

[CLICK TO VIEW](#)

[Table of Contents 2](#)

[List of Tables & Charts 3](#)

[Study Overview 4](#)

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

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

[Order Form 7](#)

[About Freedonia, Custom  
Research, Related Studies,  
Corporate Use License 8](#)



# Hard Surface Flooring

---

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

---

Study #2209 | June 2007 | \$4400 | 281 pages

---

[www.freedoniagroup.com](http://www.freedoniagroup.com)



**The Freedonia Group**

767 Beta Drive

Cleveland, OH • 44143-2326 • USA

Toll Free US Tel: 800.927.5900 or +1 440.684.9600

Fax: +1 440.646.0484

E-mail: [info@freedoniagroup.com](mailto:info@freedoniagroup.com)

## Table of Contents

### EXECUTIVE SUMMARY

### MARKET ENVIRONMENT

General .....	4
Macroeconomic Overview .....	5
Demographic Trends .....	8
Population .....	10
Households .....	11
Consumer Expenditures & Financing .....	12
Personal Income & Expenditures .....	13
Consumer Financing .....	15
Building Construction Trends .....	19
Residential Construction .....	22
Housing Outlook .....	24
Housing Stock .....	27
Single-Family Home Sales .....	28
Residential Floor Space .....	29
Improvement & Repair .....	31
Nonresidential Construction .....	33
Office & Commercial Construction .....	34
Institutional Construction .....	35
Industrial Construction .....	35
Transportation & Other Building Construction .....	36
Nonresidential Building Space .....	37
Improvement & Repair .....	38
Transportation Equipment Outlook .....	39
Motor Vehicle Outlook .....	40
Other Transportation Equipment .....	41
Pricing Patterns .....	43
Historical Market Trends .....	46
Environmental Issues .....	49
World Hard Surface Flooring Overview .....	53
US Foreign Trade .....	55
Imports .....	57
Exports .....	60
Competitive Floor Covering Outlook .....	62

### PRODUCTS

General .....	64
Supply & Demand .....	64
Resilient Flooring .....	69
Vinyl Flooring .....	71
Vinyl Sheet .....	73
Vinyl Composition Tile .....	76
Vinyl Tile .....	77
Polyvinyl Chloride Consumption .....	79
Vinyl Flooring Market Share .....	80

Other Resilient Flooring .....	82
Rubber .....	83
Linoleum .....	84
Cork .....	85
Asphalt .....	86
Nonresilient Flooring .....	87
Wood Flooring .....	90
Solid Wood Flooring .....	93
Engineered Wood Flooring .....	96
Wood Flooring Market Share .....	99
Laminate Flooring .....	101
Products .....	104
Product Development .....	107
Suppliers .....	108
Laminate Flooring Market Share .....	108
Ceramic Tile .....	111
Products .....	113
Product Development .....	114
Ceramic Tile Market Share .....	115
Other Nonresilient Hard Surface Flooring .....	117
Seamless Flooring .....	119
All Other .....	120

### MARKETS

General .....	125
Residential Building .....	128
New .....	129
Replacement .....	131
Residence Type .....	134
Single-Family Housing .....	135
Multifamily Housing .....	137
Manufactured Housing .....	139
Nonresidential Building .....	141
New .....	143
Replacement .....	145
Building Type .....	147
Office & Commercial .....	148
Institutional .....	150
Industrial .....	153
Other Nonresidential .....	155
Transportation Equipment .....	157
Motor Vehicles .....	159
Other Transportation Equipment .....	161

### INDUSTRY STRUCTURE

General .....	163
Industry Composition .....	164
Market Share .....	168
Mohawk .....	169
Armstrong .....	169
Other Leaders .....	170

Competitive Strategies .....	171
Product Development .....	173
Vinyl Flooring .....	173
Wood Flooring .....	174
Laminate Flooring .....	175
Ceramic Tile .....	176
Manufacturing .....	178
Marketing .....	179
Distribution .....	181
Mergers & Acquisitions .....	184
Cooperative Agreements .....	186

