

Table of Contents 2

List of Tables & Charts 3

Study Overview 4

Sample Text, Table & Chart 5

Sample Profile, Table &

Forecast 6

Order Form 7

About Freedonia, Custom Research, Related Studies, Corporate Use License 8



Lubricants

US Industry Study with Forecasts for 2012 & 2017

Study #2384 | September 2008 | \$4700 | 369 pages



The Freedonia Group

767 Beta Drive

Cleveland, OH • 44143-2326 • USA

Toll Free US Tel: 800.927.5900 or +1 440.684.9600

Fax: +1 440.646.0484

E-mail: info@freedoniagroup.com

US Industry Study with Forecasts for 2012 & 2017



Table of Contents

EVECUTIVE CLIBARA DV	Transmission 9 Hudraulis Eluids 11/	Dailroad Equipment 100
EXECUTIVE SUMMARY	Transmission & Hydraulic Fluids114 Automatic Transmission Fluids117	Railroad Equipment
	Tractor Hydraulic & Transmission Fluids 120	Railroad Lubricant Demand200
MARKET ENVIRONMENT	Power Steering & Other Fluids122	Aerospace Equipment201
William Elevinostines	Metalworking Fluids	Aerospace Industry Outlook201
General 4	Product Characteristics	Aerospace Lubricant Demand202
Macroeconomic Outlook 4	Suppliers129	Other Transportation Equipment
Manufacturing Trends 9	Gear Oils	
Consumer Spending Trends12	Automotive Gear Oils	Aftermarket
Motor Vehicle Outlook14	Industrial Gear Oils	Plastics & Rubber
Motor Vehicle Design & Technology18	Greases	Plastics & Rubber Industry Outlook 211
Light Vehicle Engines18	Industrial Greases	Plastics & Rubber Lubricant Demand 213
Diesel Engines20	Automotive Greases	Food & Beverages
Oil Filters22	Automotive dieases140	Food & Beverage Industry Outlook 215
Crude Oil & Refined Petroleum		Food & Beverage Lubricant Demand 217
Products Outlook23	LUBRICANT MARKETS	Cosmetics & Toiletries
Lubricant Additives Overview26	6 1	Cosmetic & Toiletry Industry Outlook 222
Historical Market Trends28	General142	Cosmetic & Toiletry Lubricant Demand 225
Pricing Trends31	Light Vehicle Aftermarket	Printing Inks226
Environmental & Regulatory Issues33	Light Vehicle Industry Outlook144	Printing Inks220 Printing Ink Industry Outlook226
Bio-Based Lubricants36	Light Vehicle Aftermarket	Printing 11st Industry Outlook220 Printing Ink Lubricant Demand227
Recycling36	Lubricant Demand146	Chemicals
Re-Refining37	Engine 0il148	
Motor Vehicle Lubricant	Transmission Fluids149	Chemical Industry Outlook
Classification & Testing39	Gear Oils151	Chemical Product Lubricant Demand 232
Foreign Trade41	Light Vehicle Engine Oil Sectors	Paper & Textiles
International Activity43	Professional153	Paper & Textiles Industry Outlook 234
	Automobile Dealerships154	Paper & Textile Lubricant Demand236
LUDDIOANT DAGE OU C	Quick Lubes155	Other Nondurable Goods Manufacturing 238
LUBRICANT BASE OILS	Other Professional Outlets 157	Durable Goods Manufacturing239
	Other Professional Outlets	Durable Goods Manufacturing
General45	Other Professional Outlets 157 DIY 158 Commercial/Industrial 159	Durable Goods Manufacturing
General	Other Professional Outlets 157 DIY 158 Commercial/Industrial 159 Agriculture 161	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49	Other Professional Outlets 157 DIY 158 Commercial/Industrial 159 Agriculture 161 Agriculture Industry Outlook 161	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52	Other Professional Outlets 157 DIY 158 Commercial/Industrial 159 Agriculture 161 Agriculture Industry Outlook 161 Agriculture Lubricant Demand 163	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55	Other Professional Outlets 157 DIY 158 Commercial/Industrial 159 Agriculture 161 Agriculture Industry Outlook 161 Agriculture Lubricant Demand 163 Power Generation 166	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59	Other Professional Outlets 157 DIY 158 Commercial/Industrial 159 Agriculture 161 Agriculture Industry Outlook 161 Agriculture Lubricant Demand 163	Durable Goods Manufacturing 239 Transportation OEM 241 Transportation Equipment Industry Outlook 242 Transportation Equipment OEM Lubricant Demand 244 Machinery 246 Machinery Industry Outlook 246
