Gasoline & Other Fuel Additives, a new study from The Freedonia Group, provides you with an in-depth analysis of major trends in the industry and the outlook for product segments and major markets -- critical information to help you with strategic planning.

This brochure gives you an indication of the scope, depth and value of Freedonia’s new study, Gasoline & Other Fuel Additives. Ordering information is included on the back page of the brochure.

**Brochure Table of Contents**

Study Highlights ................................................................. 2  
Table of Contents and List of Tables and Charts ................... 4  
Sample Pages and Sample Tables from:  
  - Market Environment ..................................................... 6  
  - Oxygenated and Specialty Fuel Additives ..................... 7  
  - Industry Outlook and Markets .................................. 8  
  - Industry Structure ...................................................... 9  
  - Company Profiles ..................................................... 10  
  - List of Companies Profiled ........................................ 11  
Forecasting Methodology ................................................... 12  
About the Company .......................................................... 13  
Advantages of Freedonia Reports ...................................... 13  
About Our Customers ........................................................ 14  
Other Titles From Freedonia .............................................. 15  
Ordering Information ...................................................... 16
US demand for gasoline and other fuel additives is forecast to increase nearly five percent annually to $12.6 billion in 2006, with volume demand reaching 45 billion pounds.

The phase out of methyl tertiary butyl ether (MTBE) will provide strong growth opportunities for ethanol, which will also benefit from tax credits and environmentally focused legislation at the state and federal level.

Biodiesel is expected to post double-digit annual growth, spurred by the expanding use of renewable fuels to increase national energy security and reduce the country’s reliance on imported oil.

Environmentally driven legislation -- in particular, emission standards for diesel engines -- will continue to spur demand for specialty fuel additives. Gains will also be supported by increasing gasoline consumption and use of additives to enhance aviation fuels.

The market for specialty fuel additives is dominated by four companies -- Chevron Oronite, BASF, Ethyl and Infineum -- which accounted for 56 percent of demand in 2001.

* Methanol, toluene and related blending components are not included.
## Study Highlights

### US Gasoline & Other Fuel Additive Demand

#### (million dollars)

<table>
<thead>
<tr>
<th>Item</th>
<th>1992</th>
<th>2001</th>
<th>2006</th>
<th>2011</th>
<th>01/92</th>
<th>06/01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline Demand (bil gal)</td>
<td>111.7</td>
<td>132.6</td>
<td>142.8</td>
<td>154.1</td>
<td>1.9</td>
<td>1.5</td>
</tr>
<tr>
<td>lb/000 gal</td>
<td>191</td>
<td>320</td>
<td>315</td>
<td>301</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Fuel Additives Demand (mil lb)</td>
<td>21340</td>
<td>42390</td>
<td>45020</td>
<td>46370</td>
<td>7.9</td>
<td>1.2</td>
</tr>
<tr>
<td>$/lb</td>
<td>0.18</td>
<td>0.23</td>
<td>0.28</td>
<td>0.31</td>
<td>2.8</td>
<td>4.0</td>
</tr>
<tr>
<td>Fuel Additives Demand</td>
<td>3744</td>
<td>9935</td>
<td>12570</td>
<td>14240</td>
<td>11.5</td>
<td>4.8</td>
</tr>
<tr>
<td>By Type:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygenates</td>
<td>3168</td>
<td>8735</td>
<td>10990</td>
<td>12220</td>
<td>11.9</td>
<td>4.7</td>
</tr>
<tr>
<td>MTBE</td>
<td>1958</td>
<td>5290</td>
<td>2530</td>
<td>400</td>
<td>11.7</td>
<td>-13.7</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1210</td>
<td>3150</td>
<td>8080</td>
<td>11400</td>
<td>11.2</td>
<td>20.7</td>
</tr>
<tr>
<td>Biodiesel</td>
<td>neg</td>
<td>35</td>
<td>130</td>
<td>190</td>
<td>--</td>
<td>30.0</td>
</tr>
<tr>
<td>Other Oxygenates</td>
<td>neg</td>
<td>260</td>
<td>250</td>
<td>230</td>
<td>--</td>
<td>-0.8</td>
</tr>
<tr>
<td>Specialty Additives</td>
<td>576</td>
<td>1200</td>
<td>1580</td>
<td>2020</td>
<td>8.5</td>
<td>5.7</td>
</tr>
<tr>
<td>By Market:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gasoline</td>
<td>3529</td>
<td>9375</td>
<td>11800</td>
<td>13290</td>
<td>11.5</td>
<td>4.7</td>
</tr>
<tr>
<td>Diesel</td>
<td>161</td>
<td>470</td>
<td>670</td>
<td>825</td>
<td>12.6</td>
<td>7.3</td>
</tr>
<tr>
<td>Other Fuels</td>
<td>54</td>
<td>90</td>
<td>125</td>
<td>125</td>
<td>5.8</td>
<td>2.1</td>
</tr>
</tbody>
</table>