### COMPANY PROFILES

American Biltrite .....	190
Anderson Hardwood Floors .....	192
Armstrong World Industries .....	194
Berkshire Hathaway .....	198
Berry Group .....	200
Biltrite Corporation .....	202
Collins & Aikman .....	205
Connor Sport Court International .....	206
Crossville Incorporated .....	209
Dodge-Regupol Incorporated .....	211
Faus Group .....	213
Florida Tile Industries .....	214
Florim Ceramiche .....	216
Forbo Holding .....	217
Freudenberg & Company .....	220
Illinois Tool Works .....	222
Internacional de Ceramica .....	224
Kaindl Flooring .....	226
Lear Corporation .....	227
Mannington Mills .....	228
Marazzi Group SpA .....	233
Mohawk Industries .....	235
Pergo AB .....	240
Pfleiderer AG .....	242
Porcelanosa Grupo .....	244
Roppe Corporation .....	245
RPM International .....	247
Superior Manufacturing Group .....	250
Tarkett AG .....	252
Teknor Apex .....	257
Tembec Incorporated .....	258
TOLI Corporation .....	259
VPI Corporation .....	261
Witex International Flooring .....	262
Selected Other Companies Mentioned in Study .....	264

## List of Tables/Charts

### EXECUTIVE SUMMARY

1 Summary Table.....3

### MARKET ENVIRONMENT

1 Macroeconomic Indicators .....8  
 2 Population & Demographics .....9  
 3 Personal Income & Expenditures .... 15  
 4 Consumer Financing Environment,  
 1996-2006 ..... 18  
 5 Building Construction  
 Expenditures ..... 21  
 6 Residential Building Construction  
 Expenditures ..... 24  
 7 Housing Indicators ..... 27  
 Cht Year of Construction of  
 Housing Stock, 2006..... 28  
 8 Home Sales ..... 29  
 9 Residential Floor Space ..... 31  
 10 Residential Improvement &  
 Repair Expenditures ..... 32  
 11 Nonresidential Construction  
 Expenditures ..... 34  
 12 Nonresidential Floor Space..... 38  
 13 Nonresidential Improvement &  
 Repair Expenditures ..... 39  
 14 Motor Vehicle Outlook..... 41  
 15 Other Transportation Equipment  
 Indicators ..... 43  
 16 Hard Surface Flooring Pricing ..... 46  
 17 Hard Surface Flooring Historical  
 Market, 1996-2006 ..... 48  
 Cht Hard Surface Flooring Historical  
 Market Trends, 1997-2006..... 49  
 Cht World Hard Surface Flooring  
 Demand by Region, 2006..... 55  
 18 US Hard Surface Flooring  
 Foreign Trade..... 56  
 Cht US Hard Surface Flooring Imports  
 by Country & Product, 2006 ..... 59  
 Cht US Hard Surface Flooring Exports  
 by Country & Product, 2006 ..... 61  
 19 Floor Covering Demand..... 63