General	Other Professional Outlets 157 DIY 158 Commercial/Industrial 159 Agriculture 161 Agriculture Industry Outlook 161 Agriculture Lubricant Demand 163 Power Generation 166 Electricity Generation Industry Outlook 167 Power Generation Lubricant Demand 168	Durable Goods Manufacturing
General	Other Professional Outlets 157 DIY 158 Commercial/Industrial 159 Agriculture 161 Agriculture Industry Outlook 161 Agriculture Lubricant Demand 163 Power Generation 166 Electricity Generation Industry Outlook 167	Durable Goods Manufacturing
General	Other Professional Outlets 157 DIY 158 Commercial/Industrial 159 Agriculture 161 Agriculture Industry Outlook 161 Agriculture Lubricant Demand 163 Power Generation 166 Electricity Generation Industry Outlook 167 Power Generation Lubricant Demand 168	Durable Goods Manufacturing
General	Other Professional Outlets	Durable Goods Manufacturing
General	Other Professional Outlets	Durable Goods Manufacturing
General	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71	Other Professional Outlets	Durable Goods Manufacturing 239 Transportation OEM 241 Transportation Equipment Industry Outlook 242 Transportation Equipment 0EM Lubricant Demand 244 Machinery 246 Machinery Industry Outlook 246 Machinery Production Lubricant Demand 248 Metals 250 Metal Products Industry Outlook 251 Metal Production Lubricant Demand 253 Other Durable Goods Manufacturing 254
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76	Other Professional Outlets	Durable Goods Manufacturing 239 Transportation OEM 241 Transportation Equipment Industry Outlook 242 Transportation Equipment 0EM Lubricant Demand 244 Machinery 246 Machinery Industry Outlook 246 Machinery Production Lubricant Demand 248 Metals 250 Metal Products Industry Outlook 251 Metal Production Lubricant Demand 253 Other Durable Goods Manufacturing 254
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83 Process Oils 85	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83 Process Oils 85 White Oils 88	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83 Process Oils 85 White Oils 88 Rubber Oils 91	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83 Process Oils 85 White Oils 88 Rubber Oils 91 Electrical Oils 93	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83 Process Oils 85 White Oils 88 Rubber Oils 91	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83 Process Oils 85 White Oils 88 Rubber Oils 91 Electrical Oils 93	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83 Process Oils 85 White Oils 88 Rubber Oils 91 Electrical Oils 93 Other Process Oils 96 General Industrial Oils 99	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83 Process Oils 85 White Oils 88 Rubber Oils 91 Electrical Oils 93 Other Process Oils 96	Other Professional Outlets	Durable Goods Manufacturing
General 45 Base Oils 47 Petroleum Base Oils 49 Petroleum Base Oil Supply & Demand 52 Petroleum Base Oil Refining Capacity 55 Other Base Oils 59 Synthetic Lubricants 62 Re-Refined Lubricants 65 Bio-Based Lubricants 68 LUBRICANT PRODUCTS General 71 Engine Oils 73 Motor Vehicle Engine Oils 76 Markets 79 Grades 80 Other Engine Oils 83 Process Oils 85 White Oils 88 Rubber Oils 91 Electrical Oils 93 Other Process Oils 96 General Industrial Oils 99 Hydraulic Fluids 102	Other Professional Outlets	Durable Goods Manufacturing

Marine Lubricant Demand 196

(continued on next page)

US Industry Study with Forecasts for 2012 & 2017



(continued from previous page)

