

# FUCHS LUBRICANTS UK PLC

Introduction - BBIA

22nd September 2015



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

# FUCHS PETROLUB SE

## Company Overview



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

# FUCHS Company Profile



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

- A global lubricants company - Family owned
- 55 operating companies (34 production plants)
- Annual sales: €1.83 billion in 2013
- Employees worldwide
  - 4,400 Total (as of 31<sup>st</sup> Dec 2014)
  - 10%+ R&D (R&D budget = 2% sales)
- Decentralised Organisation
  - Global Resources
  - Local Sales & Support
- A successful company with a long term vision



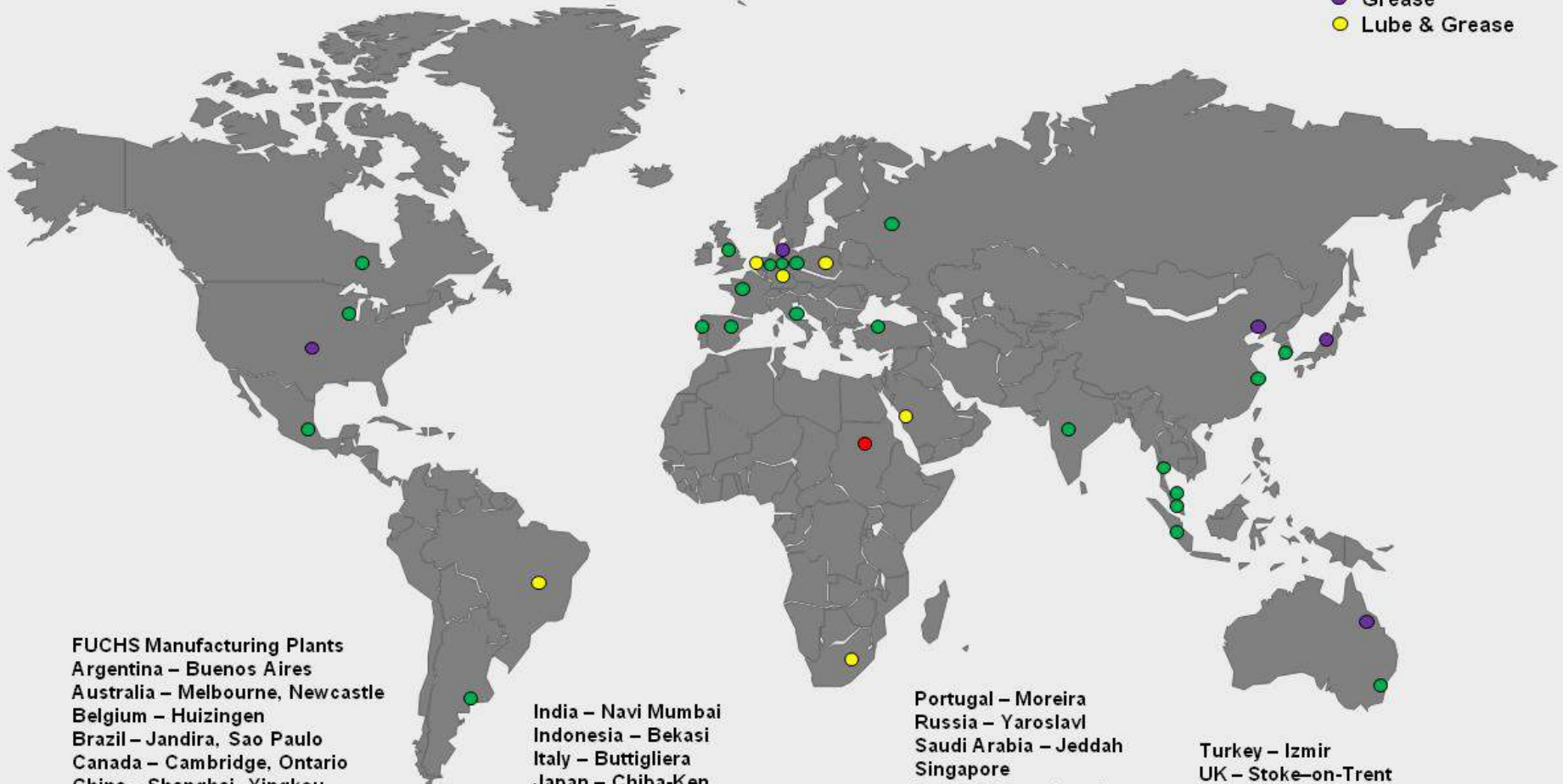


# Global Manufacturing Operations



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

- Lubricant
- Grease
- Lube & Grease



**FUCHS Manufacturing Plants**  
Argentina – Buenos Aires  
Australia – Melbourne, Newcastle  
Belgium – Huizingen  
Brazil – Jandira, Sao Paulo  
Canada – Cambridge, Ontario  
