

The North East Experience

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1 Petroplus

Petroplus is Europe's Leading mid-stream refiner, active in refining, marketing and Tank Storage. We produce high quality fuels at 3 refineries across Europe. These are in UK, Switzerland and Brussels. Teesside Refinery produces high quality, low carbon fuels, based on an optimised feedstock, using high grade Ekofisk Crude Oil from the North Sea.

Petroplus is the UK's leading marketer of Bio-diesel, branded as Bio-Plus, supplying over 50% of the Fatty Acid Methyl Ester into the UK market.

2 Bio-Plus

Bio-Plus has been developed by Petroplus, in close co-operation with key suppliers. It is a blend of 95% high quality mineral oil and 5% renewable element meeting the tight requirements of the new FAME standard EN 14214. Blending and quality control are managed within existing refinery Safety, Health, Environmental and Quality Management systems, meeting ISO9000/2000 and all aspects of the refining sites various licences to operate.

Hence, our Bio-plus product meets the EN590/ ULSD specification and can be used with confidence as an interchangeable fuel source with other fuels meeting EN590.

Petroplus continue to investigate alternative FAME sources and assess their suitability for use in blends with our mineral diesel. The FAME is currently supplied from responsibly managed global markets.

3 Quality control

There are a number of areas within the EN 14214 specification that we pay particular attention to. For example, with regard to cold flow properties, we have worked with our suppliers to manage the issues through the blending operation, as the cold flow properties of the finished bulk blend are of key importance. FAME feedstock's can be managed using heated tanks and equipment to avoid cold flow problems.

Iodine number/ oxidation stability is a key concern for vehicle and equipment manufacturers, particularly fuel injection equipment manufacturers. There is evidence from Germany, that poor quality control on B100 blends can lead to plating the fuel injection equipment internals with oxide gums, causing blockage and mal-operation. Clearly this is not acceptable. We insist on supplies meeting these specifications.

When it comes to assuring the provenance and sustainability of the FAME sources, we again rely on the supplier to demonstrate the route to market. There are a number of considerations to balance here. The detail of the issues varies from continent to continent. As some examples:

- Within the new and growing European Union, the Common Agricultural Policy has tended to support intensive farming techniques. However, this is now being more

balanced with farmers being expected to play a role in managing the impact of their activities on wildlife. Diversity seems to be the key, to provide suitable natural habitats for a diverse range of flora and fauna.

- Managed crop growth and harvesting to ensure Governments and Industry are not tempted by the economic benefits.
- Development of local economies, to ensure that value from the raw material is returned into the local community, thereby supporting development of new industries, for example in the Austrian, German, Malaysian and US models; avoiding slave labour.
- Bio-plus sources must be able to demonstrate sustainability, according to the balance of issues above.

In summary, FAME suppliers must demonstrate compliance with EN14214 and they must do this by analysis and production of a Certificate of Conformity.

Petroplus also undertakes an assessment of suppliers Safety, Health, Environment and Quality Management Systems. It is not acceptable to take care on product provenance if the driver delivering the fuel is expected to work unsafely.

4 Development

Petroplus is involved in developing our own market, developing the FAME supply chain and developing the Bio-Diesel Industry.

We are currently supplying fleet haulage companies, bus companies and local councils with Bio-Plus. This has followed the successful use of Bio-Plus in our own vehicle fleet. We have covered over 2M miles and are seeing increased fuel efficiency; no vehicle problems observed during the routine and regular vehicle inspection programme and no driver problems reported – for example no loss of power. We are looking to share these benefits with a wider customer base.

We are currently undertaking trials with a number of bus companies and local councils. Early indications are these show the same kind of increased fuel efficiency. The work is ongoing and confidential at this time.

Petroplus is keen to develop alternative supply routes into the refinery, to enable us to work more closely with local suppliers of FAME.

To this end, Petroplus is working closely with North East agronomists, fertiliser producer, farmers, utilities operator and technology providers to develop a regional Bio-Diesel Industry in the North East of England. This work is not linked to the stated plans of Bio-Fuels Corporation. It is hoped that we can support the establishment and development of a North East Bio-diesel industry to deliver regional economic and energy security benefits as well as the national and global environmental benefits.

Petroplus is also keen to work with other suppliers to support development of the UK market.