Wood & Competitive Decking

Industry Study with Forecasts for 2016 & 2021

Study #2959 | October 2012 | $5300 | 366 pages
Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT

General .......................................................... 4
Macroeconomic Trends ........................................ 5
Demographic Trends ........................................... 8
Consumer Trends ................................................ 13
Personal Income & Expenditures ............................. 13
Consumer Financing ............................................. 16
Construction Trends ............................................ 19
Building Construction .......................................... 22
Residential Buildings ......................................... 25
Housing Completions ......................................... 28
Housing Stock .................................................. 32
Improvements & Repairs ...................................... 36
Nonresidential Buildings ..................................... 38
New ............................................................... 39
Improvements & Repairs ...................................... 41
Nonresidential Building Stock ............................... 43
Nonbuilding Construction ..................................... 46
Construction Expenditures ................................. 46
Nonbuilding Construction Stock ............................ 47
Historical Market Trends & Seasonality .................... 49
Pricing ............................................................ 52
Regulatory & Environmental Issues .......................... 55
Treated Lumber .................................................. 57
Environmental .................................................. 59
US-Canadian Softwood Timber Dispute .................... 62
Foreign Trade .................................................. 63

OVERVIEW

General .......................................................... 66
Demand by Volume ............................................. 67
Demand by Material Type ..................................... 70
Demand by Function .......................................... 73
Demand by Value ............................................... 73
Demand by Material Type ..................................... 75
Demand by Function .......................................... 77
Volume & Value Demand Comparison ...................... 78
Installed Costs .................................................. 80
Lifecycle Costs .................................................. 82
Treated Yellow Pine ........................................... 84
Redwood ........................................................ 85
Cedar ............................................................. 85
Tropical Hardwoods .......................................... 86
Wood-Plastic Composite ..................................... 87
Plastic ............................................................ 88
Competitive Environment .................................... 88

MARKETS

General .......................................................... 172
Residential Buildings ......................................... 175
New ............................................................... 178
Wood ............................................................. 179
Composite, Plastic, & Other Decking ...................... 184
Improvements & Repairs ..................................... 180
Housing Types .................................................. 185
Single-Family Housing ....................................... 187
Demand by Application ....................................... 189
Demand by Material .......................................... 190
Multifamily Housing ......................................... 191
Demand by Application ....................................... 193
Demand by Material .......................................... 193
Manufactured Housing ....................................... 194
Demand by Application ....................................... 195
Demand by Material .......................................... 196
Nonresidential Buildings .................................... 197
New ............................................................... 199
Improvements & Repairs ..................................... 201
Nonbuilding Construction ................................... 203
New ............................................................... 206
Improvements & Repairs ..................................... 208

PRODUCTS

General .......................................................... 92
Wood ............................................................. 93
Demand by Volume & Value .................................. 93
Demand by Function .......................................... 95
Demand by Type ............................................... 96
Pressure-Treated Wood ...................................... 98

REGION

General .......................................................... 212
Regional Demographic & Economic Trends .............. 214
Population Patterns ............................................ 214
Economic Outlook ............................................. 217
Regional Construction ........................................ 220
Housing Trends ................................................ 222
Regional Demand for Decking ............................. 225
Northeast ......................................................... 228
New England .................................................. 231
Middle Atlantic ............................................... 232
Midwest .......................................................... 233
East North Central ........................................... 236
West North Central .......................................... 237
South ............................................................. 238
South Atlantic .................................................. 241
East South Central ............................................ 243
West South Central .......................................... 244
West .............................................................. 245
Mountain ........................................................ 249
Pacific ........................................................... 251

INDUSTRY STRUCTURE

General .......................................................... 253
Industry Composition ......................................... 254
Market Share .................................................... 255
Wood Decking .................................................. 256
Composite, Plastic, & Other Decking ...................... 257
Product Development ......................................... 260
Manufacturing .................................................. 262
Wood Decking .................................................. 263
Composite, Plastic, & Other Decking ...................... 264
Marketing ........................................................ 266
Wood Decking .................................................. 267
Composite, Plastic, & Other Decking ...................... 269
Distribution ...................................................... 272
Mergers, Acquisitions, & Divestitures ..................... 274
Cooperative Agreements ..................................... 278