China – Shanghai, Yingkou  
France – Nanterre  
Germany – Mannheim, Kiel,  
Duisburg, Bremen & Kaiserslautern

India – Navi Mumbai  
Indonesia – Bekasi  
Italy – Buttigliera  
Japan – Chiba-Ken  
Korea – Ulsan  
Malaysia – Sha Alam  
Mexico – Queretaro  
Poland - Gliwice

Portugal – Moreira  
Russia – Yaroslavl  
Saudi Arabia – Jeddah  
Singapore  
South Africa – Isando  
Spain – Barcelona  
Switzerland – Langenthal  
Thailand - Bangkok

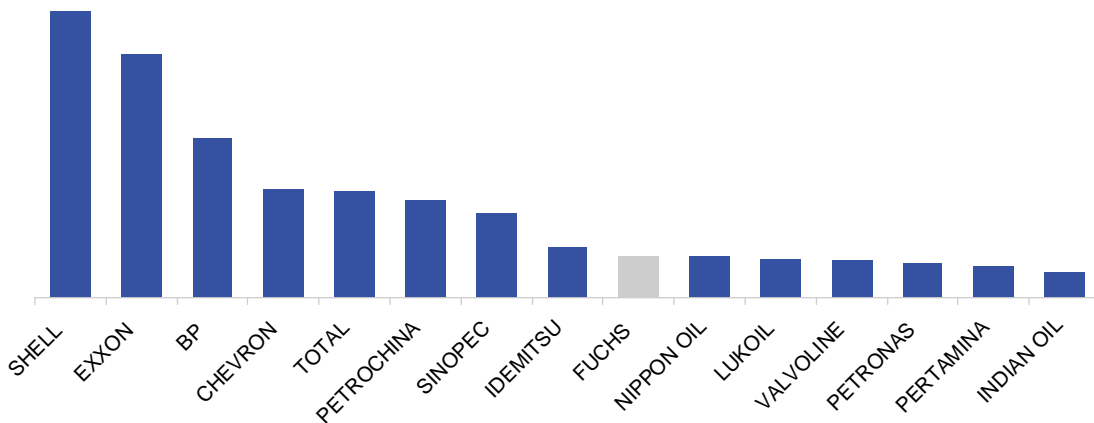
Turkey – Izmir  
UK – Stoke-on-Trent  
USA – Harvey & Kansas

● Sudan - Operated by licensee

# FUCHS - The leading independent lubricants manufacturer of the world

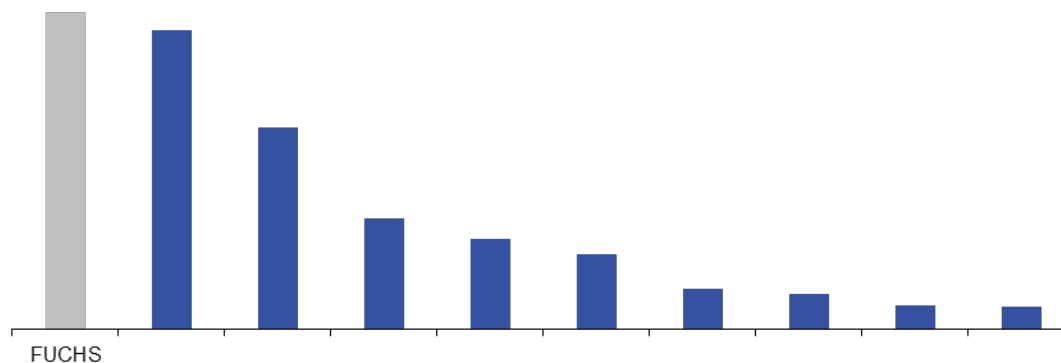


LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.



FUCHS is the 9th largest lubricant company in the world

... and the world's largest independent lubricants manufacturer



# FUCHS - The Specialist

With focus on individual customer requirements



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.



