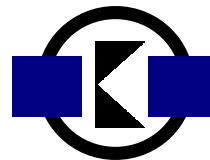


**ANNOUNCING**


---



**OPPORTUNITIES IN  
HIGH-PERFORMANCE  
BARRIER PACKAGING  
FILMS, 1998 - 4TH EDITION**



**KLINE & COMPANY, INC.**  
OVERLOOK AT GREAT NOTCH  
150 CLOVE ROAD  
PO BOX 410  
LITTLE FALLS, NJ 07424-0410  
(973) 435-6262  
[www.KlineGroup.com](http://www.KlineGroup.com)



A special report from Kline & Company that will examine and assess:

- The latest technological developments and their affect on the markets for barrier packaging films
- The opportunities for resin suppliers and packaging converters in ten food market segments
- The major suppliers, converters, and users of barrier materials

## TENTATIVE OUTLINE

### 1. EXECUTIVE SUMMARY

### 2. INTRODUCTION

### 3. COMPARATIVE PROPERTIES AND VALUE-IN-USE OF BARRIER MATERIALS (FOR EACH LISTED IN TABLE 2)

- Barrier
  - Oxygen
  - Water
  - Light
  - Aroma
- Cost (for equivalent barrier)
- Recyclability and environmental friendliness
- Converting techniques
- Physical properties
- Machineability of package containing barrier material
- Other

### 4. BARRIER FILM MARKET ANALYSIS

- Total barrier film consumption in pounds and dollars in 1998, broken down by important end use
- Individual analysis of each barrier material listed in Table 2
  - Consumption by end use
  - Major suppliers and converters

- Total corporate sales
- Sales of barrier films and share by segment
- Marketing/sales strategy
- New product development
  - Major consumers
  - Potential environmental legislation
  - Forecast consumption in 2003
- Emerging barrier materials
- Summary forecast of barrier materials in 2003

### 5. END-USE MARKET ANALYSIS (FOR EACH LISTED IN TABLE 1)

- Description of application
- Typical structures and performance properties required
- 1998 Barrier flexible packaging consumption in pounds and dollars, by barrier material and by total package structure
- Market trends and growth
- Major converters
- Major users of packaging
- Forecast packaging consumption in 2003 by barrier material and total structure

### 6. APPENDIX 1: MARKET MODEL (SPREAD SHEET)

### 7. APPENDIX 2: LIST OF ORGANIZATIONS INTERVIEWED

---

## OPPORTUNITIES IN HIGH- PERFORMANCE BARRIER PACKAGING FILMS, 1998 - 4TH EDITION

Introducing . . .

The 4th Edition multiclient report from  
Kline & Company's Packaging Group

### BACKGROUND

Non-foil, barrier flexible packaging, in existence for many years, is now a market for nearly \$1 billion annually. However, this market is far from mature or stagnant. New and improved materials and processing equipment, plus changing demographics and market pressures, will drive further growth and change:

- New grades of barrier resins such as ethylene vinyl alcohol (EVOH) and polyvinylidene chloride (PVDC) promise even higher performance
- Techniques for recycling and reprocessing PVDC continue to improve, possibly alleviating environmental pressures to ban or further regulate the material
- Coating technology further advances and could displace traditional barrier resins
- Metallization advances improve efficiency and barrier performance
- Monolayer materials continue to gain momentum as more environmentally friendly than coextrusions
- The demand for transparent barrier material has increased the need to replace foil in some applications
- End users' knowledge regarding the barrier required to maintain a given shelf life is improving

These and other factors are sure to create significant opportunities in this growing, nearly \$1 billion market for alert, well-informed resin suppliers and packaging converters.

### THE REPORT

Kline's 4th edition of  
**OPPORTUNITIES IN HIGH  
PERFORMANCE BARRIER**

### **PACKAGING FILMS, 1998,**

will provide subscribers with an unbiased, realistic assessment of the opportunities for high-performance barrier films in food applications through 2003. The report will include a review of the latest developments and trends affecting barrier packaging; a comparison of material cost and performance properties; a quantitative analysis of the current U.S. demand by material type in at least ten significant applications; a description of the major suppliers and converters, including their capability to handle various barrier materials; and a forecast of the 2003 market.

