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Sterile Medical Packaging

US Industry Study with Forecasts for **2012 & 2017**

Study #2405 | September 2008 | \$4600 | 289 pages



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The fastest gains are expected in pharmaceutical and biological applications, reflecting the commercialization of biotechnology-based therapies delivered via injection or inhalation.

US demand to climb 6.1% annually through 2012

Demand for sterile medical packaging is projected to climb 6.1 percent per annum to \$6.5 billion in 2012, representing nearly 37 billion units. Growth will be fueled by the shift to an older demographic, which will lead to a rising incidence of acute and chronic conditions and an increasing volume of patient activity. Upward trends in patient activity will broaden the overall use of sterile medical products, impacting favorably on demand for related packaging. In addition, the sterile medical packaging market will benefit from ongoing product development activity in pharmaceuticals and medical devices and the upgrading of health care infection prevention standards. While unit gains will be similar to the 2002-2007 period, more moderate value demand growth will reflect slower price increases.

Pharmaceutical, biological applications to lead gains

The fastest gains are expected in pharmaceutical and biological applications, reflecting the commercialization of sophisticated biotechnology-based therapies delivered via injection or inhalation. This factor will support above-average gains for prefillable syringes, vials and ampuls, prefillable inhalers and closures. These products are widely used with biotechnology-based drugs, which have high stability and sterility requirements. Demand will also be aided

US Sterile Medical Packaging Demand, 2007 (\$4.8 billion)

Prefillable Syringes	16%
Vials & Ampules	14%
Thermoformed Trays	10%
Closures	10%
Other Types	50%



by widening preferences for safer, unit-dose delivery systems.

Demand in other sterile medical packaging product segments will increase more slowly, reflecting decelerating growth in surgical procedures and advances in minimally invasive surgical techniques. Still, the growing role of specialized outpatient facilities in providing health care services will strengthen opportunities for sterile medical products and related packaging such as thermoformed trays, pouches, bottles, sterilization wrap, blister and clamshell packs, IV and blood containers, and bags. Fastest growth among these products is anticipated for trays, pouches and blister and clamshell packs.

Despite competition from less costly pouches and bags, advances for trays and blister and clamshell packs will be supported by higher protective properties, which reduce the risk of damage during transport and storage. Trays will further benefit from advantages of infection prevention, labor saving, cost accounting and storage convenience. Multiple compartment trays will gain ground as they virtually eliminate the risk of staff errors in the collection and organization of products required for various procedures. Gains for pouches will reflect improved strength, puncture resistance and barrier properties, which will lead to expanding applications in the unit-of-use packaging of small- to medium-sized supplies and devices.

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**Sample Text,
 Table & Chart**

MATERIALS

High Density Polyethylene

Demand for high density polyethylenes (HDPE) in sterile packaging applications is forecasted to grow at an annual rate of 3.5 percent through 2017. Demand is expected to reach 1.5 billion pounds, valued at \$1.5 billion, by 2017. HDPE's advantages include its chemical resistance, excellent drug compatibility, high strength, rigidity, effective moisture barrier, and resistance to oxidative and radiation sterilization. High density polyethylene grades of the resin, including high density polyethylene (HDPE) and high density polyethylene (HDPE), will provide the best growth opportunity on enhanced moisture, puncture, tear and chemical resistance. Significant growth in sterile medical packaging is also anticipated for TYVEK, a medical nonwoven fiber produced from HDPE. More costly grades will boost demand for TYVEK in a number of applications, including tray, pouch and bag lidstock.

Slightly below-average growth for HDPE in sterile medical packaging will be based on increasing competition from polypropylene (PP) and low density polyethylene (LDPE), especially in tray, pouch and bag applications. Furthermore, HDPE cannot meet the clarity requirements for high visibility drug containers, and therefore is not expected to penetrate high value-added applications such as IV containers and prefillable syringes. The leading sterile packaging applications for HDPE are sterilization wrap, pouches and trays, which accounted for a combined 79 percent of poundage in 2007. Other uses encompass bags, vials and ampuls, bottles and closures.

HDPE's good barrier, product compatibility and strength properties make it well suited for the production of sterile pouches and bags. Moreover, HDPE sheet is used widely in the fabrication of thermoformed trays based on its strong impact and chemical resistance, biocompatibility, broad temperature tolerance, good barrier properties, rigidity and

**SAMPLE
 TEXT**

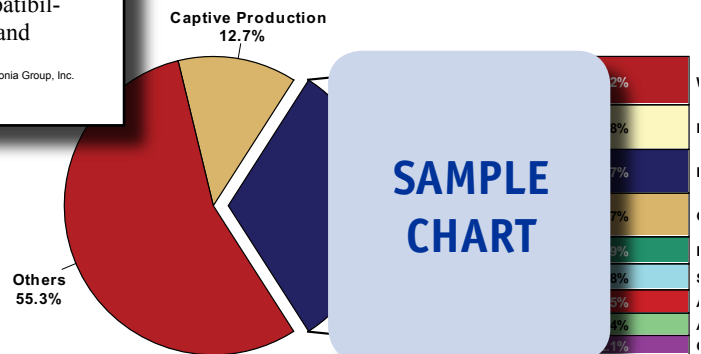
**TABLE III-4
 VIAL & AMPUL DEMAND**

Item	1997	2002	2007	2012	2017
Patient Episodes (million)*	200	200	200	200	150
vials & ampuls/episode					9
Vials & Ampuls (mil units)					5
Vials:					0
Glass					5
Plastic					5
Ampuls:					5
Glass					0
Plastic					5
cents/unit					2
Vials & Ampuls (mil \$)					0
Vials:					4
Glass					5
Plastic					9
Ampuls:					6
Glass					1
Plastic					5
% vials & ampuls					6
Sterile Medical Packaging (mil \$)	2572	3002	4010	5100	6720

