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[Table of Contents 2](#)

[List of Tables & Charts 3](#)

[Study Overview 4](#)

[Sample Text, Table & Chart 5](#)

[Sample Profile, Table & Forecast 6](#)

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Rigid Bulk Packaging

US Industry Study with Forecasts for **2011 & 2016**

Study #2188 | May 2007 | \$4500 | 322 pages

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Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT

General	4
Macroeconomic Outlook	5
Demographic Trends	8
Manufacturing Outlook.....	12
Competitive Bulk Packaging.....	15
Historical Market Trends.....	17
Pricing Trends	20
Environmental Issues.....	23
Regulatory Considerations	26
Transport & Handling.....	27
Other Regulations	29
Foreign Trade	31
International Activity	33

MATERIALS

General	36
Plastic.....	39
Steel.....	44
Paperboard & Wood Panels	47

PRODUCTS

General	51
Drums	55
Steel Drums	57
Liners & Coating Technologies.....	61
Reconditioning & Recycling.....	62
Markets	64
Producers	67
Fibre Drums.....	68
Recycling	71
Markets	72
Producers	75
Plastic Drums	77
Reconditioning & Recycling.....	79
Markets	81
Producers	84
Pails	86
Plastic Pails	87
Markets	89
Producers	92
Steel Pails	93
Markets	96
Producers	99
Material Handling Containers	101
Plastic Totes & Crates	104
Steel Material Handling Containers	107
Markets	110
Producers	113

Bulk Boxes.....	116
Markets	118
Producers	121
Rigid Intermediate Bulk Containers.....	124
Plastic Body RIBCs	127
Plastic RIBC Producers	130
Metal Body RIBCs.....	133
Metal RIBC Producers.....	135
Other RIBCs	137
Producers of Other RIBCs.....	139
Markets	141

MARKETS

General	145
Non-durable Goods	148
Chemicals & Pharmaceuticals	150
Chemical & Pharmaceutical	
Industry Outlook.....	151
Rigid Bulk Packaging	
Demand by Type	155
Rigid Bulk Packaging Demand	
by Chemical Type	160
Industrial Chemicals	162
Paints & Coatings	165
Detergents & Cleaners.....	167
Pharmaceuticals	169
Agricultural Chemicals	172
Other	174
Food	177
Food Industry Outlook	178
Rigid Bulk Packaging Demand	180
Plastic, Rubber & Fiber	186
Plastic, Rubber & Fiber Outlook.....	186
Rigid Bulk Packaging Demand	189
Petroleum & Lubricants.....	191
Petroleum & Lubricant Outlook.....	192
Rigid Bulk Packaging Demand	194
Agricultural & Horticultural Products..	196
Agricultural & Horticultural	
Industry Outlook.....	197
Rigid Bulk Packaging Demand	200
Durable Goods	202
Durable Goods Outlook.....	203
Rigid Bulk Packaging Demand	206
Other Markets.....	209

INDUSTRY STRUCTURE

General	212
Industry Composition	213
Market Share	217
Greif	218
MAUSER.....	219

BWAY	220
Menasha.....	220
Letica	221
Weyerhaeuser	221
Acquisitions & Divestitures.....	222
Competitive Strategies.....	228
Manufacturing & Development	231
Marketing & Distribution	232
Cooperative Agreements.....	236

COMPANY PROFILES

Atorka Group.....	240
Ball Corporation.....	242
Berenfield Containers.....	244
Berry Plastics	245
BWAY Corporation	247
Chem-Tainer Industries	250
Cleveland Steel Container	252
CP Louisiana	253
General Steel Drum.....	254
Greif Incorporated.....	255
Hedwin Corporation.....	261
Hoover Materials Handling.....	262
IBC North America	265
International Paper	266
IPL Incorporated.....	269
Koch Industries	270
Letica Corporation.....	272
LINPAC Group	274
Longview Fibre	276
Low & Bonar	278
MAUSER AG	279
Menasha Corporation	284
Molded Fiber Glass	288
Myers Container Corporation	289
Myers Industries	291
Nashville Wire Products Manufacturing ..	296
North American Container	297
North Coast Container.....	298
Packaging Corporation of America.....	299
Plastican Incorporated.....	301
Schoeller Arca Systems	302
SCHUETZ-Werke GmbH.....	304
Sharpsville Container	306
Smurfit-Stone Container	307
Snyder Industries	309
Svenska Cellulosa	312
Tegant Corporation.....	313
Temple-Inland Incorporated.....	315
Trilla Steel Drum Corporation	316
Weyerhaeuser Company	317
Other Companies in Rigid	
Bulk Packaging	319