© Copyright by The Freedonia Group, Inc.

### SUMMARY TABLE

- **MTBE**: 53.2%
- **Ethanol**: 31.7%
- **Biodiesel**: 0.4%
- **Other Oxygenates**: 2.6%
- **Specialty Additives**: 12.1%
List of Contents, Tables and Charts

I. EXECUTIVE SUMMARY
   Summary Table ................................................... 3

II. MARKET ENVIRONMENT
   General ................................................................. 4
   Macroeconomic Overview ......................................... 5
   Table - Macroeconomic Outlook ............................... 7
   Motor Vehicle Industry Overview .............................. 7
   Table - Motor Vehicle Outlook ................................ 9
   Market Trends ...................................................... 10
   Table - Fuel Additive Market, 1992-2001 .................. 12
   Chart - Fuel Additives Market, 1992-2001 ................. 12
   Pricing Trends ...................................................... 13
   Table - Fuel Additive Pricing Trends ........................ 14
   Technology ........................................................... 14
   Motor Vehicle Engines ......................................... 15
   Diesel Engines ................................................... 17
   Fuels .................................................................. 18
   International Activity & Foreign Trade ....................... 21
   Table - Fuel Additive US Foreign Trade .................... 22

III. ENVIRONMENTAL & REGULATORY ISSUES
   General ................................................................. 23
   Clean Air Act ........................................................ 26
   Oxygenated Gasoline Program ................................ 27
   Reformulated Gasoline Program .............................. 29
   MTBE Ban ............................................................. 31
   Renewable Fuels Legislation .................................. 34
   Diesel Fuel Regulations ......................................... 36
   CAFE Standards .................................................. 38

IV. PETROLEUM INDUSTRY OUTLOOK
   General ................................................................. 41
   Table - Petroleum Industry Outlook ......................... 43
   Gasoline Outlook .................................................. 43
   Table - Gasoline Supply & Demand ......................... 45
   Gasoline Demand by Grade .................................... 45
   Gasoline Demand by Formulation ............................ 47
   Table - Gasoline Demand by Grade & Formulation .... 49
   Alternative Fuel & Energy Threats ......................... 49
   Methanol ............................................................. 50
   Ethanol ............................................................... 50
   Natural Gas .......................................................... 51
   Propane .............................................................. 51
   Hydrogen ............................................................. 51
   P-series ............................................................... 52
   Electricity ............................................................. 52
   Other Energy Threats ............................................. 53

V. FUEL ADDITIVE OUTLOOK
   General ................................................................. 62
   Table - Fuel Additive Demand ................................. 64
   Fuel Additive Outlook by Value ............................... 64
   Chart - Fuel Additive Demand by Value .................... 65
   Fuel Additive Outlook by Volume ............................. 65
   Chart - Fuel Additive Demand by Volume .................. 66

VI. OXYGENATED FUEL ADDITIVES
   General ................................................................. 67
   Table - Oxygenate Demand ..................................... 69
   Oxygenate Demand by Value .................................. 69
   Table - Oxygenate Demand by Value ....................... 70
   Chart - Oxygenate Demand by Value, 2001 ............... 71
   Oxygenate Demand by Volume ............................... 71
   Table - Oxygenate Demand by Volume ..................... 72
   Chart - Oxygenate Demand by Volume, 2001 ............. 73
   Oxygenate Demand by MTBE Equivalent .................... 73
   Table - Oxygenate Demand by MTBE Equivalent ........ 74
   Chart - Oxygenate Demand by MTBE Equivalent, 2001 ... 75
   Regional Differences in Supply & Demand ................. 75
   Methyl Tertiary Butyl Ether (MTBE) ........................ 76
   Table - MTBE Demand ........................................... 77
   MTBE Ban ............................................................. 78
   Effects of MTBE Ban ............................................. 79
   Product Characteristics .......................................... 80
   Producers ............................................................ 82
   Table - US MTBE Capacity, 2001 ............................. 84
The Market Environment Section discusses factors influencing gasoline and other fuel additives demand, including technology and motor vehicle industry trends.

