry well-ventilated place. Use container made of : Stainless steel. Suitable plastic material.

Do NOT use container made of: Carbon steel.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Chemical Name	ACGIH	<u>NI</u> <u>OSH</u>	OSHA - Final PELs
Methyl alcohol	200 ppm TWA; 250 ppm STEL; skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m ³ TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m ³ TWA

INGREDIENT COMMENTS

OES = Occupational Exposure Standard. Methyl alcohol has a Biological Monitoring Guidance Value. See UK HSE EH40 Table 3

PROTECTIVE EQUIPMENT

Goggles and Gloves

ENGINEERING MEASURES

Provide adequate general and local exhaust ventilation

RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists. Wear respiratory protection with combination filter (dust and gas filter).

HAND PROTECTION

Use protective gloves. Rubber, neoprene or PVC. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

EYE PROTECTION

Wear approved safety goggles.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Liquid

COLOUR

Pale yellow

ODOUR:

Slight Aromatic

Boiling Point/ range (°C)

>64 DEG

MELTING POINT (°C)

Pour Point , -40

RELATIVE DENSITY

· 0.990 @ 20°C

Solubility in water:

	Partial	VISCOSITY	< 0.55 cP 20 deg C
FLASH POINT (°C)	11 degC	AUTOFlammability (°C)	464 deg C (867.20 deg F)

10. STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition Temperatures above 50 degC

MATERIAL TO AVOID

Strong oxidising substances. Strong acids, metal halides.

HAZARDOUS DECOMPOSITION PRODUCTS

During fire, toxic gases (CO, CO₂) and nitrogen oxides are formed.

11. TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 – LD50 >4.6 mg/L (oral rat)

INHALATION

Harmful by inhalation. In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Upper respiratory irritation. Vapours may cause headache, fatigue, dizziness and nausea.

INGESTION

Harmful if swallowed. Gastrointestinal symptoms, including upset stomach. May cause nausea, headache, dizziness and intoxication.

SKIN CONTACT

Harmful in contact with skin. Irritating to skin.

EYE CONTACT

Irritating to eyes. Spray and vapour in the eyes may cause irritation and smarting.

Other Health Effects

No sensitising effects known.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

MOBILITY

The product is slightly soluble in water

BIOACCUMULATION

No data available

DEGRADABILITY

No data available

WATER HAZARD CLASSIFICATION

Toxic to aquatic organisms

13. DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

Empty containers should be taken for local recycling, recovery or waste disposal

DISPOSAL METHODS

Recover and reclaim or recycle, if practical. Do not allow runoff to sewer, waterway or ground. Dispose of waste and residues in accordance with local authority requirements.

WASTE CLASS

For this product, in accordance with the European Waste Catalogue (EWC), a catalogue number cannot be given because the customer has to lay down the purpose first. The catalogue number has to be given according to the local waste removal processes.

14. TRANSPORT INFORMATION

GENERAL

ADR/RID UN no: 3082 ADR Class: 9

Packing Group: III Classification code: m6

Shipping name n/a

Labelling: 9 Hazard ID no: 90
IMDG/IMO UN no: 3082 Class: 9

Packing Group: III EMS:F-A-S-F

Marine pollutant: Labelling: 9

IATA/ICAO UN no: 3082 Class: 9

Packing Group: III Packing Instructions: 914

Labelling: 9

Harmonised Code : 2920 (Esters of other Inorganic Acids and their salts.

15. REGULATORY INFORMATION

LABELLING

Dangerous to the Environment

Harmful

CONTAINS:

RISK PHRASES	R20/21	Harmful by inhalation, in contact with skin and if swallowed
	R44	Risk of explosion if heated under confinement
	R51/53	Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
SAFETY PHRASES	S36/37/39	Wear suitable protective clothing and gloves
	S15/16	Keep away from sources of ignition—NO SMOKING
	S36/37/39	Wear suitable protective clothing, gloves and eye/ face protection
	S24/25/26	In case of contact with eyes, rinse immediately with plenty of water and see medical advice
	S61	Avoid release to the environment. Refer to special instructions

Note: Governing Directive: Danderous Substance Directive 67/548/EC as modified. This classification results from test data and or assessment.

UK REGULATORY REFERENCES

Approved Supply List

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations

APPROVED CODE OF PRACTICE

Classification and Labelling of Substances and Preparations Dangerous for Supply. Safety Data Sheets for Substances and Preparations.

GUIDANCE NOTES

Occupational Exposure Limits EH40. Approved guide to the classification and labelling of substances and preparations dangerous for supply.

16. OTHER INFORMATION

REVISION COMMENTS

General revision

ISSUED BY

CES

REVISION DATE

MARCH 2015

DISCLAIMER

The information provided in this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not being considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.