List of Tables & Charts

EXECUTIVE SUMMARY

1 Summary Table3

MARKET ENVIRONMENT

1 Macroeconomic Indicators8
 2 Population & Households12
 3 Manufacturers' Shipments.....15
 4 Rigid Bulk Packaging Market,
 1996-2006.....19
 Cht Rigid Bulk Packaging Market,
 1996-2006.....19
 5 Rigid Bulk Packaging Prices23
 6 Foreign Trade in Rigid Bulk
 Packaging.....33

MATERIALS

1 Raw Material Use in Rigid
 Bulk Packaging38
 Cht Raw Material Use in Rigid Bulk
 Packaging, 1996-201639
 2 Plastic Use in Rigid Bulk
 Packaging by Product43
 Cht Plastic Use in Rigid Bulk Packaging
 by Product, 200643
 3 Steel Use in Rigid Bulk
 Packaging by Product46
 Cht Steel Use in Rigid Bulk Packaging
 by Product, 200647
 4 Paperboard & Wood Panel Use
 in Rigid Bulk Packaging
 by Product.....50

PRODUCTS

1 Rigid Bulk Packaging
 Demand by Type54
 Cht Rigid Bulk Packaging Demand
 by Type, 200655
 2 Drum Shipments by Type57
 3 Steel Drum Shipments by Type61
 4 Steel Drum Demand by Market.....66
 Cht Steel Drum Demand
 by Market, 200667
 5 Fibre Drum Shipments.....71
 6 Fibre Drum Demand by Market.....74
 Cht Fibre Drum Demand
 by Market, 200675
 7 Plastic Drum Shipments79
 8 Plastic Drum Demand by Market83

Cht Plastic Drum Demand
 by Market, 200684
 9 Pail Shipments by Type87
 10 Plastic Pail Shipments by Type89
 11 Plastic Pail Demand by Market.....91
 Cht Plastic Pail Demand by Market,
 2006.....92
 12 Steel Pail Shipments by Type96
 13 Steel Pail Demand by Market.....98
 Cht Steel Pail Demand by Market, 2006...99
 14 Material Handling Container
 Shipments by Type104
 15 Plastic Tote & Crate
 Shipments by Type107
 16 Steel Material Handling
 Container Shipments109
 17 Material Handling Container
 Demand by Market112
 Cht Material Handling Container
 Demand by Market, 2006.....113
 18 Bulk Box Shipments118
 19 Bulk Box Demand by Market.....120
 Cht Bulk Box Demand by Market, 2006..121
 20 Rigid Intermediate Bulk Container
 Shipments by Type127
 21 Plastic Body RIBC Shipments130
 22 Metal Body RIBC Shipments.....135
 23 Other RIBC Shipments by Type139
 24 Rigid Intermediate Bulk
 Container Demand by Market143
 Cht Rigid Intermediate Bulk Container
 Demand by Market, 2006.....144

MARKETS

1 Rigid Bulk Packaging
 Demand by Market147
 Cht Rigid Bulk Packaging Demand
 by Market, 2006147
 2 Nondurable Goods Market
 for Rigid Bulk Packaging150
 3 Chemical & Pharmaceutical
 Product Shipments154
 4 Chemical & Pharmaceutical
 Products Market for Rigid Bulk
 Packaging by Type.....156
 Cht Chemical & Pharmaceutical
 Products Market for Rigid Bulk
 Packaging by Type, 2006157

5 Chemical & Pharmaceutical
 Products Market for Rigid Bulk
 Packaging by Chemical.....161
 Cht Chemical & Pharmaceutical
 Products Market for Rigid Bulk
 Packaging by Chemical, 2006.....162
 6 Industrial Chemical Market
 for Rigid Bulk Packaging165
 7 Paint & Coating Market
 for Rigid Bulk Packaging167
 8 Detergent & Cleaner Market
 for Rigid Bulk Packaging169
 9 Pharmaceutical Market
 for Rigid Bulk Packaging171
 10 Agricultural Chemical Market
 for Rigid Bulk Packaging174
 11 Other Chemical Market
 for Rigid Bulk Packaging177
 12 Food & Beverage Shipments.....180
 13 Food Market for Rigid Bulk
 Packaging.....182
 14 Plastic, Rubber & Fiber Shipments ..189
 15 Plastic, Rubber & Fiber Market
 for Rigid Bulk Packaging191
 16 Petroleum & Lubricant Product
 Supply & Demand.....193
 17 Petroleum & Lubricant Market
 for Rigid Bulk Packaging196
 18 Agricultural & Horticultural
 Indicators.....199
 19 Agricultural & Horticultural Market
 for Rigid Bulk Packaging202
 20 Durable Goods Shipments.....206
 21 Durable Goods Market
 for Rigid Bulk Packaging209
 22 Other Markets for Rigid Bulk
 Packaging.....211