This information provides you with an understanding and an analysis of the climate in which the gasoline and other fuel additives industry operates.

**MARKET ENVIRONMENT**

**Technology - Diesel Engines**

The diesel engine industry is technology driven, despite the fact that its technology is well understood. Significant changes in recent years have been developed in response to increasingly stringent emission standards without sacrificing engine power. Diesel engine design technology has also involved the development of engines that are more efficient and quieter.

The US Environmental Protection Agency (EPA) has established Tier 2 regulations for diesel engines used in motor vehicles. These standards are designed to reduce NOx emissions and nonmethane hydrocarbons approximately 60 percent from previous levels. Caterpillar, Cummins, Detroit Diesel, Mack Trucks, Navistar International and Volvo (Sweden) agreed to meet Tier 2 specifications by October 2002, while the remainder of the industry must comply by January 2004. The EPA has also been involved in the regulation of off-road diesel engines used in construction, agricultural and industrial applications, phasing in standards in three tiers between 1994 and 2006. Marine diesel engines must comply with EPA regulations between 2004 and 2007, while locomotive engines must adhere to standards in October 2001. These stricter standards set in motion by the EPA.

**ENVIRONMENTAL & REGULATORY ISSUES**

**MTBE Ban**

Although MTBE has been promoted as environmentally friendly and beneficial in providing healthier air, there are some concerns over the usage of this oxygenate, due to potential health risks involved. For example, some consumers have complained of nausea, headaches and dizziness. More recently, reports that the additive had leaked from underground tanks and was detected in drinking water supplies in California sparked widespread concern. MTBE is a suspected cancer causing agent in animals and is thought to be harmful to human health in high doses. Proponents of MTBE say that the additive is safe and that leakage problems are attributable to structural failures in storage tanks. MTBE supporters also claim that the potential phase out of MTBE from RFG will put upward pricing pressure on gasoline, as well as petrochemical feedstocks. If MTBE is eliminated nationwide, gasoline refiners will have to handle the reduction in gasoline octane, volume and other properties through the upgrading and expansion of facilities, as well as implement higher cost refining processes. In addition, politics play an important role in the ongoing debate over MTBE. MTBE advocates argue that the actions taken against the additive at the federal level are in support of Midwest ethanol producers.

Although California regulatory authorities decided in 1998 not to list MTBE as a carcinogen or as a substance that causes birth defects or infertility, California...
Oxygenated & Specialty Fuel Additives

These Sections provide demand for historical years and forecast growth to 2006 and 2011.

This information helps you:

- Analyze your company’s growth potential in the industry.
- Outline your strategic plans for five and ten years out.
- Establish sales goals.

Biodiesel - Factors Influencing Demand

Biodiesel demand will benefit from its positive environmental profile. In May 2000, biodiesel became the only alternative fuel in the US to have successfully completed the EPA’s Tier 1 and Tier 2 Health Effects testing under the Clean Air Act. These tests demonstrated that biodiesel significantly reduced regulated as well as unregulated emissions associated with cancer and lung disease. The tests also showed biodiesel’s nontoxic health effects.

In May 2001, the US Department of Energy issued a rule allowing government vehicle fleets, which are required to purchase alternative fuel light-duty vehicles, to meet these requirements through biodiesel fuel use credits. The Energy Conservation Reauthorization Act adopted by Congress in 1998 allowed a similar program for vehicles over 8,500 pounds. In March 2002, the US Senate unanimously approved the inclusion in the Senate energy bill of a measure that allows government fleets to use biodiesel to meet more than just half of their alternative fuel requirements. If this bill is signed into law, it could potentially double the size of the current biodiesel market since the majority of biodiesel users are government fleets. As of March 2002, more than 100 major fleets, including those of the US Postal Service, the US Air Force, the US Army, the US Department of Energy, and state fleets in Ohio, Iowa, Virginia, Delaware and New Jersey, had implemented biodiesel use programs.