COMPANY PROFILES

Akzo Nobel	
AMSOIL Incorporated	
Ashland Incorporated	
BP plc	. 288
Calumet Specialty Products	. 293
Chemtura Corporation	
Chevron Corporation	
Chevron Phillips Chemical	
ConocoPhillips	. 304
Croda International	
Cross Oil Refining & Marketing	.310
Dow Chemical Company	.313
DuPont (EI) de Nemours	.315
Ergon Incorporated	.317
Exxon Mobil	.318
FUCHS Petrolub	
Henkel AG	. 324
Hercules Incorporated	. 326
Houghton International	. 327
Illinois Tool Works	. 329
Lubrizol Corporation	. 332
LyondellBasell Industries	. 334
Marathon Oil	. 335
Milacron Incorporated	. 336
Nalco Holdings	.339
Petro-Canada Limited	. 340
Petroleos de Venezuela	. 343
Quaker Chemical	. 346
Royal Dutch Shell	. 349
Safety-Kleen Systems	. 352
San Joaquin Refining	. 353
Sonneborn LLC	. 354
Stuart (DA) Company	. 356
Sunoco Incorporated	. 359
Total SA 361	
Valero Energy	. 363
Warren Oil	. 364
Other Companies Mentioned in Study	.366

List of Tables/Charts

EXECUTIVE SUMMARY

1 Summary Table...... 3

MARKET ENVIRONMENT

1	Macroeconomic Indicators	9
	Manufacturers' Shipments	
	Personal Consumption Expenditures.	
	Motor Vehicle Indicators	
5	Petroleum Industry Indicators	26
6	Lubricant Market, 1997-2007	30
Cht	Lubricant Market, 1997-2007	30
7	Lubricant Pricing	33
Q	IIS Finished Lubricant Foreign Trade	//3

LUBRICANT BASE OILS Cht Lubricant Production Flowchart

CITC	Eublicant Houdelion Howellare	τU
1	Lubricant Base Oil Demand	49
Cht	Petroleum Base Oil Refining Stages	51
2	Petroleum Base Oil Supply & Demand	54
Cht	Petroleum Base Oil Demand	
	by Type, 1997-2017	55
3	Petroleum Base Oil Refining	
	Capacity, 2007	58
Cht	Petroleum Base Oil Refining	
	Capacity, 2007	59
4	Other Lubricant Base Oil Demand	51
5	Synthetic Lubricant Demand by Type	55
6	Re-Refined Lubricant Demand	58
7	Bio-Based Lubricant Demand	70

LUBRICANT PRODUCTS

1	Lubricant Demand by Type7	2
Cht	Lubricant Demand by Type, 20077	3
2	Engine Oil Demand7	
3	Motor Vehicle Engine Oil	
	Demand by Market7	g
4	Motor Vehicle Engine Oil	
	Demand by Grade8	2
Cht	Motor Vehicle Engine Oil Demand	
	by Grade, 1997-20178	3
5	Other Engine Oil Demand8	5
6	Process Oil Demand8	
Cht	Process Oil Demand by Type, 20078	8
7	White Oil Demand9	1
8		
9	Electrical Oil Demand9	
10		
11	20110141 21144001141 011 20114114 1111111111	1
Cht	General Industrial Oil Demand	
	by Type, 200710	
12	Industrial Hydraulic Fluid Demand 10	5
13	2.14436.144.14.2.1.6.01.2.1.4.14.14.14.14.14.14.14.14.14.14.14.14	
	Fire-Resistant Fluid Demand11	
15		
	Transmission & Hydraulic Fluid Demand 11	6
Cht	Transmission & Hydraulic Fluid	
	Demand by Type, 200711	7
17		
18		
19	Grease Demand	8

LUBRICANT MARKETS

1	Lubricant Demand by Market143
Cht	Lubricant Demand by Market, 2007 143
	Light Vehicles in Use146
3	Light Vehicle Aftermarket
	Lubricant Demand148
4	Light Vehicle Engine Oil
	Demand by Sector153
5	Commercial/Industrial Lubricant Demand 160
Cht	Commercial/Industrial Lubricant
	Demand, 2007 161
6	Agricultural Indicators163
7	Agricultural Lubricants Demand 166

