Magna Magna

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Innovating New Business Values Through Green Technology

Message from the President/CEO of Magna Group of Companies on Environmental Protection and Sustainable Development

BIOLUBRI

An Environmentally Friendly Approach to Industrial Lubrication
www.biolubri.com

Message from the President/CEO of Magna Group of Companies on Innovating New Business Values Through Green Technology



Nelson Cheng PhD (honoris causa) President/CEO Magna Group

The issue of environment protection and sustainable development has become more of an imperative on a global scale than before in recent years. Faced with the dual dilemmas of both shrinking resources coupled with expanding populations, the demand for environmentally-responsible commerce remains a top priority for industries and governments alike.

In response to the need for greater industrial environmental responsibility, Magna Group has expanded with the addition of a subsidiary division, Biolubri, which specializes in research and development in organically-based cleaning agents, additives as well as harnessing solar energy.

One of the main driving forces behind industries is fuel, which poses a serious threat to the environment through the occurrence of accidents and also through the by-products produced from its various uses. Industrialization, since the turn of the 19th century, has brought about a major cause for concern with pollution caused by its heavy reliance on fuel, as well as the fact that fuel shortage is a likely scenario in the not too distant future.

Magna Group recognizes the importance of remediating the toxic effects that petroleum derivatives have on our ecological capital, and has developed a range of biolubricants specially designed for minimal impact on the environment, simultaneously without compromising on lubrication performance.

Being fully organically based, Magna's bio-lubricants are targeted to optimize efficiency and productivity of machinery and equipment, while being mindful of our planet. Adoption of bio-lubricants should be actively promoted to prevent the undesirable scenario of placing both land and waterways in jeopardy.

A green transition should be started and maintained, beginning from the most basic of industrial necessities: fuel. We need to start strengthening and publicizing environmental responsibility, to change longstanding opinions and beliefs regarding the superiority of conventional fossil lubricants and fuels.

For more information on the range of our environmentally-responsible products please visit our websites at w w w . b i o l u b r i . c o m o r www.magnachem.com.sg. Detailed product data is also available upon request.

Yours Faithfully,

Nelson Cheng PhD (honoris causa) President/CEO Magna Group

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BIOLUBRIAn Environmentally Friendly Approach to Industrial Lubrication



Introduction

Bio-lubricants have been considered as a promising long term sustainable and renewable source of lubricant which has potential to address both environmental impacts and security concerns posed by current dependence on petroleum-based chemicals.

Fossil fuels such as petroleum, coal and natural gas, which have been used to meet the energy needs of man, are associated with negative environmental impacts such as global warming.

Besides, supply of these non-renewable energy sources is threatening to run out in a foreseeable future. It has been widely reported that not less than ten major oil fields from the 20 largest world oil producers are already experiencing decline in oil reserves.

The first oil palm plantation was established in Sumatra in 1911 and in Malaysia in 1917. About this time it was simultaneously established in West Africa and tropical America. Over the years, little attention was paid to the industrial use of palm kernel oil. Nevertheless, recent studies by Magna have indicated that apart from their domestic uses, they can be used as lubricants, as replacement for mineral based lubricants if their properties are enhanced.

Biolubri™ Products

Biolubri is a trade mark of Magna International and stands for Bio-Lubricant. After several years of research and development, Magna now offers the whole range of bio-lubricants and bio-based products.

- Metalworking Lubricants
- Greases
- Gun Lubricants
- Fuel Additives
- Oil Additives
- Bio-Cleaners

Biolubri products and additives produced from modified naturally derived raw materials. The Biolubri lubricant products manufactured to perform at levels that are at least equivalent if not better than petroleum-based lubricants.

Bio-Based Additives & Lubricants

The Bio-Based Lubricant that offers better performance features than the mineral-based counterparts. Biolubricant have been considered as a promising long term sustainable and renewable source of lubricant which has potential to address both environmental impacts and security concerns posed by current dependence on petroleum-based chemicals. Fossil fuels such as petroleum, coal and natural gas, which have been used to meet the energy needs of man, are associated with negative environmental impacts such as global warming.

Besides, supply of these nonrenewable energy sources is threatening to run out in a foreseeable future. It has been widely reported that not less than ten major oil fields from the 20 largest world oil producers are already experiencing decline in oil reserves. Over the years, little attention was paid to the industrial use of bio-based oil. Nevertheless, recent studies by Magna have indicated that apart from their domestic uses, they can be used as lubricants, as replacement for mineral based lubricants if their properties are enhanced.

Biolubri bio-based lubricants offer users a wide range of environmentally friendly lubricants that are developed to meet environmental requirements. These revolutionary green products provide users an excellent alternative to mineral based lubricants without comprising on the lubricant's performance and capabilites.

Biolubri's lubricants are excellent solutions for applications where demand for environmental parameters is a matter of priority. Biolubri's lubricants are both rapidly biodegradable and non-toxic to the applicants and environment.



BIOLUBRIAn Environmentally Friendly Approach to Industrial Lubrication





RoHS Compliance

Our products have been submitted for testing and certified by Bureau Veritas, an established organization specialized in QHSE (quality, health, safety and environment) management and certification. Magna is pleased to inform all our current and potential customers that our products are free of any of the restricted substances stated in the Directive (2002/95/EC), as according to the results.





ISO 14000

At Magna, we recognize that effective environmental management is one of the most important corporate priorities We are committed to protecting and respecting the environment through outstanding environment performance and efficiency in the conduct of its operations.



USDA Certified Biobased Product

Magna International Pte Ltd has earned the USDA Certified Biobased Product Label for its Biolubri-Greaskote 100. The USDA Certified Biobased Product Label verifies that the products amount of renewable biobased ingredients meets or exceeds prescribed USDA standards. Biobased products are goods composed in whole or in significant part of agricultural, forestry, or marine materials.





Biolubri Greaskote meets environmental requirements according to Swedish Standard SS155470

Biolubri Greaskote series are a range of Environmentally Acceptable Lubricants(EAL) according to the definitions and requirements of US EPA 2013 Vessel General Permit(VGP).

























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