Mining



Passenger Car



Construction



Food industry



Steel



Trucks



Agriculture



Glass



Cement



Aeronautic



Railway



Wind energy



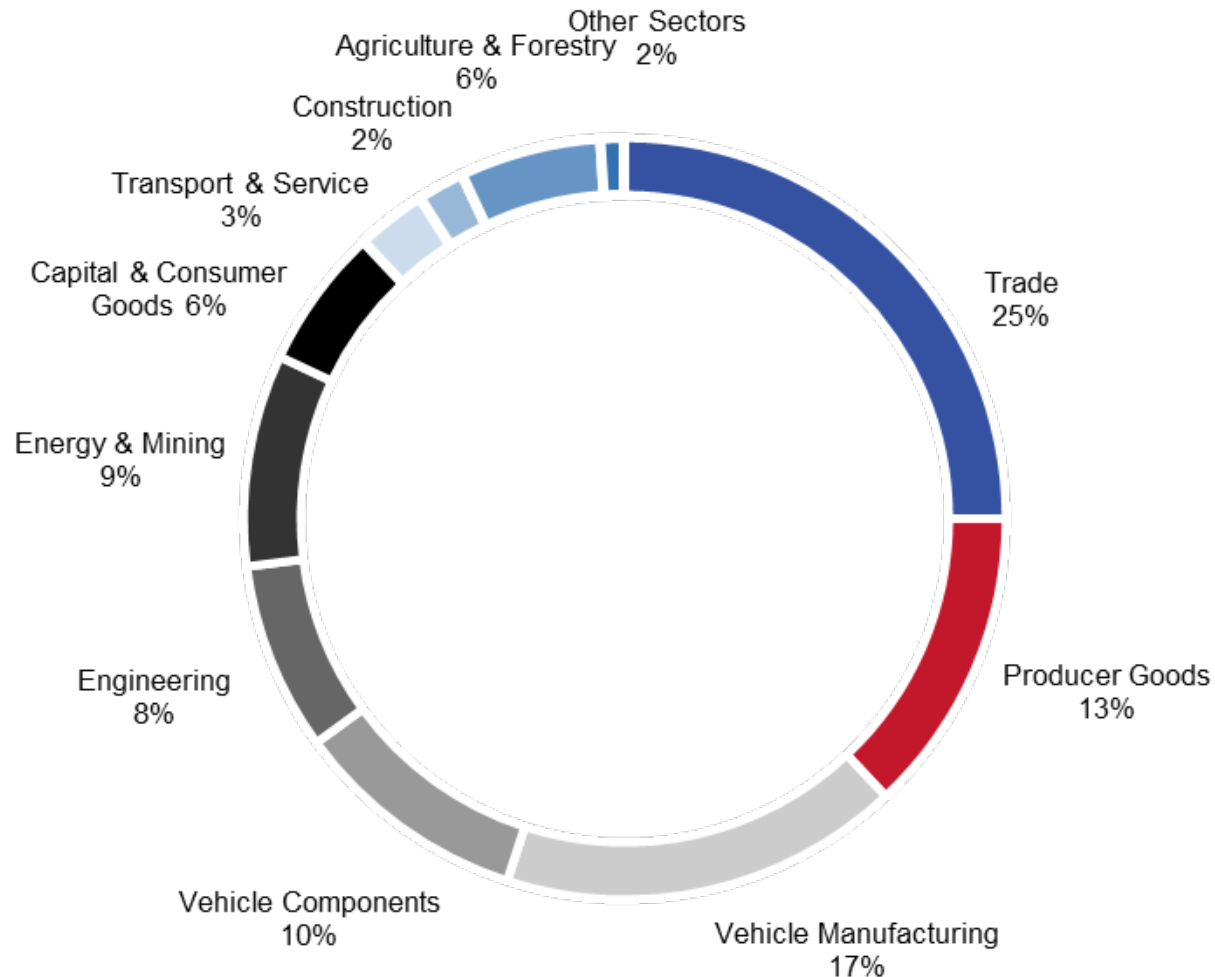
# FUCHS - The Specialist

With focus on individual customer requirements



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

## FUCHS PETROLUB Group customer portfolio (Customer segments % sales in 2013)



Mining



Steel



Cement



Food industry



Glass



Wind energy

# What is behind this success ? Our business model works...



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

- Fuchs is fully focused on lubricants (advantage over major oil companies)
- Technology, innovation and specialisation leadership in strategically important product areas
- Independence allows customer and market proximity, responsiveness, speed and flexibility (advantage over major oil companies)
- Fuchs is a full line supplier (advantage over most major oil companies)
- Global presence (advantage over most independent oil companies)