INDUSTRY STRUCTURE

1 US Rigid Bulk Packaging Sales
 by Company, 2006.....215
 Cht US Rigid Bulk Packaging
 Market Share, 2006218
 2 Selected Acquisitions &
 Divestitures226
 3 Selected Cooperative Agreements ...238

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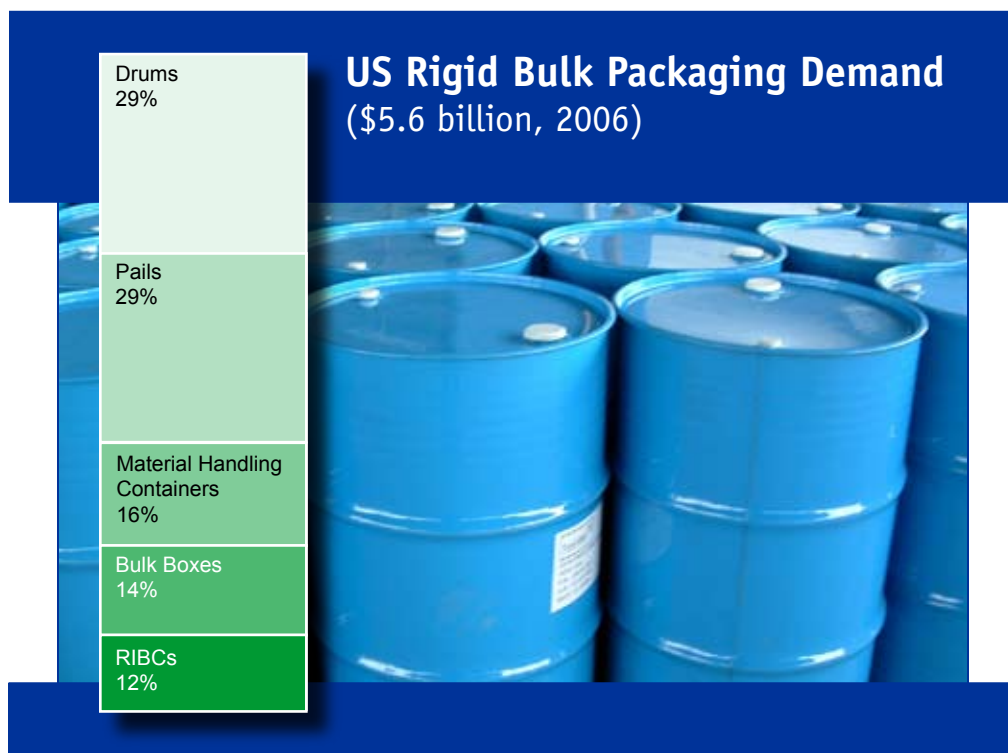
Rigid intermediate bulk containers (RIBCs) will log the fastest growth through 2011, the result of cost and performance advantages versus smaller, single-trip, or shorter life alternatives.

US demand to grow 3.5% annually through 2011

Demand for rigid bulk packaging is forecast to increase 3.5 percent per year to \$6.6 billion in 2011. Advances will be aided by growth in manufacturing activity along with a shift toward larger, higher-value containers offering enhanced performance and cost effectiveness. Also supporting gains will be the need for containers that comply with state, federal and international regulatory requirements, especially those concerning the transport and handling of hazardous chemicals and the management of hazardous waste. Unit demand will lag value growth due to the maturity of a number of product types and the shift to larger and longer-lasting containers.

RIBCs, material handling containers to lead gains

Rigid intermediate bulk containers (RIBCs) will log the fastest growth, with demand expanding 6.0 percent per annum to \$885 million in 2011, the result of cost and performance advantages versus smaller, single-trip, or shorter life alternatives. Material handling container demand will also climb favorably, fueled by expanded usage of returnable and reusable containers in the manufacture of durable and other goods in order to increase manufacturing efficiency. In addition, advances will benefit from greater use of plastic crates in the agricultural sector for the storage and handling of seeds and grain. In contrast,



drum demand is expected to increase only 1.7 percent per year to \$1.7 billion in 2011, the result of maturity of steel and fibre drums and competition from both rigid and flexible intermediate bulk containers. Despite their maturity, drums will remain a mainstay in bulk packaging based on their relatively low cost and reusability, along with a good safety profile in the transport of hazardous substances.