### PRODUCTS

1 Hard Surface Flooring  
 Supply & Demand ..... 67

Cht Hard Surface Flooring  
 Supply & Demand, 2006 ..... 68  
 2 Resilient Flooring  
 Supply & Demand ..... 70  
 3 Vinyl Flooring Supply & Demand .... 72  
 4 Vinyl Sheet Flooring Shipments .... 76  
 5 Vinyl Composition Tile  
 Flooring Shipments..... 77  
 6 Vinyl Tile Flooring Shipments ..... 79  
 7 Polyvinyl Chloride Consumption  
 in Vinyl Flooring ..... 80  
 8 Vinyl Flooring Demand ..... 81  
 Cht Vinyl Flooring Market Share, 2006.. 82  
 9 Other Resilient Flooring  
 Supply & Demand ..... 83  
 10 Nonresilient Flooring  
 Supply & Demand ..... 89  
 Cht Nonresilient Flooring Demand  
 by Type, 1996-2016 ..... 90  
 11 Wood Flooring Supply & Demand ... 93  
 12 Solid Wood Flooring Shipments..... 96  
 13 Engineered Wood  
 Flooring Shipments..... 99  
 14 Wood Flooring Demand..... 100  
 Cht Wood Flooring  
 Market Share, 2006..... 101  
 15 Laminate Flooring  
 Supply & Demand ..... 104  
 16 Laminate Flooring Demand ..... 110  
 Cht Laminate Flooring  
 Market Share, 2006..... 110  
 17 Ceramic Tile Supply & Demand.... 113  
 18 Ceramic Tile Demand..... 116  
 Cht Ceramic Tile Market Share, 2006 .. 117  
 19 Other Nonresilient Flooring  
 Supply & Demand ..... 119

### MARKETS

1 Hard Surface Flooring  
 Demand by Market..... 127  
 Cht Hard Surface Flooring Demand  
 by Market, 2006..... 127  
 2 Residential Building Hard Surface  
 Flooring Demand ..... 129  
 3 New Residential Hard Surface  
 Flooring Demand ..... 131

4 Residential Replacement  
 Hard Surface Flooring Demand.. 134  
 Cht Residential Hard Surface  
 Flooring Demand  
 by Housing Type, 2006 ..... 135  
 5 Single-Family Housing Hard Surface  
 Flooring Demand ..... 137  
 6 Multifamily Housing Hard Surface  
 Flooring Demand ..... 139  
 7 Manufactured Housing Hard Surface  
 Flooring Demand ..... 141  
 8 Nonresidential Building  
 Hard Surface Flooring Demand.. 143  
 9 New Nonresidential Building  
 Hard Surface Flooring Demand.. 145  
 10 Nonresidential Replacement  
 Hard Surface Flooring Demand.. 147  
 11 Nonresidential Building  
 Hard Surface Flooring Demand  
 by Building Type ..... 148  
 12 Office & Commercial Building  
 Hard Surface Flooring Demand.. 150  
 13 Institutional Building Hard Surface  
 Flooring Demand ..... 153  
 14 Industrial Building Hard Surface  
 Flooring Demand ..... 155  
 15 Other Nonresidential Building  
 Hard Surface Flooring Demand.. 157  
 16 Transportation Equipment  
 Hard Surface Flooring Demand.. 159  
 17 Motor Vehicle Hard Surface  
 Flooring Demand ..... 160  
 18 Other Transportation Equipment  
 Hard Surface Flooring Demand.. 162

### INDUSTRY STRUCTURE

1 Sales for Selected Hard Surface  
 Flooring Firms, 2006 ..... 166  
 Cht Hard Surface Flooring  
 Market Share, 2006..... 168  
 2 Selected Acquisitions  
 & Divestitures..... 185  
 3 Selected Cooperative Agreements. 188