COMPANY PROFILES

Advanced Environmental Recycling Technologies ........ 284
Associated Materials ........................................... 287
Atrium Corporation ............................................ 289
Berkshire Hathaway ............................................ 291
BlueLinx Holdings ............................................ 293
Boise Cascade .................................................. 295
Building Materials Corporation of America ............. 296
CPG International ............................................. 297
Crane Group ..................................................... 302
Deceuninck NV ................................................ 303
Dow Chemical .................................................. 305
Eastman Chemical ............................................. 307
Fiboron LLC ................................................... 308
Georgia Gulf .................................................... 313
Gracious Living ................................................ 315
Green Bay Decking .......................................... 316

(continued on following page)
Table of Contents

COMPANY PROFILES
(continued from previous page)

Green Diamond Resource ........................................ 318
Hood Companies .................................................. 320
Hoover Treated Wood Products ................................ 321
Integrity Composites ............................................. 323
Inteplast Group ................................................... 324
International Paper .............................................. 325
Koch Industries .................................................... 326
LB Plastics .......................................................... 327
Lonz Group ........................................................... 329
Mendocino Forest Products ..................................... 331
N.E.W. Construction ............................................. 332
Osmose Holdings .................................................. 333
Ply Gem Holdings ................................................ 335
Potlatch Corporation ............................................. 337
Rockwood Holdings .............................................. 338
Saint-Gobain ........................................................ 340
Sherwin-Williams Company ................................... 342
TAMKO Building Products ..................................... 344
Timber Treatment Technologies ............................... 346
Trex Company ...................................................... 347
Universal Forest Products ..................................... 350
VEKA AG ............................................................ 354
West Fraser Timber ............................................... 356
Westlake Chemical ............................................... 357
Weyerhaeuser Company .......................................... 359
Selected Other Decking Companies ......................... 361

List of Tables/Charts

EXECUTIVE SUMMARY

1 Summary Table .................................................. 3

MARKET ENVIRONMENT

1 Macroeconomic Indicators ................................... 8
2 Population & Households ................................... 12
3 Personal Consumption Expenditures ..................... 15
4 Consumer Financing Environment, 2001-2011 .......... 19
5 Construction Expenditures ................................. 22
6 Building Construction Expenditures ..................... 25
7 Residential Building Construction Expenditures .... 28
8 Housing Completions ........................................ 32
9 Housing Stock by Type ..................................... 35
Cht Year of Construction of Housing Stock, 2011 ........ 36
10 Residential Improvement & Repair Expenditures .... 38
11 Nonresidential Building Construction Expenditures .. 41
12 Nonresidential Building Improvement & Repair Expenditures ............................... 43
13 Nonresidential Building Stock ............................. 45
14 Nonbuilding Construction Expenditures ............... 47
15 Nonbuilding Construction Stock .......................... 48
16 Decking Market, 2001-2011 .............................. 51
Cht Decking Demand Growth, 2002-2011 ............... 52
17 Decking Prices ................................................ 54

OVERVIEW

1 Decking Demand by Material & Function .............. 69
Cht Decking Market Volume by Material Type, 2001-2021 . 72
2 Decking Market Value by Material & Function ......... 75
Cht Decking Market Value by Material Type, 2001-2021 . 77
Cht Volume vs. Value: Decking Demand by Material, 2011 ... 79
Cht Average Installed Costs for Selected Decking Materials, 2011 .... 82
3 Life Cycle Cost Comparison by Decking Material ....... 84
4 Residential Decking Indicators ............................. 91

PRODUCTS

1 Wood Decking Demand by Function ..................... 93
2 Wood Decking Demand by Type .......................... 98
3 Pressure-Treated Wood Decking Demand by Function & Species ........ 101
4 Cedar Decking Demand by Function .................... 108
5 Redwood Decking Demand by Function ................ 109
6 Tropical Hardwood & Other Wood Decking Demand by Function ........ 115
7 Wood Decking Demand by Installation Method ....... 118
8 Wood Decking Demand by Market & Application ..... 118
9 Wood-Plastic Composite Decking Demand by Function ........ 122
10 Wood-Plastic Composite Decking Demand by Type ............ 130
11 Wood-Polyethylene Decking Demand by Function ....... 133
12 Other Wood-Plastic Composite Decking Demand by Function ....... 135
13 Wood-Plastic Composite Decking Demand by Market & Application ... 138
14 Wood-Plastic Composite Decking Demand by Installation Method ... 140
Cht Wood-Plastic Composite Decking Market Share, 2011 ....... 142
15 Plastic & Other Decking Demand by Function ......... 146
16 Plastic & Other Decking Demand by Type 149
17 Plastic Decking Demand by Material Type 150
18 Vinyl Decking Demand by Function .................... 153
19 Polyethylene & Other Plastics Decking Demand by Material & Function .... 159
Cht Plastic Decking Market Share, 2011 .................. 163
20 Other Decking Materials Demand by Function ........ 166
21 Plastic & Other Decking Demand by Market & Application .... 169
22 Plastic & Other Decking Demand by Installation Method .......... 171