8	Electricity Generation167
9	Power Generation Lubricant Demand 170
10	Construction Expenditures
11	Construction Equipment
	Lubricants Demand
12	Petroleum & Natural Gas Production 178
13	Petroleum & Natural Gas
	Lubricant Demand
14	Mining Materials Handled
15	Mining Lubricant Demand
16	Other Commercial/Industrial
47	Lubricant Demand
1/	Transportation Equipment Aftermarket
Cl-+	Lubricant Demand
Cnt	Transportation Equipment Aftermarket for Lubricants, 2007
10	
18 19	Heavy Truck & Bus Indicators
19	Heavy Truck & Bus Aftermarket Lubricant Demand
20	Waterborne Commerce Indicators 196
21	Marine Lubricant Demand
22	Railroad Indicators
23	Railroad Lubricant Demand
24	Aircraft in Service
25	Aerospace Lubricant Demand
26	Other Transportation Lubricant Demand . 208
27	Nondurable Goods Lubricant Demand 210
Cht	Nondurable Goods Lubricant
0	Demand by Market, 2007211
28	Plastics & Rubber Demand
29	Plastics & Rubber Market for Lubricants . 215
30	Food & Beverage Shipments217
31	Food & Beverage Lubricant Demand 221
32	Cosmetic & Toiletry Supply & Demand 224
33	Cosmetic & Toiletry Lubricant Demand 226
34	Printing Ink Production227
35	Printing Ink Lubricant Demand 229
36	Chemical Product Shipments
37	Chemical Product Lubricant Demand 233

38 Paper & Textile Products Shipments...... 236 39 Paper & Textile Lubricant Demand....... 237 40 Other Nondurable Goods Manufacturing

Lubricant Demand 238

Lubricant Demand 240

Demand by Market, 2007.......241
42 Transportation Equipment Shipments.....244
43 Transportation OEM Lubricant Demand...246

44 Machinery Shipments 248

45 Machinery Production Lubricant Demand 250

46 Metal Products Shipments......252

47 Metal Production Lubricant Demand 254

Lubricant Demand255

INDUSTRY STRUCTURE

48 Other Durable Goods Manufacturing

41 Durable Goods Manufacturing

Cht Durable Goods Manufacturing Lubricant

1	US Lubricant Sales by Company, 2007	258
Cht	US Finished Lubricant	
	Market Share, 2007	259
2	Selected Cooperative Agreements	267
3	Selected Acquisitions & Divestitures	268

US Industry Study with Forecasts for 2012 & 2017

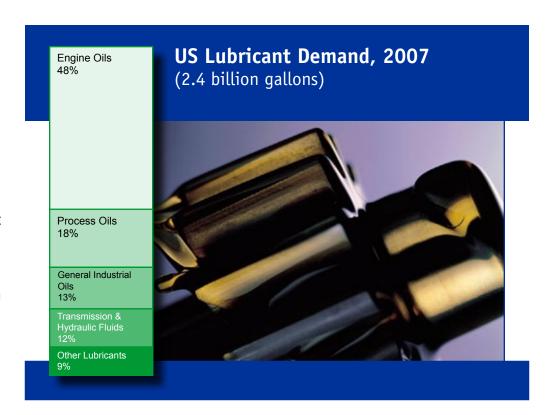


While volume gains will be restricted by longer-lasting lubricants, growth in value will continue to be driven by the impact of high base oil costs and shifts toward higher-quality formulations.

US market value to reach \$17 billion in 2012

Demand for lubricants in the US will increase nearly one percent per year to 2.5 billion gallons in 2012, growing off a weak base. Market value will approach \$17 billion, an annual increase of more than four percent from 2007. Advances will largely be a result of climbing demand for engine oils, which will benefit from the increasing number of motor vehicles in use. Additionally, growth in the manufacturing sector is expected to fuel demand for industrial lubricants such as hydraulic fluids, process oils and greases. However, volume gains will be restricted by trends toward longer-lasting lubricants, which extend oil drain intervals and reduce overall lubricant requirements. The growth in value will continue to be driven by the impact of high base oil costs and shifts toward higher-quality formulations.

Significant shifts in demand for lubricating base oils are expected, as performance requirements of finished lubricants continue to change. Together, higher quality basestocks such as Group II, II+ and III petroleum oils, as well as synthetic types, are expected to increase their share of the market at the expense of Group I base oils, particularly over the longer term. Better quality base oils are necessary for lubricants to comply with the variety of new standards in the industry, including ILSAC GF-5 motor oils, API CJ-4 diesel engine oils, and DEXRON-VI transmission fluids.