**SAMPLE
 TABLE**

CHART VI-1

**STERILE MEDICAL PACKAGING MARKET SHARE, 2007
 (\$4.8 billion)**

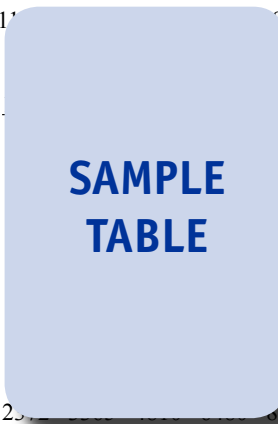


**SAMPLE
 CHART**

Sample Profile, Table & Forecast

TABLE V-2
PHARMACEUTICALS & BIOLOGICALS:
STERILE MEDICAL PACKAGING DEMAND
 (million dollars)

Item	1997	2002	2007	2012	2017
Pharma & Biological Shpts (bil \$)	11	15	20	20.0	20.0
\$ sterile packaging/000\$ shpts					0.1
Pharm & Biologicals Sterile Pkg				80	80
Prefillable Syringes				50	50
Vials & Ampuls				47	47
Prefillable Inhalers				70	70
Closures				00	00
Bottles				25	25
IV & Blood Containers				00	00
Pouches				40	40
Thermoformed Trays				48	48
% pharmaceuticals & biologicals				7.4	7.4
Sterile Packaging Demand	2.5	3.5	4.5	8720	8720



COMPANY PROFILES

Oliver Products Company
 445 Sixth Street Northwest
 Grand Rapids, MI 49504
 616-456-7711
<http://www.oliverproducts.com>

Annual Sales
 Employment
 Key Products

Oliver Products Company is operating through three business units: Medical Device Packaging, Bakery Equipment, and Industrial and Food Packaging. The privately held company serves over 3,000 customers in over 40 countries. In June 2007, Oliver Products was acquired by Mason Wells Incorporated (Milwaukee, Wisconsin), a private equity firm.

The Company is active in the US sterile medical packaging industry through the Medical Device Packaging unit, which manufactures lidding, pouches and rollstock for use in packaging medical devices. Oliver Products uses its proprietary XHALE adhesives with DOT-COAT sure-seal technology to seal the Company's sterile medical packaging products. XHALE hot melt adhesives are designed to provide accelerated ethylene oxide (EtO) sterilization cycles; good anchorage; and resistance to humidity, condensation and ultraviolet light.

Lidding from Oliver Products is manufactured using OVANTEX sterile-grade material, paper, film and TYVEK (DuPont) for packaging such medical products as surgical trays, orthopedics and implantables. This lidding can be used in EtO, autoclave and radiation sterilization

"Parenteral vials and ampuls will remain the standard containers for injectable pharmaceuticals packaged in volumes of 50 milliliters or less. Demand for these containers is projected to rise 7.5 percent annually to over \$895 million in 2012. The increasing development of bioengineered medicines will impact favorably on gains. Moderating gains will be competition from prefillable syringes and pre-mixed IV systems, along with advances in oral and inhalation drug delivery systems. Sterile plastic and glass bottle demand is expected to ..."
 --Section V, pg. 167

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OTHER STUDIES

Pharmaceutical Packaging

US demand for pharmaceutical packaging will grow 5.5% annually through 2012. Strong growth is forecast for value-added types, especially parenteral vials and flip-top closures, plastic dispensing bottles and closures, prefilled inhalers and syringes, parenteral stoppers, track and trace and authentication labels, and unit dose pouches. This study analyzes the \$12.2 billion US drug packaging industry, with forecasts for 2012 and 2017 by material, product and market. It also evaluates market share and profiles industry players.

#2341 05/2008..... \$4700

Cosmetic & Toiletry Containers

US cosmetic and toiletry container demand will reach 25.5 billion units in 2012 based on accelerating cosmetic and toiletry shipments. Plastic will be the fastest growing material while shaped aerosol cans and upscale paper cartons enjoy niche prospects. Skin care and liquid soap will be the fastest growing markets. This study analyzes the \$3.6 billion US cosmetic and toiletry container industry, with forecasts for 2012 and 2017 by material and market. It also details market share and profiles major players.

#2322 04/2008..... \$4600

Drug Delivery Systems

US demand for drug delivery systems will grow 10% annually through 2012. Oral types will remain the largest drug delivery category while parenteral, inhalation and implantable systems grow the fastest. Parenteral formulations will eventually surpass oral dosages as the largest product group. This study analyzes the \$80.2 billion US drug delivery system industry, with forecasts for 2012 and 2017 by material, type and application. It also evaluates company market share and profiles leading industry players.

#2294 03/2008..... \$4500

Active & Intelligent Packaging

US demand for active and intelligent packaging will grow 13% yearly through 2011. Intelligent packaging will grow the fastest, driven by the emergence of lower cost time-temperature indicator (TTI) labels. Active packaging will be paced by gas scavengers. Pharmaceuticals, beverages and food will offer the best market prospects. This study analyzes the US active and intelligent packaging industry, with forecasts for 2011 and 2016 by product and market. It also details market share and profiles major players.

#2236 08/2007..... \$4400

World Pharmaceutical Packaging

World pharmaceutical packaging demand will grow 5.9% annually through 2011. Western Europe, the US and Japan will continue to account for most demand while China, India and Brazil lead gains. Prefillable inhalers and syringes will grow the fastest while plastic bottles will remain dominant. This study analyzes the \$25.8 billion world drug packaging industry, with forecasts for 2011 and 2016 by material, product, world region and for 30 countries. It also details market share and profiles major players.

#2213 07/2007..... \$5800

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