Active & Intelligent Packaging

US Industry Study with Forecasts for 2019 & 2024

Study #3338 | October 2015 | $5300 | 364 pages
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**Active & Intelligent Packaging**

US Industry Study with Forecasts for **2019 & 2024**

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US demand to rise 7.3% annually through 2019

Demand for active and intelligent packaging in the US is forecast to expand 7.3 percent annually to $4.0 billion in 2019, well above the packaging industry average. Active packaging provides functions beyond product protection and identification, such as moisture control; intelligent packaging incorporates features that indicate status or communicate product changes and other information. While many active and intelligent packaging products, such as packaged desiccants and volatile corrosion inhibitors, have a well established presence, emerging products include antimicrobial packaging, advanced time-temperature monitors, and smartphone-enabled interactive packaging products. All of these products are expected to see further development over the next decade as food safety concerns and interest in product connectivity create a need for products that can more efficiently perform related functions.

Intelligent packaging to grow faster

Intelligent packaging demand will see the faster growth, advancing at a double-digit rate and reaching $1.5 billion in 2019 as products such as time-temperature indicators and smart labels and tags become more common. Although many of these products have been seen as unnecessary or cost prohibitive in the past, the development of technology which allows for low cost production of printed electronics and the elimination of specialized electronic readers in favor of smartphones will allow them to enter the mainstream. Rapid adoption of tracking-enabled or interactive packaging components will be driven by recent legislation in the pharmaceutical and food markets which requires producers to take steps to make products safer and easier to recall.

Active packaging driven by gas scavengers

Active packaging demand is forecast to grow 5.4 percent per year to $2.5 billion in 2019. Demand will be driven by growth in gas scavenger products which are benefiting from the development of more advanced technology and the growing preference for foods with fewer additives. Growth in demand for corrosion control packaging, desiccants, and microwave susceptors will register more moderate gains due to market maturity. However, healthy gains will still be observed as products are introduced to perform these standard functions more efficiently. For example, new environmentally friendly corrosion control scavengers have been developed, and desiccants are now being embedded in bottles or caps to provide moisture control for pharmaceuticals.
Demand for time-temperature indicators in packaging is forecast to increase to $285 million in 2019, aided by improved cost competitiveness, the ongoing significance of food safety issues, and the need to reduce losses in perishable foods and other temperature-sensitive products that are moved through the supply chain. Increased cost competitiveness will be the result of the availability of products that are less costly or offer greater sophistication at low costs. Increased cost competitiveness will also be fueled by the increased presence of high value, temperature-sensitive drugs in the pharmaceutical product mix and the need for enhanced tracking and tracing capabilities for perishable foods arising from the requirements of the Food Safety Modernization Act, which was enacted in January 2011.

The availability of electronic TTIs that are integrated with radio frequency identification (RFID) capability will also propel gains. Many of these tags are reusable, which brings down overall costs. TTIs that use printed electronics are also expected to gain an expanded presence based on their combination of low cost, suitability for high volume production, and capabilities that include temperature sensing as well as memory, display, and wireless communications. For example, Bemis has an agreement with Norway-based Thin Film Electronics to accelerate the development of sensor labels that use Thin Film’s proprietary technology. Targeted areas include temperature-sensitive food and pharmaceutical products, and such products were made commercially available in 2014. The company has a similar agreement with PakSense to distribute smart labels – which can be used in conjunction with PakSense’s TTI labels and other devices using wireless labels and readers – to suppliers and retailers of produce, meat, and seafood in the Americas.

Moderating faster growth will be performance limitations of chemical-type indicators, competition from wireless and other electronic temperature monitoring systems that are not employed directly in packaging, and new regulatory requirements that could discourage the use of TTIs. The availability of electronic TTIs that are integrated with radio frequency identification (RFID) capability will also propel gains. Many of these tags are reusable, which brings down overall costs. TTIs that use printed electronics are also expected to gain an expanded presence based on their combination of low cost, suitability for high volume production, and capabilities that include temperature sensing as well as memory, display, and wireless communications. For example, Bemis has an agreement with Norway-based Thin Film Electronics to accelerate the development of sensor labels that use Thin Film’s proprietary technology. Targeted areas include temperature-sensitive food and pharmaceutical products, and such products were made commercially available in 2014. The company has a similar agreement with PakSense to distribute smart labels – which can be used in conjunction with PakSense’s TTI labels and other devices using wireless labels and readers – to suppliers and retailers of produce, meat, and seafood in the Americas.