Engine oils to benefit from oil change market

Demand for engine oils -- which accounted for nearly half of total lubricant demand in 2007 -- will be boosted by the increasing number of motor vehicles in use, although this will be offset somewhat by trends toward smaller automobiles, less frequent oil changes and a decline in the miles driven per automobile. The "Do-It-For-Me" engine oil change market will continue to benefit from the decline in the "Do-It-Yourself" market as aging baby boomers continue to change sectors. Dealerships are expected to benefit the most from this switch as they use oil changes as a loss leader to attract customers for the more profitable repair work. Above average

engine oil demand is also expected to come from the agricultural sector and the construction industry.

Demand for process oils is forecast to lag overall lubricant demand. Although process oils are often incorporated into the finished product, making them less vulnerable to factors such as recycling and extended drain intervals, some weakness in key markets such as cosmetics and toiletries and inks is likely to dampen gains. Demand for transmission and hydraulic fluids is projected to reverse recent declines, although growth will be below average for the industry due to changing standards for automatic transmission fluids, which will continue to increase drain intervals.

Copyright 2008 The Freedonia Group, Inc.

US Industry Study with Forecasts for 2012 & 2017



Sample Text, **Table & Chart**

Synthetic Lubricants

LUBRICANT BASE OILS

US demand for synthetic lubricants is forecast to advancent annually through 2012 t to gain market share at the e ing performance and environ fully synthetic and synthetic for growth will be in engine consumer acceptance. How

SAMPLE TEXT

tion from highly refined petro. similar performance and environmental properties more cost than synthetic lubricants. For the purposes of this report, a s bricant is one whose basestock is manufactured by chemical organic reaction. This definition is in contrast to a lubricant oil is extracted or refined from naturally occurring sources. lubricants formulated with Group III petroleum base oils are termed synthetic, these products are included as conventional in

report. Additionally, in the case of synthetic blends, only the synthetic portion of the blend is included in the totals.

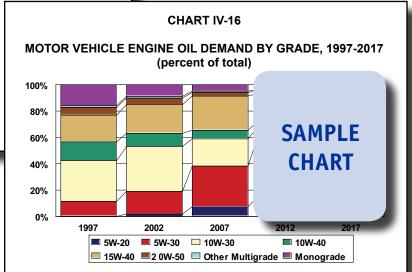
Synthetic lubricants are designed to provide primarily the same lubrication functions as petroleum lubricants. However, synthetic lubricants can also be custom formulated to meet a combination of requirements for specific applications. Synthetic lubricant formulations typically provide enhanced performance properties versus their petro-

leum counterparts. Such properties include:

- petroleum compatibility
- hydrolytic stability
- low volatility
- viscosity temperature behavior
- low temperate fluidity
- paint and elastomer compatibility

62

TABLE IV-16 TRANSMISSION & HYDRAULIC FLUID DEMAND (million gallons) 1997 2002 2007 2012 2017 Item Motor Vehicles in Use (mil) gal/vehicle Transmission & Hydraulic Fluids By Type: **Automatic Transmission Fluids** Tractor Hydraulic/Transmission F SAMPLE Power Steering & Other Fluids **TABLE** By Market: Light Vehicle Aftermarket Commercial/Industrial **Durable Goods Manufacturing** Transportation Equip Aftermarket % transmission Lubricant Demand



US Industry Study with Forecasts for 2012 & 2017



Sample Profile, Table & Forecast

TABLE V-27 NONDURABLE GOODS LUBRICANT DEMAND (million gallons) 1997 2002 2007 2012 2017 Item Nondurable Goods Shpts (bil 2000\$) 17 gal lubricant/mil \$ shpts Nondurable Goods Lubricants By Market: Plastics & Rubber Food & Beverages Cosmetics & Toiletries **SAMPLE** Printing Inks Chemicals **TABLE** Paper & Textiles Other By Product: Process Oils General Industrial Oils Other Lubricants % nondurable goods Lubricant Demand

COMPANY PROFILES

Sonneborn LLC

575 Corporate Drive, Suite 415 Mahwah, NJ 07430 201-760-2940 http://www.sonneborn.com

Annual S Employr

Key Proc and refri

and reiri

microcry serves th

cessing, telecommunications industrial and other markets.

