

# Global Opportunities and Threats in the Wax Business, 2006-2020

**Kline's 20/20 vision on the future of the global wax industry**

**Published: August 2007**

**Base Year: 2006**

## **Regional Coverage**

North America

Latin America

Eastern Europe

Western Europe

Africa/Middle East

Asia

A comprehensive global analysis of the petroleum and energy business, focusing on key changes, challenges, and business opportunities, and addressing such questions in detail in as:

- What are the current levels of supply and demand for different types of waxes?
- Could GTL waxes and others compete in high-volume wax markets such as candles, packaging, and board sizing?
- What are the manufacturing costs for each type of wax?
- How will the expected shortfall in the petroleum wax supply affect the global market and the business dynamics in this sector?
- What kind of market space and pricing structures will be prevalent?
- What are some of the key barriers to entry?
- What are the key business opportunities and threats for industry participants?

Includes access to Kline's *FutureView Scenario Forecasting Model*.

## Report Scope

The scope of the study is global, since waxes are defined by global markets and options. Wax is traded easily between the regions of the world, since transportation costs are dwarfed by wax product pricing.

Although the study primarily focuses on petroleum wax (fully refined paraffin, microcrystalline wax, slack wax, scale wax, and petrolatum), detailed consideration is given to synthetic waxes, including GTL waxes, vegetable waxes, montan waxes, and animal waxes, in order to provide a complete picture.

The base year for the supply and demand data is 2006. The study also presents supply and demand forecasts in three windows of time: from 2006 to 2011, from 2011 to 2016, and from 2016 to 2020.

Additionally, three scenarios—most likely case, oversupply, and undersupply—are presented.

## Key Benefits

*Global Opportunities and Threats in the Wax Business, 2006-2020* summarizes the results of Kline & Company's comprehensive analysis of the global supply and demand of waxes, including vegetable-based, animal-based, mineral-based, and synthetic waxes. The study addresses neat GTL waxes as well as GTL waxy raffinates and will explore the potential for these waxes to be processed in conventional refineries and blended with petroleum waxes to increase global wax volumes.

This study is truly global in scope, since waxes are defined by worldwide markets and options. It is designed to:

- Assess global wax supply, demand, market space, pricing developments, inter-material competition, trends, and market developments
- Focus on conventional and synthetic wax technology providers
- Highlight similarities and differences between synthetic and traditional waxes
- Provide wax manufacturing cost models and comparisons based on type of wax
- Analyze barriers to entry for neat and co-processed GTL waxes and other synthetic, animal-based and vegetable-based waxes

Competitive supplier profiles are provided for 12 entities, including major global wax manufacturers and marketers as well as de-oilers.

This report will be a valuable tool for manufacturers and marketers of traditional and synthetic wax, GTL technology providers and partners, and leading wax end users.

## Contents

### 1. INTRODUCTION

- Scope
- Data sources and methods

### 2. EXECUTIVE SUMMARY

*An overview of the study findings from each chapter of the report.*

### 3. WAX TYPES, PROPERTIES, AND GRADES

*This section provides an overview of the specific properties and comparative performance of the following wax types:*

- Petroleum wax
  - Fully refined paraffin wax
  - Slack wax
  - Microcrystalline wax
  - Petrolatum wax
  - Scale wax
- Synthetic wax
  - Alpha-olefin wax
  - Ethylene-derived wax
  - Fischer-Tropsch wax
  - Polyethylene wax
  - Polypropylene wax
- Animal waxes
  - Beeswax
  - Spermaceti
  - Tallow
  - Lanolin wax
- Vegetable waxes
  - Hydrogenated soy wax
  - Hydrogenated palm wax
  - Candelilla
  - Carnauba
  - Jojoba

### 4. APPLICATIONS AND MARKET SEGMENTATION

- Non-packaging
  - Candles
  - Board sizing
  - Health industries: soaps, cosmetics, pharmaceutical, and other health applications
  - Rheology and surface applications: to modify flow and surface properties of plastics, rubber, adhesives, and polishes
  - Other: crayons, firelogs
- Packaging
  - Corrugated containers
  - Cups and cartons
  - Flexible packaging

### 5. WAX MANUFACTURING PROCESSES AND ECONOMICS

- Overview
- Petroleum wax manufacturing
- Hydrogenated vegetable wax manufacturing
- Fischer-Tropsch wax manufacturing
- Polyethylene wax manufacturing
- Summary and analysis of models