# FUCHS LUBRICANTS UK PLC



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

# Fuchs Group Supply Capability - UK



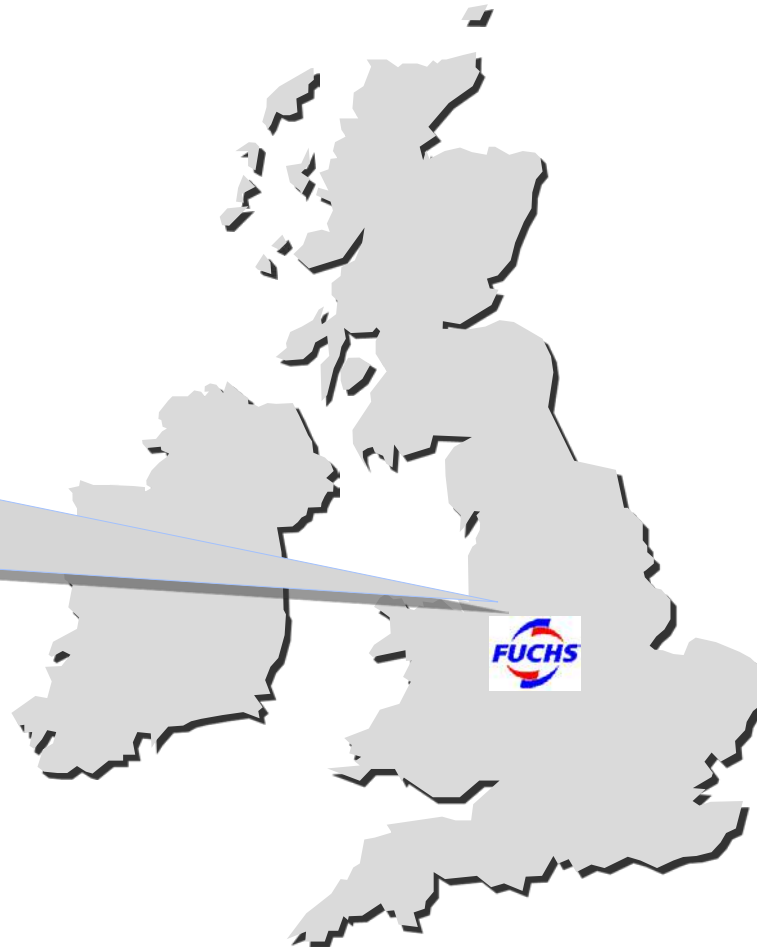
LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.



Most modern  
production facilities in  
the UK

300 Employees  
120KT capacity  
5,000 pallet locations

Stoke-on-Trent HQ  
Manufacturing,  
Distribution,  
Research &  
Technical Centre



# UK Operating Divisions



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

FUCHS UK

Industrial



Automotive



**Silkolene**

Mining



**GENTURY**

Speciality  
Division



**CASSIDA**  
food grade lubricants

**b bremer & leguil**



# Manufacturing Quality



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

The FUCHS Group has a worldwide reputation for outstanding performance and product quality...