PROFILE

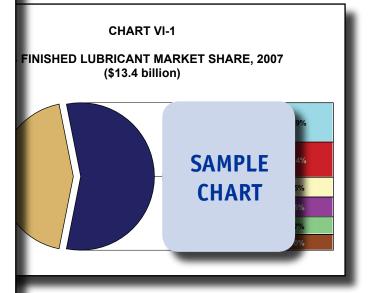
petrolatums,
ons. The Company
essing, polymer proleanons, refrigeration and aff conditioning, general

cants

The Company's lubricants include several ink oils, white oils, compressor lubricants, petrolatums and refrigeration oils. Sonneborn's ink oils, which are marketed under the WITSOL brand name, are hydrocarbon solvents used in the formulation of printing inks. White oils from the Company encompass products marketed under the HYDRO-BRITE, CARNATION, KAYDOL, KLEAROL, PROTOL, GLORIA, ERVOL, RUDOL, BLANDOL and BENOL brand names. In general, these mineral oils consist of saturated aliphatic and alicyclic non-polar hydrocarbons; and are hydrophobic, colorless, tasteless, odorless and chemically inert. Among the end-use markets for these lubricants are the pharmaceuticals, personal care, food processing, baking, agricultural and adhesives industries. For example, HYDROBRITE plastic oils are used in the formation of rigid polyvinyl chloride pipe, window

SAMPLE

354 Copyright 2008 The Freedonia Group, Inc



ORDER INFORMATION

Five Convenient Ways to Order

INDUSTRY MARKET RESEARCH FOR BUSINESS LEADERS, STRATEGISTS, DECISION MAKERS



ONLINE: www.freedoniagroup.com

MAIL: Print out and complete the order form and send to The Freedonia Group (see address at the bottom of this form)

PHONE: Call toll free, 800.927.5900 (US) or +1 440.684.9600

FAX: +1 440.646.0484 (US)

EMAIL: info@freedoniagroup.com

Free Handling & Shipping

There is NO charge for handling or UPS shipping in the US. Expect delivery in 3 to 5 business days. Outside the US, Freedonia provides free airmail service. Express delivery is available at cost.

Orders Outside of the US

Checks must be made payable in US funds, drawn against a US bank and mailed directly to The Freedonia Group. For wire transfers please contact our customer service department at info@freedoniagroup.com. Credit cards accepted.

Credit Card Orders

For convenience, Freedonia accepts American Express, MasterCard or Visa. Credit card purchases must include account number, expiration date and authorized signature.

Save 15%

If you order three (3) different titles at the same time, you can receive a 15% discount. If your order is accompanied by a check or wire transfer, you may take a 5% cash discount (discounts do not apply to Corporate Use Licenses).

Corporate Use License

Now every decision maker in your organization can act on the key intelligence found in all Freedonia studies. For an additional \$2300, companies receive unlimited use of an electronic version (PDF) of the study. Place it on your intranet, e-mail it to coworkers around the world, or print it as many times as you like,

Click here to learn more about the Corporate Use License

ORDER FORM F-WEB.2384	Name
Lubricants\$4700	Title
Corporate Use License (add to study price) * + \$2300	Company
Additional Print Copies @ \$500 each * Total (including selected option) \$	Division
☐ Enclosed is my check (5% discount) drawn on a US bank and payable to The Freedonia Group, Inc., in US funds (Ohio residents add 7.75% sales tax)	Street (No PO Box please)
☐ Bill my company ☐ American Express ☐ MasterCard ☐ Visa	City/State/Zip
MM YY	Country
Credit Card # Expiration	Phone Fax
Signature	Email
* Please check appropriate option and sign below to order an electronic version of the study. Corporate Use License Agreement The above captioned study may be stored on the company's intranet or shared directory, available to company employees. Copies of the study may be made, but the undersigned represents that distribution of the study will be limited to employees of the company.	☐ Individual Use License Agreement The undersigned hereby represents that the above captioned study will be used by only individual(s) who are employees of the company and that the study will not be loaded on a network for multiple users. In the event that usage of the study changes, the Company will promptly notify Freedonia of such change and will pay to Freedonia the appropriate fee based on Freedonia's standard fee schedule then in effect. Note: Entire company corporate use license, add \$2300; one additional user, add \$500; two additional users, add \$1000; three additional users, add \$1500.
Signature	Signature