A number of renewable fuel bills have been introduced in the US Congress to provide incentives for or mandate the increasing use of biodiesel. If these bills are signed into law, they would have a positive impact on biodiesel demand in the US.

Corrosion Inhibitor Demand in Fuels

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline Demand (bil gal)</td>
<td>111.7</td>
<td>121.3</td>
<td>132.6</td>
<td>142.8</td>
<td>154.1</td>
</tr>
<tr>
<td>lb/000 gal</td>
<td>0.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrosion Inhibitor Demand (mil lb)</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$/lb</td>
<td>0.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrosion Inhibitor Demand (mil $)</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% corrosion inhibitor</td>
<td>5.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Specialty Additive (mil lb)</td>
<td>590</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© Copyright by The Freedonia Group, Inc.
These Sections analyzes trends and considers the threats and opportunities in each of the major markets for gasoline and other fuel additives.

The information presented will help you:

- Focus your sales and marketing efforts on high growth areas.
- Propose new areas for development.

Demand for additives incorporated into regular and other non-premium gasoline grades is projected to advance five percent per annum to $8.7 billion in 2006. Although demand will decelerate significantly from gains posted in the 1990s (primarily because of the phase out of MTBE), growth will be supported by increasing production of other grades of gasoline. The continued incorporation of specialty additives, such as detergents and other deposit control agents, into non-premium gasoline formulations will also provide some opportunities for advances, particularly as consumers become more aware that non-premium grades of gasoline offer many of the same performance and environmental benefits of premium gasoline.

The US has seen a shift toward the purchase of non-premium gasolines. In 2001, non-premium grades of gasoline accounted for 87 percent of the gasoline pool, up from 81 percent in 1992. One reason for this is that these grades contain substantially more additives than in the past. In dollar terms, the amount of additives used in non-premium gasoline has increased from 68 percent in 1992 to 73 percent in 2001. The use of detergents and other deposit control additives is mandated by the EPA, so the advantage of premium grades of gasoline is much lower today than it was a decade ago. Furthermore, consumers are becoming increasingly aware that premium gasoline does not necessarily provide better acceleration or better fuel economy, and that they can use the octane level recommended by the vehicle’s manufacturer. In addition, some higher performance cars no longer call for premium gasoline.

---

**Gasoline Demand by Grade & Formulation**

(billion gallons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Domestic Product (bil 96$)</td>
<td>6880</td>
<td>7813</td>
<td>9320</td>
<td>10850</td>
<td>12500</td>
</tr>
<tr>
<td>gal/000$ GDP</td>
<td>16.2</td>
<td>15.5</td>
<td>14.2</td>
<td>13.2</td>
<td>12.3</td>
</tr>
<tr>
<td>Gasoline Demand</td>
<td>111.7</td>
<td>115.2</td>
<td>125.7</td>
<td>137.1</td>
<td></td>
</tr>
<tr>
<td>By Grade:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premium</td>
<td>21.4</td>
<td>20.5</td>
<td>17.4</td>
<td>17.1</td>
<td>17.0</td>
</tr>
<tr>
<td>Other Grades</td>
<td>90.3</td>
<td>94.7</td>
<td>108.3</td>
<td>120.6</td>
<td>120.1</td>
</tr>
<tr>
<td>By Formulation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Reformulated &amp; Oxygenated</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
</tr>
<tr>
<td>Reformulated</td>
<td>neg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygenated</td>
<td></td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
</tr>
<tr>
<td>Other</td>
<td>111.7</td>
<td>97.5</td>
<td>87.6</td>
<td>82.8</td>
<td>88.7</td>
</tr>
</tbody>
</table>

© Copyright by The Freedonia Group, Inc.
Gain a better understanding of your competition and analyze your company’s position in the industry with information about:

- oxygenates market share
- specialty fuel additives market share
- competitive strategies
- manufacturing
- marketing & distribution
- merger & acquisition activity
- cooperative agreements

**INDUSTRY STRUCTURE**

**Competitive Strategies**

Crucial determinants of success in the highly competitive fuel additives industry include research and development, product differentiation, product focus and cost controls. Other key variables include product innovation and value-added testing, strong marketing skills, the development of a comprehensive product line, effective distribution, and partnership relationships with professional societies. Furthermore, because all new fuel additives must be EPA and government approved before being sold on the market, companies must have a good understanding of the environmental requirements and standards that must be met for the introduction of newly developed additives.