### THE MODEL

The study will include an Excel-based computer model developed by Kline's Packaging professionals. It will incorporate current market data as well as Kline's forecast of the market in 2003. Most importantly, the model will provide subscribers with a user friendly means of running "what if scenarios" around proprietary packaging technology and subsequent market development. The model will allow for new entries and therefore "customization" of the forecast by each client.

### METHODS

Primary research techniques will be employed throughout the study to assure a realistic assessment of the opportunities and threats to each barrier material covered. A comprehensive data base will be established for developing

actionable information and concrete conclusions. In-depth interviews will be conducted with key industry participants, including resin suppliers, barrier material converters, major food marketers, governmental and environmental agencies, and trade associations.

An analysis of published information will also be completed, including research of trade journals, technical papers, and company sales literature for valuable information on potential legislation, key resin and packaging properties, and current happenings in each market segment.

## REPORT SUBSCRIPTION AND PRICING

**OPPORTUNITIES IN HIGH-PERFORMANCE BARRIER PACKAGING FILMS, 1998 - 4th Edition** is available by subscription only. To order, see details on the subscription form at the back of this brochure. The report is available for \$9,500 until March 31, 1998 and \$11,000 thereafter until completion.

## REPORT SCHEDULE

If a sufficient number of charter subscribers are received, **OPPORTUNITIES IN HIGH-PERFORMANCE BARRIER PACKAGING FILMS, 1998 - 4th Edition** will be completed according to the following schedule:

Project stage	Date
Presurvey planning and client input	2nd Quarter 1998
Research and analysis	3rd Quarter 1998
Publication	End of 4th Quarter 1998

## END-USE MARKETS

The study will concentrate on the end-use markets for high-performance barrier films in packaging. Tentative end-use markets to be included are listed in Table 1. Early subscribers have the opportunity to maximize the benefits of this report for their companies by suggesting other segments of importance for their specific businesses.

Table 1 TENTATIVE MARKET SEGMENTS INCLUDED	
Market segment	
Snack foods	
Fresh meats	
Processed meats	
Cheese	
Coffee	
Bag-in-box	
Shelf stable foods	
Medical	
Tobacco	
Confection	
Dry mixes	
Other niche markets	

## BARRIER MATERIALS AND STRUCTURES

For each end-use market, the study will describe the important barrier resins and structures. Consumption will be estimated in both pounds and dollars of barrier material, and total material. The tentative barrier materials to be included are listed in Table 2.

Table 2 TENTATIVE BARRIER MATERIALS INCLUDED	
Form	Material
Coextruded resin	Ethylene vinyl alcohol (EVOH) Polyvinylidene chloride (PVDC) Nylon (MXD6)
Coating	PVDC Silicon based (glass) Aluminum oxide Inorganic platelet
Metallized film	Polyester Polypropylene (PP) Biaxially-oriented nylon
Extruded barrier film	PVDC Nylon Biaxially-oriented nylon Acrylonitrile Liquid crystal polymers (LCPs)

## WHO SHOULD SUBSCRIBE

**OPPORTUNITIES IN HIGH-PERFORMANCE BARRIER PACKAGING FILMS, 1998 - 4th Edition** will assist barrier resin and film suppliers, converters, users, and others in focusing efforts toward exploiting the best potential opportunities. The study will be beneficial to the following individuals at each company:

- [Market Research Analyst](#) by providing comprehensive, pertinent information in a well-organized, unbiased form
- [Strategic Planners](#) by presenting the likely timing and impact of new barrier material developments, or switches among existing materials, to aid in better planning of offensive and defensive strategies
- [Product Managers](#) by researching the key driving forces and material properties to accentuate when developing marketing and promotional strategies
- [Executives](#) by providing concise, actionable information to assist in decision making

## OUR QUALIFICATIONS

Since our founding in 1959, Kline & Company has become a global leader in business research and strategic consultation to the chemical and allied industries. The company helps management with pragmatic solutions to problems in marketing strategy, acquisition and divestiture programs, and appraisal of technology. Our industry specialists have a thorough understanding of the markets, participants, and technologies within the businesses that we evaluate. We provide clients with facts, forecasts, and recommendations to business problems, based solidly on the realities of the marketplace as well as modern strategic principles.