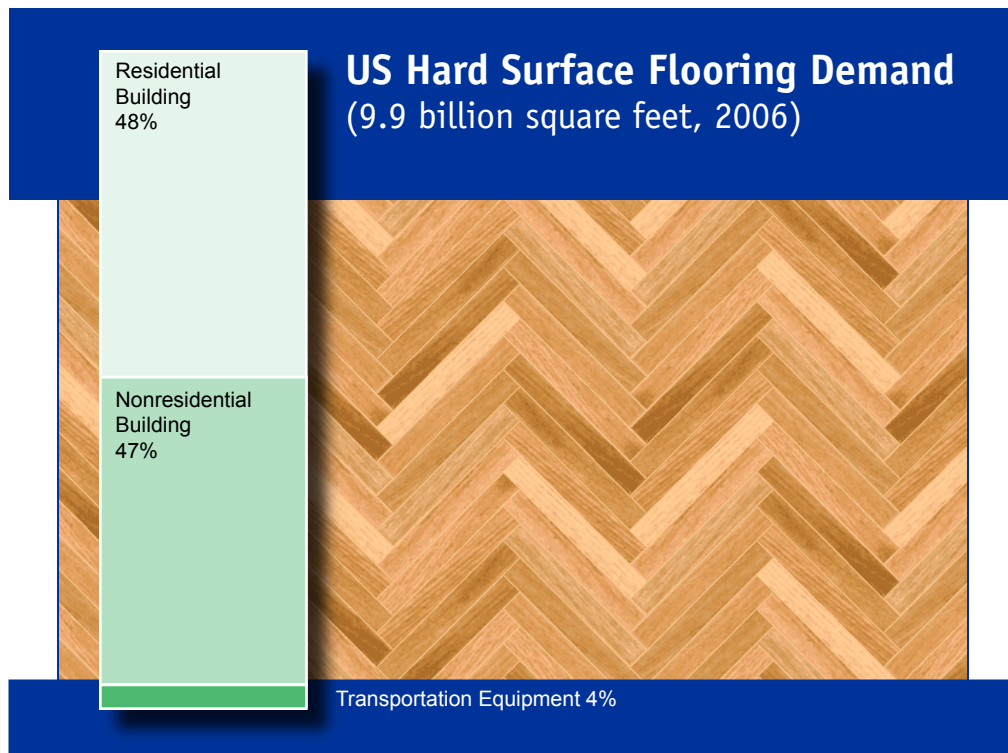
*Hard surface flooring will gain market share from carpets and rugs, an ongoing trend driven by growing consumer preference for high-end, natural and environmentally responsible flooring.*

## US hard surface flooring market to grow 3.9% annually through 2011

US demand for hard surface flooring is projected to advance 3.9 percent per annum to 11.9 billion square feet in 2011, valued at \$13.5 billion. Growth will decelerate from the 2001 to 2006 period, mostly due to a significant contraction in residential construction, especially single-family housing. Hard surface flooring is expected to gain market share from carpets and rugs, an ongoing trend for the past decade. Demand will be driven by growing consumer preference for high-end products such as wood, laminates and ceramic tile, as well as increasing interest in natural and environmentally responsible products such as natural stone, engineered wood, linoleum, cork and bamboo.

## Laminate flooring to offer best opportunities

Laminate flooring will provide the best opportunities, with demand growing at an annual rate of 10.8 percent to 2.6 billion square feet in 2011. Introduced to the US in the early 1990s, laminate flooring quickly registered very strong growth. Demand will be supported by increased consumer awareness and familiarity with the product, as well as continuing product development by manufacturers to provide easier flooring installation, improved durability and realistic designs.



Vinyl flooring is expected to remain the leading hard surface floor covering, with 33 percent of the market in 2011. Vinyl benefits from its low price, wide selection range and versatility. However, vinyl is losing ground to laminates, ceramic tile and wood flooring as consumers move to higher-end flooring.

## Nonresidential building market to see strongest growth

The nonresidential building market will see strong growth in both new construction as well as improvement and repair expenditures, leading to substantial increases in floor covering demand. The

office and commercial building segment, which accounts for most nonresidential flooring demand, is expected to see 3.7 percent annual growth to 3.4 billion square feet in 2011, while the institutional building sector, which includes educational, health care and religious facilities, will enjoy annual growth of nearly six percent.

Gains in multifamily and manufactured housing construction will support growth in the residential housing sector over the forecast period, while single-family housing activity will decline. Modest increases in transportation equipment production will support demand for hard surface flooring in motor vehicles, recreational vehicles, boats and aircraft.



## Sample Text, Table & Chart

### MARKETS

#### Residential Building

In 2006, the residential floor covering market was 2.1 billion square feet. Hard surface flooring accounted for 25 percent, a rise from 1996 when it was 19 percent. Competition from carpet and rugs has eroded the dominance of carpet and rugs in the market in recent years, a trend that is expected to continue.