Durable goods market to outpace nondurables uses

Nondurable goods markets such as chemicals, food, plastics, rubber, fiber, petroleum and lubricants, and agricultural and horticultural products repre-

sented over 80 percent of demand in 2006. Chemicals, by far the leading rigid bulk packaging market, will expand in line with the overall rigid bulk packaging average. While gains will be aided by robust pharmaceuticals demand, opportunities will be constrained by the maturity of many chemical product segments, the increased presence of imports and the movement of key customers to developing regions. Among other nondurables, the food, and agricultural and horticultural markets will experience the fastest growth. Durable goods uses will outpace those of nondurables, benefitting from heightened capital equipment spending, which often expands or upgrades material handling systems to increase manufacturing

Sample Text, Table & Chart

MARKETS

Nondurable Goods

As in packaging markets overall, nondurable goods account for the majority of rigid bulk packaging demand, representing over 60% of the total in 2006. This sector encompasses chemicals, pharmaceuticals, food, beverages, plastic, rubber, fiber, and other nondurable goods as petroleum and lubricants, and agricultural and horticultural products. Demand for nondurables is less strongly influenced by fluctuations in the business cycle than is demand for durables since the purchase of most nondurables is not delayed during periods of slower economic growth as are purchases of big-ticket durable goods such as automobiles and appliances. The significance of chemicals (industrial chemicals, pharmaceuticals, detergents and cleaners, paints and coatings, adhesives, food additives, etc.) and food and beverages as key markets for various rigid bulk packaging products tends to somewhat shield rigid bulk packaging from the vicissitudes of the business cycle, as these sectors frequently track population more closely than consumer spending or other macro-economic variables.

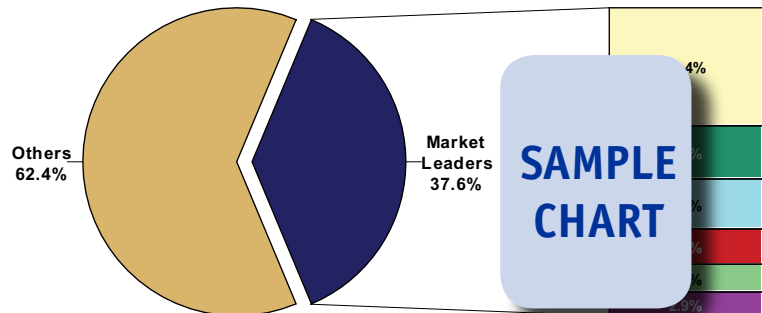
Through 2011, demand for rigid bulk packaging in nondurable goods uses is projected to grow at a rate of 3.5% per year, reaching \$5.6 billion. Markets with above-average projected growth include agricultural and horticultural products. Food applications are expected to benefit from population gains and heightened demand for convenience and higher quality items, which will stimulate demand for rigid bulk packaging. Agricultural and horticultural applications are expected to benefit from agricultural output and a general increase in landscaping activities, with a shift to larger capacity reusable packaging also driving opportunities.

Demand for rigid bulk packaging in chemical applications will expand in line with the nondurables average pace. Segments expected to see faster than average growth include pharmaceuticals, agricultural chemicals, and various other chemicals such as flavors and fragrances,

39

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CHART VI-1
US RIGID BULK PACKAGING MARKET SHARE, 2006
 (\$5.6 billion)

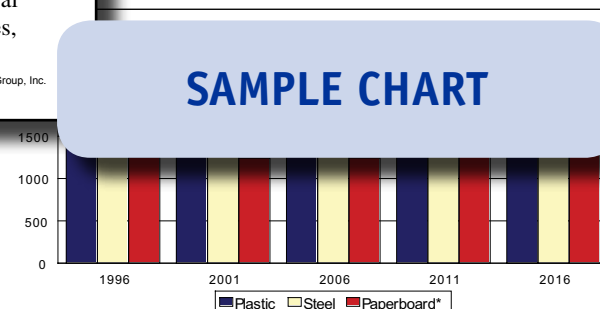


SAMPLE CHART

SAMPLE TABLE

CHART III-1

MATERIAL USE IN RIGID BULK PACKAGING, 1996-2016
 (million pounds)



* Includes wood panels.

Source: The Freedonia Group, Inc.