Strategies pursued by participants in the oxygenates and the specialty additives sectors can differ markedly. While oxygenates producers stress cost control through manufacturing efficiencies and economies of scale, specialty companies are more concerned with new product development, customer service, product differentiation and name recognition.

Due to technological developments in the design of engines and other automotive equipment, as well as growing needs for environmental protection and fuel economy, there is a demand for increasingly sophisticated specialty fuel additives. Therefore, research and development is the most important of all the competitive strategies employed by manufacturers of specialty additives. In fact, leading specialty petroleum additive suppliers invest a substantial amount of total revenues into research, testing and development programs. For example, Ethyl invested $58 million into research and development in 2001. With the exception of engine oil additives, the company’s research and development spending was at similar or increased levels compared to 2000.

The rising cost of research and development presents a serious barrier to entry into the specialty fuel additives business. In order to differentiate their products,
The Profiles Section analyzes 33 companies active in the U.S. gasoline and other fuel additives market. These profiles represent a sampling or cross-section of the types of companies involved in the industry.

Divisions, subsidiaries, joint ventures, etc., are discussed under appropriate parent companies.

Sources for profiles included:

- Information provided by key staff members in the respective companies
- Annual reports
- 10-K reports
- Security analysts reports
- Corporate product literature

Equistar Chemicals LP
1221 McKinney Street, Suite 700
Houston, TX 77010
713-652-7200
http://www.equistarchem.com

Revenues:

Key Products: ethanol, methyl tertiary butyl ether and alkylate

Equistar is a limited partnership that operates in two segments: Petrochemicals and Polymers. The Company is 41-percent owned by Lyondell Chemical Company, with Millennium Chemicals Incorporates and the Occidental Chemical Corporation subsidiary of Occidental Petroleum Corporation each owning 29.5 percent. In January 2002, Lyondell announced that it had agreed to acquire Occidental Chemical’s share of Equistar in return for Lyondell stock.

The Company is active in the US gas and fuel additives industry through its Petrochemicals segment. The segment produces oxygenated products, olefins, aromatics and specialty products. The oxygenated line of products encompasses the Petrochemicals segment’s ethanol and methyl tertiary butyl ether (MTBE) fuel additives. Specialty products available from the segment include alkylate, a blending component used in reformulated gasoline.

The Petrochemicals segment formulates ethanol through a direct hydration process that combines water and ethylene. Marketed under the PUNCTILIOUS brand name, the ethanol is offered in proofs of 190 and 200. Among other applications, the segment’s ethanol is used as a gasoline additive that is designed to reduce emissions and help gasoline burn more cleanly. Synthetic ethanol is
Companies Profiled

Abengoa SA
  High Plains Corporation
Archer-Daniels-Midland Company
Baker Hughes Incorporated
BASF AG
  Sabina Petrochemicals LLC
Cargill Incorporated
Chevron Phillips Chemical Company LLC
ChevronTexaco Corporation
  Texaco Incorporated
CITGO Petroleum Corporation
Dow Chemical Company
  Union Carbide Corporation
El Paso Corporation
  Coastal Corporation
Equistar Chemicals LP
Ethyl Corporation
Exxon Mobil Corporation
  Infineum International Limited
Ferro Corporation
Huntsman Corporation
INEOS Group Holding plc
Lubrizol Corporation
Lyondell Chemical Company
Marathon Ashland Petroleum LLC
Midwest Grain Products Incorporated
Millennium Chemicals Incorporated
  La Porte Methanol Company LP
Minnesota Corn Processors LLC
Octel Corporation
Phillips Petroleum Company
  Tosco Corporation
PPG Industries Incorporated
Rohm and Haas Company
Royal Dutch/Shell Group of Companies
  Deer Park Refining LP
  Equilon Enterprises LLC
  Infineum International Limited
  Motiva Enterprises LLC
  Sabina Petrochemicals LLC
  Shell Oil Company
Suez SA
  Nalco/Exxon Energy Chemicals LP
  ONDEO Nalco Company
Sunoco Incorporated
  Belvieu Environmental Fuels
Tate & Lyle plc
  Staley (AE) Manufacturing Company
Texas Petrochemical Holdings LP
Valero Energy Corporation
  Ultramar Diamond Shamrock Corporation
Williams Companies Incorporated

Gasoline & Other Fuel Additives #1538

Order form on last page
Freedonia does not just collect and reprint data; Freedonia develops data. Our analysts thoroughly investigate an industry by extensively interviewing key industry participants and analyzing information from sources such as associations, government and trade literature. Once this research is complete, Freedonia establishes one set of forecasts. All writing, editing and forecasting is done in-house to assure quality and consistency. In cases where data does not exist, Freedonia develops the data based on input/output ratios, bills of materials and flow charts. The following chart summarizes Freedonia’s methodology:
The Freedonia Group, Inc. is a leading international industry study/database company.