MARKETS

1 Decking Demand by Material & Function .............. 174
Cht Decking Demand by Market, 2011 .................. 175
2 Residential Decking Demand by Application & Material .......... 178
3 New Residential Decking Demand by Material .......... 179
4 Residential Improvement & Repair Decking Demand by Material ........ 183
5 Residential Decking Demand by Housing Type .......... 187
6 Single-Family Housing Decking Demand by Application & Material ...... 189
7 Multifamily Housing Decking Demand by Application & Material ....... 192
8 Manufactured Housing Decking Demand by Application & Material ....... 195
9 Nonresidential Decking Demand by Application & Material .......... 199
10 New Nonresidential Decking Demand by Material .......... 201
11 Nonresidential Improvement & Repair Decking Demand by Material ....... 203
12 Nonbuilding Construction Decking Demand by Material & Application .... 206
13 New Nonbuilding Construction Decking Demand by Material .......... 208
14 Nonbuilding Construction Improvement & Repair Decking Demand by Material .... 211

REGIONS

1 Population by Region ........................................ 217
2 Gross Domestic Product by Region ..................... 220
3 Construction Expenditures by Region .................... 222
4 Regional Housing Indicators ............................... 225
5 Decking Demand by Region ................................. 227
Cht Decking Demand by Region, 2011 ................... 228
6 Northeast Decking Demand by Subregion & Market ....... 231
7 Midwest Decking Demand by Subregion & Market ....... 236
8 South Decking Demand by Subregion & Market ......... 241
9 West Decking Demand by Subregion & Market .......... 249

INDUSTRY STRUCTURE

1 US Composite, Plastic, & Other Decking Sales by Company, 2011 .......... 259
2 Selected Acquisitions & Divestitures ..................... 277
3 Selected Cooperative Agreements ....................... 280

Click here to purchase online

Order now, click here!
US demand to rise 2.4% annually through 2016

US demand for decking is forecast to rise 2.4 percent per year to 3.3 billion lineal feet in 2016, valued at $5.7 billion. This pace represents a rebound from the declines seen between 2006 and 2011, when housing completions plummeted and residential improvement and repair expenditures contracted from their elevated 2006 base. Through 2016, decking demand will be driven by an expected advance in housing completions and continuing consumer interest in decks as a way to increase outdoor leisure space.

Plastic, composite decking to see double-digit gains

Wood-plastic composite and plastic lumber decking materials are expected to experience double-digit annual gains in demand through 2016. Plastic decking will see the most rapid growth. Consumers are expected to opt for the material because of its durability and low maintenance requirements. Moreover, increasing availability of cellular PVC decking that better resembles natural wood will promote advances among residential consumers. Composite decking demand will be supported by its favorable performance properties and reputation as a “green” product that uses recycled materials. Because wood scraps are a key component, composite decking looks more like wood decking than many plastic varieties, a feature that will aid in its adoption.

Wood decking will continue to account for the majority of decking demand in volume and value terms. However, demand for wood decking is forecast to rise less than one percent annually to 2.7 billion lineal feet in 2016. Advances will be checked by competition from composite and plastic decking, which need less maintenance. Among wood types, tropical hardwoods will see the fastest growth due to their favorable aesthetics and performance properties.

Dominant residential market to rebound

The residential market accounted for 61 percent of decking demand in 2011, a lower share than the historical average. Through 2016, decking demand will be driven by an expected advance in housing completions and continuing consumer interest in decks as a way to increase outdoor leisure space.
Installation Methods

Professional installation accounted for 81 percent of wood decking demand in 2011. Demand for professionally installed decks is projected to rise less than one percent per year to 2.2 billion lineal feet in 2016. Rebounding housing completions and residential improvement and repair expenditures will spur gains. Home builders either construct decks themselves or, more commonly, contract the work to a certified professional to ensure that the deck meets all building codes. As a result, so too will the number of professionally installed decks.

In the residential improvement and repair market, increasing consumer demand for larger decks with more amenities -- such as outdoor kitchens, fire pits, and dining and relaxation areas -- will spur homeowners to hire professional installers. Many consumers, such as dual-income homeowners and aging baby boomers, prefer to have decks installed by professionals, rather than spend significant amounts of time installing their own decks. In the nonresidential and nonbuilding markets, decks are almost always installed by professional contractors. Thus, as nonresidential building construction and nonbuilding construction expenditures advance, so too will demand for professionally installed decks.