Sample Profile, Table & Forecast

TABLE IV-4
STEEL DRUM DEMAND BY MARKET
(million dollars)

Item	1996	2001	2006	2011	2016
Steel Drum Shipments	720				
- net exports	-6				
Steel Drum Demand	726				
Chemical & Pharm Products:	480				
Industrial Chemicals	295				
Pharmaceuticals	83				
Paints & Coatings	40				
Other Chemicals	62				
Petroleum & Lubricants	123				
Hazardous Waste	47				
Food	42				
Other Markets	34				
% steel drums	20.3				
Rigid Bulk Packaging Demand	3573				

**SAMPLE
TABLE**

COMPANY PROFILES

Hedwin Corporation

1600 Roland Heights Avenue
 Baltimore, MD 21211
 410-467-8209
<http://www.hedwin.com>

**SAMPLE
PROFILE**

Annual Sales: \$1.2 billion (Company, 4/07)
 Employment: 1,200 (Company, 4/07)

Key Products: Industrial containers, pails, bottles and flame-treated containers

Hedwin is a privately held manufacturer of industrial containers and liners. In addition to its own operations, the Company has strategic partnerships with a network of 19 privately held firms throughout the US and Canada.

The Company is involved in the US rigid bulk packaging industry primarily through the manufacture and sale of high density polyethylene (HDPE) blow molded tight-head pails, bottles and flame-treated containers. Hedwin's WINPAK tight-head pails are self-supporting, high-molecular-weight HDPE containers designed to provide secure shipment and storage of liquid materials. These pails are constructed in cylindrical and rectangular shapes in a variety of colors. The cylindrical pails feature spouts that are in line with the sidewall for optimum product dispensing, as well as swing handles on the top faces of the pails. WINPAK cylindrical pails are offered in 3-, 5- and 6-gallon sizes, and are also available with flexispout or screw-cap closures. Rectangular WINPAK tight-head pails offer enhanced stacking capabilities and feature 2-3/4-inch openings and 7/10-inch pouring vents with screw-caps, in addition to swing handles. These rectangular pails

261

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"Markets -- Steel drum demand is projected to advance 1.2 per annum to \$915 million in 2011. Gains in most markets will be restricted by increased inroads by RIBCs as well as competition from plastic drums and pails, and flexible bulk packaging. The relatively low cost of steel drums will support growth, though..."

--Section IV, pg. 64

OTHER STUDIES

Food Containers

Food container opportunities will be driven by population and diet trends as well as heightened demand for convenience foods. This study presents historical data (1996, 2001, 2006) and forecasts to 2011 and 2016 by rigid and flexible container (e.g., pouches and bags; folding cartons and other paperboard containers; plastic, metal and glass containers); and application. It also considers market environment factors, evaluates company market share, reviews merger and acquisition trends, and profiles major players.

#2208.....07/2007..... \$4500

Beverage Containers in China

The Chinese beverage container industry is analyzed in this study. It presents historical demand data (1995, 2000, 2005) and forecasts to 2010 and 2015 by container (e.g., metal cans, plastic bottles and pouches, glass bottles, paperboard containers); and beverage (e.g., milk, bottled water, carbonated soft drinks, fruit juices and drinks, packaged tea, energy drinks, beer, distilled spirits, rice wine, wine). The study also considers market environment factors, evaluates company market share and profiles industry participants.

#2183.....05/2007..... \$4900

Meat, Poultry & Seafood Packaging

US demand for meat, poultry and seafood packaging will grow 4.2% annually through 2011. Smaller, more convenient packaging sizes and an increasing variety of items that are further processed will provide opportunities. Flexible packaging such as pouches and high barrier film will outpace rigid types. This study analyzes the \$6.6 billion US meat, poultry and seafood packaging industry to 2011 and 2016 by material, product, application and market. It also details market share and profiles major players.

#2176.....03/2007..... \$4400

Produce Packaging

US produce packaging demand will grow 4.6% per year through 2010. Growth will be fueled by rising demand for fresh-cut, ready-to-eat produce, which favors more value-added packaging than bulk produce. Corrugated boxes will remain the leading format while plastic containers and bags and liners will grow faster. The study analyzes the \$3.4 billion US produce packaging industry to 2010 and 2015 by type, application and end user. It also evaluates company market share and profiles major competitors.

#2094.....08/2006..... \$4400

Corrugated & Paperboard Boxes

US demand for boxes will surpass \$34 billion in 2009. Gains will be driven by an upswing in shipments of nondurables and by a shift toward high-quality printing and graphics on boxes. Corrugated and solid fiber boxes will remain dominant and grow the fastest based on their low cost and recyclability. This study analyzes the 33 million ton US corrugated and paperboard box industry to 2009 and 2014 by material, product and market. It also evaluates company market share and profiles leading producers.

#1999.....11/2005..... \$4200

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 unbiased 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

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