Since 1985, Freedonia has published 1,800 titles covering areas such as chemicals, coatings and adhesives, building materials, plastics, industrial components and equipment, health care, packaging, household goods, security, and many other industries.

Freedonia has produced a wide variety of titles, including:

- **Biocides**
- **Dyes & Organic Pigments**
- **Industrial Starch & Other Corn Chemicals**
- **Fermentation Chemicals**

Because Freedonia is a reliable information source, our forecasts are cited in numerous publications such as *The Wall Street Journal, Chemical Market Reporter, Chemical Week* and *Oil & Gas Journal*.

**In-house operations**

Because all of our staff work at the same location, interaction between analysts and departments provides a strong system of checks and balances.

**Consistency**

Our Economics Group develops indicators that are used by all analysts. Therefore, every Freedonia study is based on a consistent set of economic assumptions (GDP, motor vehicles in use, gasoline demand, etc.)

**Reliable forecasts**

Because all of our forecasts consider the environment in which a product or industry is operating, as well as threats and opportunities to the market, Freedonia forecasts are reliable indicators of future performance.

**One-on-one interviews**

All studies are produced by conducting interviews with key industry participants and end-users.

**Proprietary electronic database**

Freedonia’s analysts can tap into an extensive in-house electronic database containing corporate literature (including private company information), trade publications, government reports and many other sources of information.

**Advantages of Freedonia Reports**

*Gasoline & Other Fuel Additives #1538*

Order form on last page
Freedonia's clients include major US and international companies in the manufacturing, services, consulting and financial sectors.

Typical purchasers of Freedonia studies:

- Key Executives
- Corporate Planners
- Market Researchers
- Financial Analysts
- Information Centers
- New Product Developers
- Merger & Acquisition Specialists

Since 1985 we have provided research to customers ranging in size from global conglomerates to one person consulting firms. More than 90% of the industrial companies in the Fortune 500 use Freedonia research to help with their strategic planning.

Some of Freedonia's customers in the gasoline and other fuel additives market include: BASF, Cargill, Dow Chemical, Lubrizol, and Rohm and Haas.
Automotive
Aftermarket in North America
The North American automotive aftermarket will continue to grow through 2006, driven by gains in average vehicle age and miles driven. Mexico will grow the fastest while the US and Canada benefit from the emerging end-of-life service needs of ‘new quality’ vehicles, which will begin to require more aftermarket service and parts. This study forecasts the North American automotive aftermarket industry to 2006 and 2011 by product and country. It also evaluates market share and profiles key producers.
#1590. 8/02. 3,900

Enzymes: Specialty & Industrial
The US enzymes market is analyzed in this study. It presents historical data (1992, 1996, 2001) and forecasts to 2006 and 2011 by type (e.g., medical, polymerases, nucleases, carbohydrases, proteases, lipases); and by market (e.g., medical/diagnostic, research/biotechnology, food and beverage processing, agriculture, detergents, cosmetics and toiletries, textile processing, pulp and paper, leather processing and chemical production). The study also presents company market share data and profiles key competitors.
#1574. 8/02. 3,800

Corrosion Inhibitors
The US market for corrosion inhibitors will reach $1.6 billion in 2006. Higher-value, multi-functional and specialty blends will continue to replace low-cost commodity chemicals in most markets. Organic-based products will remain the largest type in value terms, although molybdates and silicates will experience faster growth. This study analyzes the 950 million pound US corrosion inhibitors industry to 2006 and 2011 by product and market. It also presents market share data and profiles key competitors.
#1570. 6/02. 3,700