Demand for decks built using do-it-yourself (DIY) methods is projected to advance 1.2 percent annually to 520 million lineal feet in 2016, aided by a general interest in DIY projects. Some homeowners will install or replace their own decks, particularly decks with simple designs or those with minimal extra features, such as seating areas. A major reason for this is to reduce costs. Consumers can learn about building from the Internet, television shows that popularize DIY improvement projects, and seminars and classes on deck construction sponsored by home improvement superstores (which stock all the materials needed for deck construction).

### Table V-2

<table>
<thead>
<tr>
<th>Item</th>
<th>2001</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Bldg Construction (bil 2005$)</td>
<td>484.7</td>
<td>624.9</td>
<td>257.0</td>
<td>466.0</td>
<td>600.0</td>
</tr>
<tr>
<td>lineal feet decking/000$ construction</td>
<td>3.72</td>
<td>3.30</td>
<td>6.89</td>
<td>4.38</td>
<td>3.75</td>
</tr>
<tr>
<td>Residential Decking Demand</td>
<td>1804</td>
<td>2065</td>
<td>1770</td>
<td>2040</td>
<td>2250</td>
</tr>
<tr>
<td>By Application:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New</td>
<td>225</td>
<td>258</td>
<td>71</td>
<td>185</td>
<td>250</td>
</tr>
<tr>
<td>Improvement &amp; Repair</td>
<td>1579</td>
<td>1807</td>
<td>1699</td>
<td>1855</td>
<td>2000</td>
</tr>
<tr>
<td>By Material:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood</td>
<td>1619</td>
<td>1733</td>
<td>1579</td>
<td>1670</td>
<td>1750</td>
</tr>
<tr>
<td>Wood-Plastic Composite</td>
<td>177</td>
<td>316</td>
<td>171</td>
<td>315</td>
<td>410</td>
</tr>
<tr>
<td>Plastic &amp; Other</td>
<td>8</td>
<td>16</td>
<td>20</td>
<td>55</td>
<td>90</td>
</tr>
<tr>
<td>% residential Decking Demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$/lineal foot</td>
<td>1.22</td>
<td>1.40</td>
<td>1.41</td>
<td>1.75</td>
<td>2.03</td>
</tr>
<tr>
<td>Residential Decking Demand (mil $)</td>
<td>2195</td>
<td>2891</td>
<td>2487</td>
<td>3580</td>
<td>4565</td>
</tr>
</tbody>
</table>
Advanced Environmental Recycling Technologies Incorporated
914 North Jefferson Street
Springdale, AR  72764
479-756-5000
http://www.aertinc.com
Sales:  $59 million (2011)
Employment:  430 (2011)
Key Products:  composite decking and railing systems

Advanced Environmental Recycling Technologies (AERT) develops, manufactures and markets composite building materials made from reclaimed plastic and wood fiber waste for use in specialized exterior construction applications. The Company’s products include decking, railing, trim, door components and fencing.

The Company competes in the US decking industry through the manufacture and sale of composite decking and railing systems under the CHOICEDEK and MOISTURESHIELD brand names. Decking and railing from AERT are manufactured through a patented encapsulation process using recycled wood fiber, including wood fiber waste generated from hardwood furniture, pallet, cabinet, and flooring manufacturers; and postindustrial and postconsumer waste polyethylene. The Company produces decking, railing, and other composite products at two facilities in Springdale, Arkansas. AERT performs plastic recycling, blending, and storage at plants in Lowell, Arkansas and Watts, Oklahoma. The Company distributes its products via a network of sales representatives and dealers, as well as through cooperative agreements. According to the Company, its principal competitors in the nonwood decking market are TAMKO Building Products Incorporated (Joplin, Missouri), the TimberTech Limited subsidiary (Wilmington, Ohio) of CPG International (Scranton, Pennsylvania), Trex Company

---

**TABLE VI-9**

WEST DECKING DEMAND BY SUBREGION & MARKET
(million lineal feet)