Demand for hard surface flooring in residential applications is projected to increase through 2011 to 2.5 billion square feet, aided by residential improvement spending. Spending is expected to remain strong due to the aging of residential housing stock and the demand for replacement as well as increases in new construction which typically has higher spending per square foot to support replacement. Factors influencing hard surface flooring selection in the residential market include comfort and aesthetic properties, price and quality. The increasing availability of environmentally friendly products, as well as the wide range of product types and strong product development activities, will also serve to support residential demand.

However, declines in residential construction spending (in inflation-adjusted terms) and single-family housing completions are anticipated over the next several years, restraining gains. Additionally, the generally lower price of carpet and rugs will continue to provide competition for hard surface flooring.

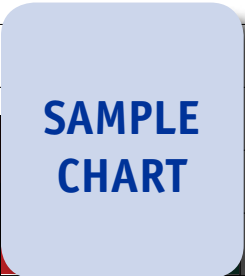
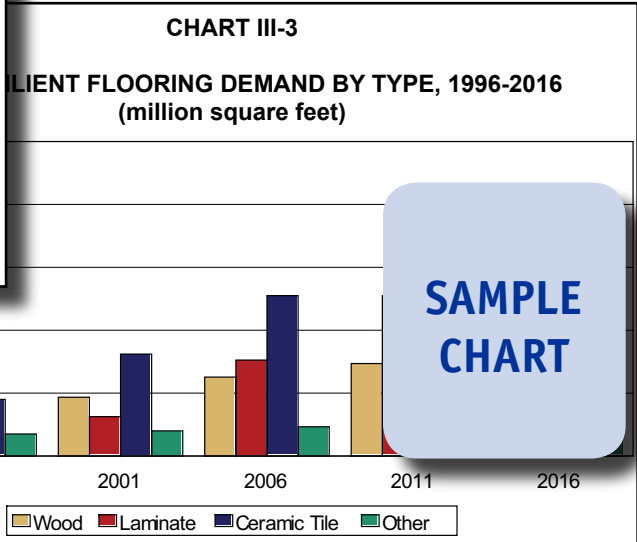
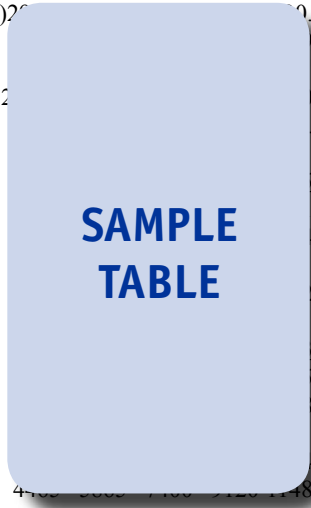
A variety of firms produce hard surface flooring for the residential market. Some firms -- including Congoleum, Mannington Mills, Mohawk and Shaw -- serve both the residential and nonresidential markets, while other companies -- such as Anderson, Duramar and Memphis Hardwood Flooring -- primarily focus on the residential market.

128

Copyright 2007 The Freedonia Group, Inc.

**TABLE III-1**  
**HARD SURFACE FLOORING SUPPLY & DEMAND**  
 (million square feet)

Item	1996	2001	2006	2011	2016
Bldg Improve/Rep Expend (bil 2000\$)	200.0	200.0	200.0	200.0	200.0
sq ft floor covering/000\$ expend	15.0	15.0	15.0	15.0	15.0
Floor Covering Demand	200.0	200.0	200.0	200.0	200.0
% hard surface flooring	19.0	25.0	25.0	25.0	25.0
Hard Surface Flooring Demand	38.0	50.0	50.0	50.0	50.0
Resilient	38.0	50.0	50.0	50.0	50.0
Nonresilient	0.0	0.0	0.0	0.0	0.0
- net imports	0.0	0.0	0.0	0.0	0.0
Hard Surface Flooring Shipments	0.0	0.0	0.0	0.0	0.0
Resilient	0.0	0.0	0.0	0.0	0.0
Nonresilient	0.0	0.0	0.0	0.0	0.0
\$/sq ft	15.0	15.0	15.0	15.0	15.0
Hard Surface Flooring Shpts (mil \$)	480.0	480.0	480.0	480.0	480.0