### 6. CURRENT AND FORECAST GLOBAL SUPPLY

- Wax supply introduction and background
- Global wax summary: historical and current
- Global wax supply analysis
- North American wax supply
- Latin American wax supply
- Eastern European wax supply
- Western European wax supply
- African and Middle Eastern wax supply
- Asian wax supply
- Wax supply forecast

### 7. WAX DEMAND

- Global overview
- North American demand
- Latin American demand
- Eastern European demand
- Western European demand
- African and Middle Eastern demand
- Asian demand
- Demand trends and forecast

### 8. SUPPLY AND DEMAND BALANCE

- Current supply and demand balance
- Forecast supply and demand balance, 2006 to 2020
- Most likely scenario
- Oversupply demand scenario
- Undersupply demand scenario

### 9. GLOBAL WAX TRADE ANALYSIS

- Exports and imports by country and wax type

### 10. PRICING ANALYSIS

- Historical wax pricing
- Price/market space relationship
- Pricing by application
- Price forecast
- Conclusions

### 11. BARRIERS TO MARKET ENTRY

- Supply reliability
- Quality assurance
- Long-term commitment to the wax industry
- Logistics issues
- Environmental and regulatory issues
- Capital intensity

### 12. BUSINESS DYNAMICS AND STRATEGIES

- For non-petroleum wax suppliers
- For petroleum wax suppliers
- For wax buyers

### 13. WAX MANUFACTURER PROFILES

- Petroleum wax manufacturers
  - CNPC and Sinopec
  - ExxonMobil
  - Shell
  - National Iranian Oil Company
  - PDVSA
  - LUKOIL
  - H&R Wasag
  - Calumet
  - Petrobras
- De-Oilers
  - Sasol
  - IGI
  - Others
    - Naftowax
    - Nippon Seiro
    - Alborz
    - Parafinas del Plata

## Methodology

Kline is unmatched in our ability to gather hard-to-get market and competitive intelligence with a high degree of confidence. Kline's market analysis approach places the principal emphasis on primary research techniques to ensure that the foundation of business intelligence and insight is accurate, current, and reliable.

During the course of field research, Kline's professional staff of industry experts conduct in-depth discussions and personal interviews with a wide range of knowledgeable industry participants and opinion leaders, including, wax producers, de-oilers, end users, technology and catalyst companies, natural gas producers, and trade associations.

This approach has proven to be the most effective and reliable approach to obtaining accurate market data, capturing expert insights, and identifying business opportunities. Primary research will comprise the bulk of the overall research methodology for this report.

In addition, this analysis will be supplemented by secondary research drawn from the review of suppliers' product literature and price lists, a search of recent trade and technical literature, Internet sources, and analysis of statistical data from government, industry, and trade associations and agencies.

## Kline Credentials

Kline is a worldwide consulting and research firm dedicated to providing the kind of insight and knowledge that helps companies find a clear path to success. The firm has served the management consulting and market research needs of organizations in the chemicals, materials, energy, life sciences, and consumer products industries for nearly 50 years.

Kline's research and consulting services extend across the entire energy industry value chain. Our solutions have helped clients develop better ways to create and profit from new business opportunities, respond to competitive and economic threats, improve productivity, achieve sustainable growth, and optimize performance. Kline provides clients with facts, forecasts, and recommendations based solidly on the realities of the market.

Our market research reports and services are designed to provide subscribers with a deeper understanding of their markets, an outlook for their business, and accurate information about their competitors. Our clients tell us they often use Kline's market research to validate their own internal analysis, and many clients rely on Kline reports as their most critical source of information.

For more information about this study or Kline's other services e-mail us at [sales@klinegroup.com](mailto:sales@klinegroup.com), visit our website at [www.KlineGroup.com](http://www.KlineGroup.com), or contact us at any of our regional offices listed below.

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### Recently published or in-progress research for the Petroleum and Energy industry includes:

- Opportunities in Lubricants North America continuing industry analysis
- Competitive Intelligence for the Global Lubricants Industry, 2006-2016 - Year Five
- LubesNet Database 2008
- Global Synthetic Lubricants, 2007-2017
- Business Opportunities In The Emerging Lubricant Markets of South Asia, the Middle East, and Northern Africa, 2005-2015