ISO 9001  
ISO TS 16949  
ISO 14001  
ISO 18001  
QS 9000  
AS 9100  
AQAP 2120  
Ford Q1  
MHRA

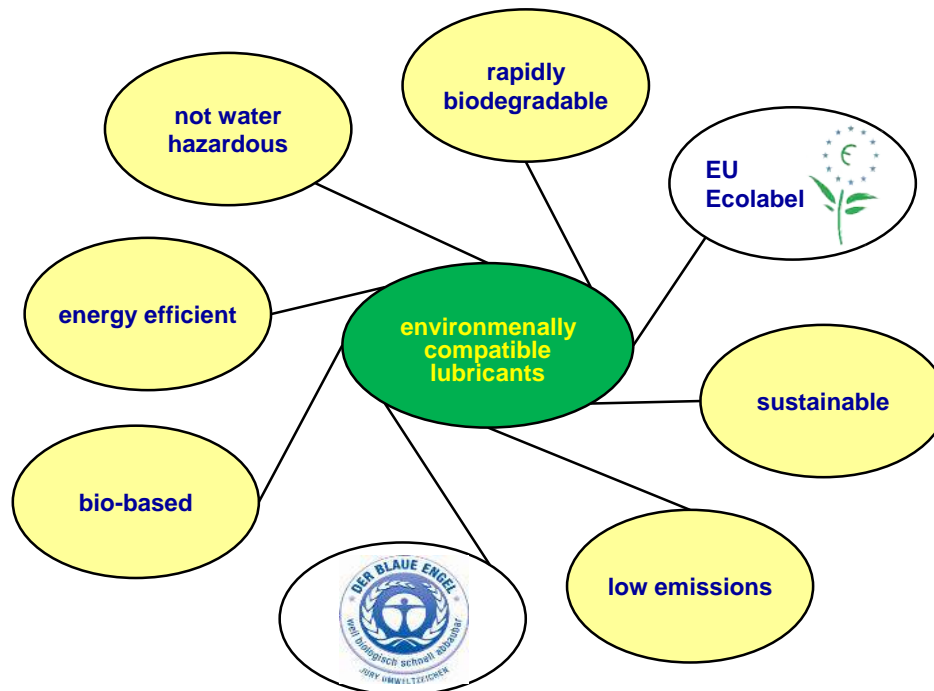


## Biolubricants – Issues and opportunities



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

- ☀ From an environmental point of view, lubricants are not a highly risky product group per se; however, spillages and leakages of oils in environmentally sensitive areas can generate considerable environmental impacts
- ☀ How can lubricants which are *less problematic* to the environment, be characterized and distinguished from conventional ones?
- ☀ What is an environmentally compatible lubricant?





- ✿ **Objective, measurable & provable criteria for the environmental relevance of lubricants:**
  - **Biodegradability**
  - **Toxicity**
  - **Sustainability of (renewable) raw materials**
  - **Technical performance**
    - with these 4 criteria the direct environmental impact of fresh oils to nature can be described
  
- ✿ **A 'Life Cycle Assessment' of an 'eco-lubricant' should include further aspects:**
  - **Sustainable production of the (renewable) raw materials**
  - **Energy efficiency in the operating time of machines**
  - **Lifetime of lubricant and machine,**
    - but for these 3 criteria, standardised methods are not yet available
  
- ✿ **Consequently, actual Ecolabels for special lubricants are focussed on the first 4 criteria**
  
- ✿ **However, a general definition for 'Bio-Lubricants' was missed in the past.**

# The strict view: EU Ecolabel for Lubricants (EEL)



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

☀ The EEL was created in 2005 – Current version: Directive 2011/381/EU

☀ The EEL includes only special groups of lubricants:

🌱 Category 1: Hydraulic fluids and 'Tractor Transmission Oils'

🌱 Category 2: Lubricating greases and stern tube greases

🌱 Category 3: Chain saw oils, mould release agents, wire rope & other total loss lubes

🌱 Category 4: 2-stroke engine oils

🌱 Category 5: Industrial and marine gear oils



☀ The EEL includes a criterion "Minimum amount of renewable resources":

Criterion 5	Hydraulic fluids	Greases	Chain saw oils, mould release agents and niche loss lubricants	Two-stroke oils	Industrial gear oils
<i>Carbon content from renewable raw materials % (w/w)</i>	≥ 50%	≥ 45%	≥ 70%	≥ 50%.	≥ 50%

☀ Reputation of EEL is based on the **certification process**

☀ **Disadvantage of EEL:**

Only few lubricants groups – what about engine oils, metalworking fluids etc?



- ✿ Over the last decade, the aspect of using renewable, bio-based material grew up
- ✿ Bio-Lubricants are explicitly mentioned as promising product group within the European 'Lead Market Initiative' (LMI, 2008-2009)
- ✿ CEN Standardisation work started under the umbrella of the LMI Mandate M/430: Elaboration of a 'Standardisation programme for Bio-Lubricants'
- ✿ As the first step, the Technical Report 16227 "Bio-Lubricants" concerning "Recommendation for terminology and characterisation of bio-lubricants and bio-based lubricants" was set up (2011)
- ✿ An adequate CEN standard will be finalized in 2015:  
prEN 16807 — Liquid petroleum products — Bio-lubricants —  
Criteria and requirements of bio-lubricants and bio-based lubricant
- ✿ This standard will define minimum requirements regarding
  - **Renewability ('minimum bio-based carbon content')**
  - **Biodegradability**
  - **Toxicity**
  - **Technical performance.**