Biocides
Demand for biocides in the US will grow 5.3% annually through 2006. Gains will be driven by heightened awareness of bacterial dangers, and by a shift towards higher end, environmentally-compliant specialty biocides. Halogen compounds will remain the largest segment, while phenolic compounds rise the fastest. This study examines the $2.3 billion US specialty biocides industry to 2006 and 2011 by product, function and market. It also presents market share data and profiles key industry participants.
#1535. 4/02. 3,700

World Diesel Engines & Parts
World diesel engine demand will grow 5.5% annually through 2005. Gains will be driven by the lower price of diesel fuel relative to gasoline in Western Europe, and the greater fuel efficiency of diesel engines versus gasoline engines in general. The stationary segment (e.g., industrial, power generation) will grow the fastest worldwide. This study analyzes the US$73 billion world diesel engine industry to 2005 and 2010 by application, region and for 26 countries. It also details market share and profiles key firms.
#1476. 10/01. 4,500

Diesel Engines & Parts
US demand for diesel engines and parts will grow 4.8% through 2005. Value gains will be propelled by technological innovations resulting from rising emissions standards. Opportunities for growth will also be driven by demand for niche products such as power generation and mining equipment, as well as further development of the light-duty trucks market. This study analyzes the $14 billion US diesel engine industry to 2005 and 2010 by product and market. It also evaluates market share and profiles key firms.
#1448. 7/01. 3,600

Biomass Energy
Demand for biomass energy and raw materials will grow 8.5% annually to 2005. The fastest gains will occur in the market for biomass transportation fuels, which will be spurred by cellulosic ethanol capacity coming online, production cost reductions and legislative incentives for biodiesel consumption. This study analyzes the US biomass energy industry to 2005 and 2010 by type (e.g., ethanol, biodiesel, methanol, direct power production); material and region. It also presents market share data and profiles key firms.
#1411. 5/01. 3,700

For more information about these or other Freedonia titles, please contact us at:
The Freedonia Group, Inc.
Phone: (440) 684-9600
(800) 927-5900
Fax: (440) 646-0484

Gasoline & Other Fuel Additives #1538

Order form on last page
How to Order

Ordering Information
Fill out the coupon below and mail it to The Freedonia Group, or send your order by fax (440) 646-0484, or E-mail to info@freedoniagroup.com

Handling and Shipping is FREE
There is NO charge for handling and shipping. In the US we ship via UPS. Outside the US, we provide free airmail service. If you would like express delivery, we provide this to you at cost.

Save Fifteen Percent
If you order three (3) different titles at the same time, you can receive a discount of 15 percent. If your order is accompanied by a check, you may take a 5 percent cash discount (discounts do not apply to corporate use licenses).

Use Credit Card
You may charge your order to either Visa, MasterCard or American Express. Please include your credit card account number, expiration date and your signature.

Orders Outside of the US
Checks must be paid in US funds and drawn against a US bank. Wire transfers should be sent to: Fifth Third Bank, Cincinnati, Ohio; The Freedonia Group, Inc.; SWIFT #FTBCUS3C; ABA #042000314; Account #830-51814 (please include study number and/or invoice number with all wire transfers).

Additional Copies
Additional copies are available to original purchasers at $400 per title.

Online Access
The complete text and tables from our studies and reports can be found on our website www.freedoniagroup.com and through major commercial online vendors.

Freedonia Custom Research
Need analysis on a topic not covered by Freedonia Industry Studies? Call Customer Service for details on Freedonia Custom Research.

THE FREEDONIA GROUP, INC.
767 Beta Drive
Cleveland, OH 44143-2326 USA
Phone: (440) 684-9600 • (800) 927-5900
Fax: (440) 646-0484

Name:__________________________
Title:__________________________
Company:______________________
Division:_______________________
Street:________________________ (no PO Box please)
City/State/Zip:__________________
Country:_______________________
Phone:________________________ Fax:________________________
Email:________________________

Please check method of payment: Total: $
☐ Enclosed is my check (5% discount) drawn on a US bank and payable to The Freedonia Group, Inc., in US funds. (Ohio residents add 7% sales tax).
☐ Bill my company ☐ MasterCard ☐ Visa ☐ American Express

SHIPPING and HANDLING charges are FREE via UPS (USA only) or airmail. Express delivery available at cost. Please inquire.

Certificate of Analysis

F-SM.1538

For more information about our products, please call the Freedonia Customer Service Department at (440) 684-9600 or (800) 927-5900 or fax (440) 646-0484.