## Sample Profile, Table & Chart

**TABLE IV-12**  
**OFFICE & COMMERCIAL BUILDING**  
**HARD SURFACE FLOORING DEMAND**  
 (million square feet)

Item	1996	2001	2006	2011	2016
Office & Comm Bldg Space (bil sq ft)	29.7	33.4	34.9	35.9	37.5
sq ft floor covering/000 sq ft space	111	111	111	111	111
Office & Comm Flooring Demand	3.3	3.7	3.9	4.0	4.2
% hard surface	75	75	75	75	75
Office & Comm Hard Surface Demand	2.5	2.8	2.9	3.0	3.1
New	1.0	1.1	1.1	1.1	1.1
Replacement	1.5	1.7	1.8	1.9	2.0
% office & commercial	53	53	53	53	53
Nonres Hard Surface Flooring Demand	3.1	3.5	3.6	3.7	3.8

**SAMPLE TABLE**

**COMPANY PROFILES**

**Dodge-Regupol Incorporated**  
 715 Fountain Avenue  
 Lancaster, PA  
 717-295-3400  
 http://www.re

Annual Sales: (5/07)  
 Employment:  
 Key Products:

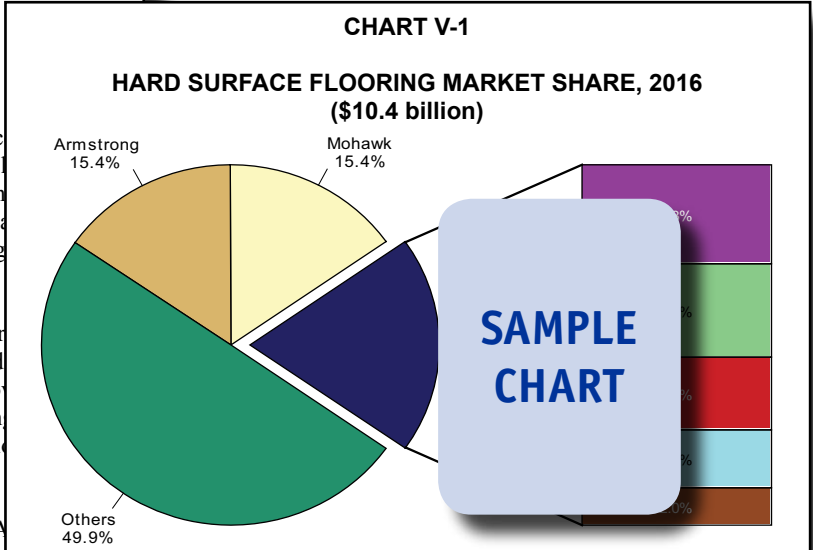
Dodge-Regupol Incorporated (DRI) cleans, recycles and scrap tires for the manufacture of rubber products. The private company also produces cork and cork/rubber materials using the technology. DRI's recycled materials are used in automotive damage prevention materials, playground tiles, sports surfacing commercial flooring.

The Company is active in the hard surface flooring industry through the manufacture of rubber flooring products. Reported is the largest user of scrap tire rubber in the US, and converts 45 million pounds of tires annually into recycled rubber flooring commercial applications. DRI conducts manufacturing operations in Lancaster, Pennsylvania.