## Minimum requirements for 'Bio-Lubricants' or 'Bio-based Lubricants' (in short):

### **Renewability:**

Bio-based carbon content  $\geq 25\%$  accord. to ASTM D6866 ( $^{14}\text{C}$  method)

### **Biodegradability:**

$\geq 60\%$  according to OECD 301 for oils;  $\geq 50\%$  for lubricating greases

### **Toxicity:**

Not to be labelled as 'Dangerous to the environment' accord. to CLP directive

### **Technical performance:**

'Fit for purpose'.

⇒ Since these CEN publications operate as a **self-committment** of the lubricant producers, the approach focuses on the customer's view:  
**Every claim with regard to biodegradability, toxicity and bio-based content is measurable in the final product by the customer, for better acceptance.**

# Activities of TAXUD: Proposed PRODCOM / CN codes for bio-lubricants



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

- ✿ **Approach by EU: Bio-Lubricants should be recognizable in statistical aspects**
- ✿ **TAXUD =**  
DG Taxation and Customs Union Convention, combined nomenclature, tariff classification
- ✿ **Draft proposal for an amendment of the Combined Nomenclature related to lubricants (TAXUD/987102/2012)**
- ✿ **Starting of the statistical monitoring of production and trade volumes through the possible establishment of new codes in the existing PRODCOM (production information) and CN (trade information) lists for bio-based products: bio-based lubricants (and bio-based succinic acid, bio-based 1,4-butanediol)**
- ✿ **For bio-lubricants one overall PRODCOM number would be recommended**
- ✿ **For the distinction of conventional and bio-lubricants the definition of CEN/TR16227 (upcoming: CEN/prEN 16807) is recommended**
- ✿ **Final decision is pending.**

# Market demands for Bio-Lubricants: From Push to Pull?



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.

- ☀ Value for customers is based on **price and performance**
- ☀ Well-performing bio-lubricants have higher costs
- ☀ '**Bio**' or '**Eco**' properties are so far not regarded as a value for most customers, mostly it **is only an add-on**
- ☀ Customers of Bio-Lubricants pay for biodegradability, low toxicity and 'non water hazardous' characteristics (Germany)
- ☀ Customers mostly are not interested in the source of chemistry
- ☀ Thus, to justify higher prices, Bio-Lubricants need '**technical added values**' like  
→ longer life time, → superior wear properties, → higher energy efficiency
- ☀ The R&D behind 'performance' is done by the lubricant manufacturer, but it is a long and hard way to market growth, as long as the competition between different uses of biomass is not fair and the energetic use actually is politically preferred
- ☀ Remembering LMI Priority recommendation #11: "Study the possibility of mandating the use of bio-lubricants and hydraulic fluids in environmentally sensitive areas. This could be implemented e.g. via soil protection and water protection legislation"
- ☀ To switch from the existing technology push to a market pull, a binding **political framework** for supporting bio-based lubricants should be considered.





- ☀ Due to discussions concerning environmental impact and sustainability of resources the product group "**Bio-Lubricants**" has **positive perspectives**
- ☀ Homework for lubricants – done or in process:
  - General definition for bio-lubricants → **CEN/prEN16807**
  - Establishment of statistical distinction of conventional and bio-lubricants → **CN**
  - Establishment of eco-labels → **EEL**
- ☀ These objectives can be seen as pre-conditions for mandating the use of specified bio-lubricants and hydraulic fluids in environmentally sensitive areas
- ☀ Such legislation could be based on the existing **European Eco-Label for Lubricants**
- ☀ As basic definition of "Bio-Lubricants", for clear & unambiguous communication and for all statistical issues the proposal of **CEN/TR 16227** (upcoming: CEN/prEN 16807) is recommended
- ☀ All these efforts will give support for reaching the goals:
  - **Transparency of criteria & claims**
  - **Reputation & acceptance in the market**
  - **Sustainable market success.**



**FUCHS Lubricants (UK) Plc**

**New Century Street**

**Hanley**

**Stoke-on-Trent, ST1 5HU**

**Tel: 01782 203700,**

**[www.fuchslubricants.com](http://www.fuchslubricants.com)**



**LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.**