Moderating faster growth will be performance limitations of chemical-type indicators, competition from wireless and other electronic temperature monitoring systems that are not employed directly in packaging, and new regulatory requirements that could discourage the use of TTIs.
Sample Profile & Table, & Study Coverage

COMPANY PROFILES

Daubert Cromwell LLC
12701 South Ridgeway Avenue
Alsip, IL  60803
708-293-7750
www.daubertcromwell.com

Annual Sales:  $70 million (estimated)
Employment:  180 (estimated)
Key Products:
volatile corrosion inhibitor protective coatings for plastic film and paper substrates; and corrosion inhibitor packaging

Daubert Cromwell is a leading producer of protective coatings, corrosion inhibitor packaging, and related products. The Company is privately held.

The Company is active in the US active and intelligent packaging market through the production of volatile corrosion inhibitor (VCI) protective coatings for plastic film and paper substrates; and corrosion inhibitor packaging. Daubert Cromwell’s VCI protective coatings can be applied to plastic film and paper substrates for packaging ferrous, nonferrous, and other metals, among other applications. The VCI molecules align on the surface of the metal to a depth of three to five molecules; this layer of molecules passivates the charged surface and creates a barrier that prevents oxidation. When VCI packaging is unwrapped from metal parts, the protective layer begins to dissipate, leaving the metal clean.

Daubert Cromwell produces a wide range of VCI plastic film and paper products. The Company makes VCI films by extruding VCI corrosion inhibitors into polyethylene film to provide long term protection for metal parts. Specific products include PREMIUM METAL-GUARD multipurpose film, METAL-GUARD FF foil barrier films and

TABLE IV-3

FOOD MARKET FOR ACTIVE & INTELLIGENT PACKAGING
(million dollars)

<table>
<thead>
<tr>
<th>Item</th>
<th>2004</th>
<th>2009</th>
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<th>2019</th>
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<td>Processed Foods</td>
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<td>Meat, Poultry, &amp; Seafood*</td>
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<td>Produce</td>
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<tr>
<td>Total Active &amp; Intelligent Packaging</td>
<td>1076</td>
<td>1621</td>
<td>2835</td>
<td>4035</td>
<td>5520</td>
</tr>
</tbody>
</table>

*excludes processed meats, which are included in processed foods

Source: The Freedonia Group, Inc.

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This Freedonia study, Active & Intelligent Packaging, presents historical demand data (2004, 2009, 2014) and forecasts (2019, 2024) by product and market. The study also considers market environment factors, details the industry structure, evaluates company market share and profiles 48 US industry competitors.
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<td>Enclosed is my check (5% discount)</td>
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Meat, Poultry & Seafood Packaging

US demand for meat, poultry, and seafood packaging will rise 3.8 percent annually to $10.9 billion in 2019. Flexible packaging will outpace rigid based on their aesthetic appeal and capability to increase brand marketing and recognition. Corrugated boxes will remain the leading type. This study analyzes the $5.1 billion US produce packaging industry, with forecasts for 2019 and 2024 by material, application and end user. The study also evaluates company market share and profiles industry players.

#3263 .......... April 2015 ............... $5300

Produce Packaging

Demand for produce packaging in the US is forecast to increase 3.2 percent annually to $6.0 billion in 2019. Plastic containers and stand-up pouches will be among the fastest growing package formats, based on their aesthetic appeal and capability to increase brand marketing and recognition. Corrugated boxes will remain the leading type. This study analyzes the $5.1 billion US produce packaging industry, with forecasts for 2019 and 2024 by packaging type, application and end user. The study also evaluates company market share and profiles industry players.

#3319 .......... August 2015 ............... $3300

Related Studies

Protective Packaging

This study analyzes the US protective packaging industry. It presents historical demand data (2004, 2009 and 2014) and forecasts (2019 and 2024) by protective function (cushioning, blocking and bracing, insulation, void-fill, wrapping), market (manufacturing, non-manufacturing) and packaging type (e.g., flexible, rigid, plastic foam). The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry players.

#3356 .......... December 2015 ............... $5400

Specialty Films

US demand for specialty films is forecast to rise 4.8 percent per year to $8.4 billion in 2019. Barrier films will remain the dominant function, while biodegradable and water soluble films will grow the fastest. The best opportunities for growth in the dominant packaging market will be in meat packaging, while construction will be the fastest growing market overall. This study analyzes the $6.7 billion US specialty film industry, with forecasts for 2019 and 2024 by function, resin, and market. The study also evaluates company market share and profiles industry competitors.

#3287 .......... August 2015 ............... $5200

Labels

US label demand will rise 3.8 percent annually to $19.7 billion in 2019. In-mold, stretch sleeve and heat-shrink labels will grow the fastest. Digital printing will continue to displace traditional label printing methods. Primary packaging will remain the largest function, while secondary labeling and mailing/ship labels will pace gains. This study analyzes the $16.3 billion US label industry, with forecasts for 2019 and 2024 by material, application method, printing technology, and function. The study also evaluates company market share and profiles industry players.

#3291 .......... June 2015 ............... $5500

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