<table>
<thead>
<tr>
<th>Item</th>
<th>2001</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Construction (bil 2005$)</td>
<td>280</td>
<td>370</td>
<td>340</td>
<td>370</td>
<td>400</td>
</tr>
<tr>
<td>lineal feet decking/000$ construction</td>
<td>2.05</td>
<td>1.95</td>
<td>3.34</td>
<td>2.55</td>
<td>2.33</td>
</tr>
<tr>
<td>West Decking Demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By Subregion:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mountain</td>
<td>145</td>
<td>167</td>
<td>151</td>
<td>170</td>
<td>185</td>
</tr>
<tr>
<td>Pacific</td>
<td>388</td>
<td>440</td>
<td>394</td>
<td>460</td>
<td>510</td>
</tr>
<tr>
<td>By Market:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential Buildings</td>
<td>266</td>
<td>315</td>
<td>265</td>
<td>325</td>
<td>370</td>
</tr>
<tr>
<td>Nonresidential Buildings</td>
<td>65</td>
<td>67</td>
<td>58</td>
<td>65</td>
<td>70</td>
</tr>
<tr>
<td>Nonbuilding Construction</td>
<td>202</td>
<td>225</td>
<td>222</td>
<td>240</td>
<td>255</td>
</tr>
<tr>
<td>% West</td>
<td>18.1</td>
<td>18.7</td>
<td>18.6</td>
<td>19.1</td>
<td>19.3</td>
</tr>
<tr>
<td>Decking Demand</td>
<td>2945</td>
<td>3245</td>
<td>2925</td>
<td>3300</td>
<td>3600</td>
</tr>
</tbody>
</table>

---

“Demand for decking in the West is expected to rise 2.9 percent per year to 630 million lineal feet in 2016. This is a turnaround from the declines seen during the 2006-2011 period, when decking demand fell because of the region’s precipitous decline in housing activity. Moreover, steep drops in home values negatively affected decking demand in the residential improvement and repair market, as it became more difficult for homeowners to take out home equity loans to engage in renovation projects, such as deck repair or replacement.”

--Section VI, pg. 246
Corporate Use License

Now every decision maker in your organization can act on the key intelligence found in all Freedonia studies. For an additional $2600, companies receive unlimited use of an electronic version (PDF) of the study. Place it on your intranet, e-mail it to coworkers around the world, or print it as many times as you like.

Click here to learn more about the Corporate Use License

□ Individual Use License Agreement

The undersigned hereby represents that the above captioned study will be used by only __ individual(s) who are employees of the company and that the study will not be loaded on a network for multiple users. In the event that usage of the study changes, the Company will promptly notify Freedonia of such change and will pay to Freedonia the appropriate fee based on Freedonia’s standard fee schedule then in effect. Note: Entire company corporate use license, add $2600; one additional user, add $600; two additional users, add $1200; three additional users, add $1800.

□ Corporate Use License Agreement

The above captioned study may be stored on the company’s intranet or shared directory, available to company employees. Copies of the study may be made, but the undersigned represents that distribution of the study will be limited to employees of the company.

* Please check appropriate option and sign below to order an electronic version of the study.

**ONLINE:** www.freedoniagroup.com

**MAIL:** Print out and complete the order form and send to The Freedonia Group (see address at the bottom of this form)

**PHONE:** Call toll free, 800.927.5900 (US) or +1 440.684.9600

**FAX:** +1 440.646.0484 (US)

**EMAIL:** info@freedoniagroup.com

**Free Handling & Shipping**

There is NO charge for handling or UPS shipping in the US. Expect delivery in 3 to 5 business days. Outside the US, Freedonia provides free airmail service. Express delivery is available at cost.

**Orders Outside of the US**

Checks must be made payable in US funds, drawn against a US bank and mailed directly to The Freedonia Group. For wire transfers please contact our customer service department at info@freedoniagroup.com. Credit cards accepted.

**Credit Card Orders**

For convenience, Freedonia accepts American Express, MasterCard or Visa. Credit card purchases must include account number, expiration date and authorized signature.

**Save 15%**

If you order three (3) different titles at the same time, you can receive a 15% discount. If your order is accompanied by a check or wire transfer, you may take a 5% cash discount (discounts do not apply to Corporate Use Licenses).

**Corporate Use License Agreement**

The above captioned study may be stored on the company’s intranet or shared directory, available to company employees. Copies of the study may be made, but the undersigned represents that distribution of the study will be limited to employees of the company.

Name ____________________________________________

Title ____________________________________________

Company ________________________________________

Division _________________________________________

Street ____________________________ (No PO Box please)

City/State/Zip ____________________________

Country ______________________________________

Phone ____________________________ Fax _____________

Email ____________________________

Signature ____________________________

**Bill my company** ☐**American Express** ☐**MasterCard** ☐**Visa**

Credit Card # ____________________________ Expiration Date MM/YY

Signature ____________________________
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

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 Freedonia

Click here to learn more about Custom Research

Click here for complete title list

Click here to visit freedoniagroup.com