Among DRI's rubber flooring offerings is the ECOSURFACE collection, which features flooring products that are comprised of 100-percent recycled materials and colored ethylene-propylene-diene-monomer (EPDM) flecks. Flooring in this range is available in several color combinations, and is sold through the ECONIGHTS, ECOSTONE, ECOEARTH, ECOROCKS, ECOSAND and ECOMAX lines. ECOSURFACES flooring products are distributed in the US by Gerbert Limited (Lancaster, Pennsylvania).

166 Copyright 2007 The Freedonia Group, Inc.

**SAMPLE PROFILE**





**OTHER STUDIES**

**Wood & Competitive Decking**

US demand for decking will reach 3.6 billion lineal feet by 2011, supported by solid residential improvement and repair activity. Alternative decking materials such as wood-plastic composite and plastic will continue to lead gains, further supplanting wood. Tropical hardwoods will grow the fastest in the wood decking segment. This study analyzes the \$4.6 billion US decking industry, with forecasts given for 2011 and 2016 by product, market and region. It also evaluates market share and profiles major players.

#2222 ..... 07/2007..... \$4500

**Decorative Laminates**

US sales of decorative laminates will grow 3.8% annually through 2011, driven by increased demand for laminate flooring, store fixtures and wall panels. Decorative foils and saturated papers will pace the dominant low-pressure laminate segment, while high-pressure laminates will lead gains. This study analyzes the US decorative laminate industry, with forecasts for 2011 and 2016 given by raw material, production process, product and market. It also evaluates company market share and profiles major firms.

#2203 ..... 06/2007..... \$4400

**Hard Surface Flooring in China**

Chinese demand for hard surface flooring will rise 7.3% annually through 2010. Ceramic floor tile will remain dominant while laminate flooring will lead gains among the major products. The housing market will outpace the nonresidential building segment, spurred by ongoing privatization, higher incomes and further growth in larger new homes. This study analyzes the hard surface flooring industry in China to 2010 and 2015 by product, market and region. It also details market share and profiles major players.

#2147 ..... 01/2007..... \$4900

**Wood Panels**

US demand for wood panels will decline 1.1% annually through 2010, restrained by a weak single family housing market. Best prospects will occur in smaller segments such as new nonresidential building and construction improvements and repairs. Nonstructural panels will see marginal increases based on a brighter outlook for manufacturing. This study analyzes the \$18.2 billion US wood panel industry to 2010 and 2015 by product, market and region. It also evaluates company market share and profiles major players.

#2124 ..... 01/2007..... \$4400

**World Flooring & Carpets**

World floor covering demand will rise 4.1% yearly through 2010. China will surpass the US to become the top market, and sales will also be strong in India, Indonesia, Turkey, Iran, the Ukraine and Saudi Arabia. Developed areas will grow slower. Nonresilient flooring will outpace resilient flooring and carpets and rugs. This study analyzes the \$126 billion world flooring and carpet industry to 2010 and 2015 by product, market, world region and for 31 countries. It also evaluates market share and profiles major firms.

#2139 ..... 12/2006..... \$5500

**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

[Click here to learn more about Freedonia](#)

**Freedonia Custom Research**

Freedonia Custom Research delivers the same high quality, thorough and unbiased assessment of an industry or market as an industry study. Since the research initiative is based upon a company's specific needs, companies harness Freedonia's research capabilities and resources to answer unique questions. When you leverage the results of a Freedonia Custom Research engagement, you are able to obtain important answers to specific questions and issues associated with: mergers and acquisitions, new product launches/development, geographic expansion, entry into new markets, strategic business planning, and investment and funding decisions.

Freedonia Custom Research is ideal for companies seeking to make a strategic difference in the status quo and focus on future business growth. Working side by side with clients, Freedonia's team is able to define a research project that is custom-tailored to answer specific questions and provide the basis from which a company can make informed business decisions.

[Click here to learn more about Custom Research](#)



[Click here for complete title list](#)

[Click here to visit freedoniagroup.com](http://www.freedoniagroup.com)