Lubricating Oil Additives

December 2021

Abstract

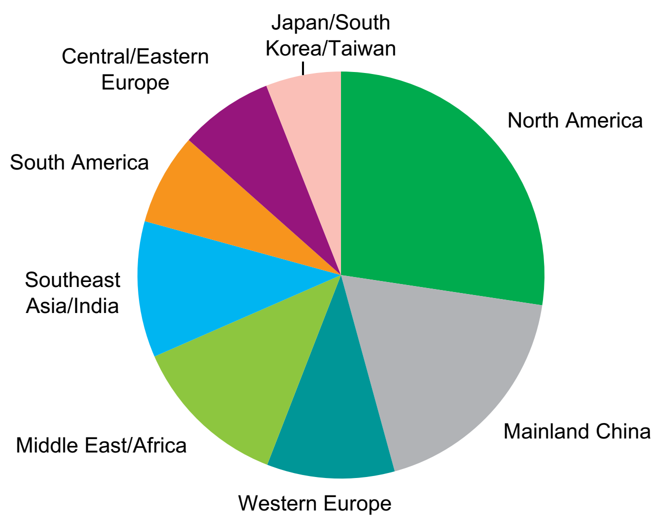
Lubricating oil additives (LOAs) are used to enhance the performance of lubricants and functional fluids. Each additive is selected for its ability to perform one or more specific functions in combination with other additives. Selected additives are formulated into packages for use with a specific lubricant base stock and for a specified end-use applications. The largest end use is in automotive engine crankcase lubricants. Other automotive applications include hydraulic fluids and gear oils. In addition, many industrial lubricants and metalworking oils also contain LOAs. The major functional additive types are dispersants, detergents, oxidation inhibitors, antiwear agents, extreme-pressure additives, and viscosity index improvers.

Crude oil price directly affects single-additive component price. However, dispersant inhibitor (DI) package prices are little affected because the cost of the additive package is a large part of the test fee. Crude oil price experienced sharp declines twice in the past few years; in 2014 and again in 2020. Prices of single components also experienced declines with the price of crude, but to a smaller extent.

Government regulations have had a major effect on LOA markets in the past and are likely to remain important in the future, as upgrading lubricants is part of the effort to improve fuel economy and to meet more stringent emission-control requirements.

The following chart presents world consumption of lubricating oil additives:

World consumption of lubricating oil additives—2021



Source: IHS Markit

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The LOA market is dominated by four multinational companies, some of which are, or were, linked to major oil companies. Together, they account for over 80% of the market. These four suppliers offer packages of formulated components, most of which they captively manufacture. Three are headquartered in the United States, where a large share of the manufacturing is conducted. Thus, the United States is a large net exporter of LOAs to other global regions.

Japan, in contrast, imports most of its products. The four large additive companies have all set up manufacturing plants in Singapore, from where they supply additives primarily for the Asian market including mainland China. As a result, Singapore has become an important exporter of LOAs.

Lubricants are used for various machines. Advances in machinery are the major driver for lubricant upgrades. Overall, LOAs are consumed primarily in auto vehicle lubricants, with a share of around 70% or more of the total additives consumption. The auto vehicle industry has become important for LOA technology and markets. Greenhouse gas (GHG) control is the key factor affecting the auto vehicle industry, including mandated regulations on fuel economy and emission control. It is expected that mandated regulations will speed up GHG control in the next 5–10 years. Most countries' governments have also made related regional mandated regulations.

The split between demand for lubricants (the end-use market for LOAs) in the automotive and industrial sectors varies widely across the world. Lube oil for automotive applications depends on automotive production as well as on automotive possession. In some Asian countries, especially in India, Indonesia, and Thailand, lube oil for motorcycles plays an important role because of high motorcycle production and possession in these countries. For industrial uses, economic development and industrialization usually result in lube oil consumption growth. The LOA market share for the automotive vehicles sector has declined because of lengthened lube oil exchange intervals.

The global LOA market volume is expected to grow at an average rate of less than 2% per year in 2021–26.

For more detailed information, see the table of contents, shown below.

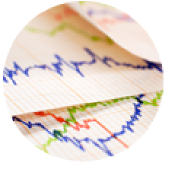
IHS Markit's Specialty Chemicals Update Program – ***Lubricating Oil Additives*** is the comprehensive and trusted guide for anyone seeking information on this industry. This latest report details global and regional information, including

Industry structure, operating characteristics and regulatory environment

Products, functions and markets

Cost structure/ profitability

Technology changes and emerging substitution practices



Quantitative market analysis and forecasts

Key benefits

IHS Markit's Specialty Chemicals Update Program – ***Lubricating Oil Additives*** has been compiled using primary interviews with key suppliers and organizations, and leading representatives from the industry in combination with IHS Markit's unparalleled access to upstream and downstream market intelligence and expert insights into industry dynamics, trade, and economics.

This report can help you

- Identify the competitive environment and key players
- Assess key issues facing both suppliers and their end-use customers
- Understand industry integration strategies
- Keep abreast of industry structure changes, regulatory requirements, and other factors affecting profitability
- Identify new business opportunities and threats
- Follow important commercial developments
- Recognize trends and driving forces influencing specialty chemical markets

Contents

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