The Freedonia Group, Inc. 767 Beta Drive • Cleveland, OH • 44143-2326 • USA • Web site: www.freedoniagroup.com
Tel US: 800.927.5900 or +1 440.684.9600 • Fax: +1 440.646.0484 • e-mail: info@freedoniagroup.com



OTHER STUDIES

Fuel & Lubricant Additives

The US market for fuel and lubricant additives is analyzed in this study. It presents historical demand data for 1997, 2002 and 2007 and forecasts for 2012 and 2017 by type and application. The study also considers market environment, environmental and regulatory factors affecting demand, as well as the overall outlook for the petroleum industry. Included are profiles of industry competitors and evaluations of company market share.

#2409 \$4500

Well Stimulation Materials

Buoyed by historically high oil and gas prices, US demand for well stimulation materials will grow 14% annually through 2012. All important product types will register strong growth as US oilfield operators struggle to sustain production levels. Proppants, the largest category, will double in market value. This study analyzes the \$2.8 billion US well stimulation material industry, with forecasts for 2012 and 2017 by product and regional market. It also evaluates market share and profiles industry competitors.

#2358......\$4600

Solvents

Demand for solvents in the US will reach 11.8 billion pounds in 2012. Esters and alcohols will exhibit the best growth within the conventional solvents product group, though green solvents such as hydrogen peroxide and supercritical fluids will post more rapid gains. This study analyzes the \$5.5 billion US solvents industry, with forecasts for 2012 and 2017 by solvent product, market and function. It also considers market environment factors, evaluates company market share and profiles industry players.

#2357......\$4600

World Biofuels

Global demand for biofuels will grow 20% annually through 2011, despite concerns about their impact on the environment and food supplies. Bioethanol and biodiesel will lead gains. North America will remain dominant while the Asia/Pacific region and Western Europe grow faster. This study analyzes the 37.7 million metric ton world biofuel industry, with demand and production forecasts for 2011 and 2016 by fuel, world region and for 16 countries. It also evaluates market share and profiles major players.

#2287......\$5500

World Lubricants

Global demand for lubricants will reach 41.8 million metric tons in 2010. Gains will by driven by increasing motor vehicle ownership and use and growth in manufacturing activity. Engine oils will continue to claim over half of demand, while process oils will grow the fastest. Manufacturing markets will lead gains. This study analyzes the \$35.7 billion world lubricant industry for 2010 and 2015 by formulation, product, world region and for 31 countries. It also evaluates market share and profiles major players.

#2182......\$5400

About The Freedonia Group

The Freedonia Group, Inc., is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unibiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States, the emerging China market, and other world markets. Industries analyzed by Freedonia include:

Chemicals • Plastics • Life Sciences • Packaging • Building Materials • Security
 Electronics • Industrial Components & Equipment • Automotive & Transportation
 Equipment • Household Goods • Energy/Power Equipment

Click here to learn more about Freedonia

Freedonia Custom Research

Freedonia Custom Research delivers the same high quality, thorough and unbiased assessment of an industry or market as an industry study. Since the research initiative is based upon a company's specific needs, companies harness Freedonia's research capabilities and resources to answer unique questions. When you leverage the results of a Freedonia Custom Research engagement, you are able to obtain important answers to specific questions and issues associated with: mergers and acquisitions, new product launches/development, geographic expansion, entry into new markets, strategic business planning, and investment and funding decisions.

Freedonia Custom Research is ideal for companies seeking to make a strategic difference in the status quo and focus on future business growth. Working side by side with clients, Freedonia's team is able to define a research project that is custom-tailored to answer specific questions and provide the basis from which a company can make informed business decisions.



Click here for complete title list

Click here to learn more about Custom Research



Click here to visit freedoniagroup.com