**Packaging.** Kline's expertise in the packaging industry dates back to the 1960s when it published the first four editions of the **Kline Guide to the Packaging Industry**. The company has developed in-depth expertise in flexible packaging through tracking and analyzing the industry for over 35 years. Kline's most recent multiclient studies on flexible

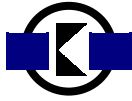
packaging include **Flexible Packaging Companies and Markets**, which profiles 75 of the leading flexible packaging converters and film producers in the industry, and **The Outlook for PEN - Evolution or Revolution?** which assesses the impact PEN will have on current materials in several end-use industries, including film applications. In addition to its multiclient reports, the Packaging Group has completed over 60 custom projects in the last five years, a significant number of which have involved barrier flexible packaging.

Kline & Company is well qualified to undertake this project in barrier packaging. Kline has closely monitored this market since it published its highly successful study, **High-Performance Films** (in 1987). This study laid the ground work for two additional studies entitled, **High-Performance Films and Lidding** (in 1989) and **Opportunities in High-Performance Barrier Packaging Films** (in 1992). The current study, **OPPORTUNITIES IN HIGH-PERFORMANCE BARRIER PACKAGING FILMS, 1998**, will be the fourth time the Packaging Group undertakes this important subject in a multiclient format, each time drawing upon and furthering our expertise and knowledge base developed from previous reports.

In addition, Kline has completed over 30 syndicated studies on packaging markets and materials that span three decades, as summarized below:

- THE OUTLOOK FOR PEN-EVOLUTION OR REVOLUTION?
- RIGID PLASTIC PACKAGING COMPANIES AND MARKETS 1997
- FLEXIBLE PACKAGING COMPANIES AND MARKETS
- HIGH-PERFORMANCE BARRIER PACKAGING FILMS 1992
- PVC IN PACKAGING . . . CONTINUED GROWTH OR REPLACEMENT 1992
- THE U.S. PACKAGING MARKETS 1990
- INVESTMENT OPPORTUNITIES IN PACKAGING - 1989-1990
  - Converted Rollstock
  - Glass Containers
  - Metal Containers
  - Paper and Plastic Bags
  - Paperboard Packaging
  - Rigid Plastic Packaging
  - Other Packaging Components
- COSMETICS AND TOILETRIES PACKAGING 1989
- ADVANCED PACKAGING TECHNOLOGIES 1986-1989
  - Degradable Packaging Films
  - Flexible Lidding
  - PP Thermoformed Containers
  - Microwave Heating Enhancers
  - Convenience Feeding
  - CAP/MAP Packaging
  - Microwavable Containers
  - Tamper-Evident Packaging for Food
  - High-Performance Films
  - Advanced Paper Packaging
  - High-Performance Bottles
  - Irradiation-Resistant Packaging
  - Controlled Atmosphere Packaging
  - Engineering Resins in Packaging
  - Retortable Plastic Containers
  - Advanced Microwavable Packaging
- PROTECTIVE PLASTICS PACKAGING 1983
- PLASTICS PACKAGING 1979
- KLINE GUIDE TO THE PACKAGING INDUSTRY





---

# THE KLINE GROUP

## USA

---

**KLINE & COMPANY, INC.**  
OVERLOOK AT GREAT NOTCH  
150 CLOVE ROAD  
PO BOX 410  
LITTLE FALLS, NJ 07424-0410  
TEL: (973) 435-6262  
FAX: (973) 435-6291  
E-mail: [consult@klinegroup.com](mailto:consult@klinegroup.com)

## EUROPE

---

**KLINE EUROPE, S.A.**  
1 AVENUE GRIBAUMONT  
B-1150 BRUSSELS  
BELGIUM  
TEL: (32-2) 770-4740  
FAX: (32-2) 770-9440  
E-mail: [kline.europe@popost.eunet.be](mailto:kline.europe@popost.eunet.be)

