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Geosynthetics

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

Study #2435 | January 2009 | \$4600 | 264 pages

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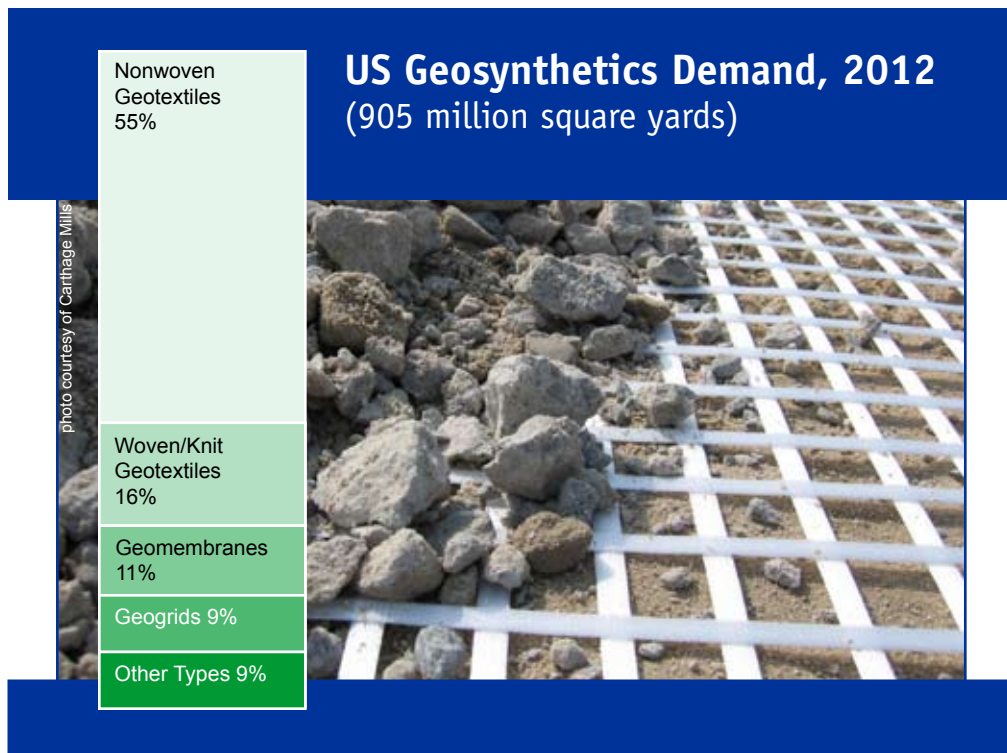
Gains will be promoted by rebounding road and highway construction spending, as federal, state and local transportation agencies rebuild and rehabilitate the nation's transportation infrastructure.

US demand to reach 905 million square yards in 2012

Demand for geosynthetics is projected to advance 2.5 percent annually to over 900 million square yards in 2012. Gains will be promoted by rebounding road and highway construction spending, as federal, state and local transportation agencies rebuild and rehabilitate the nation's transportation infrastructure. As many construction projects are subject to competitive bidding processes, use of geosynthetics will be specified, instead of more expensive materials. Further gains in demand for geosynthetics will be promoted by continued nonresidential construction spending and an acceleration in residential building construction expenditures.

High-performance types to be fastest growing

Demand for high-performance geosynthetics, such as geomembranes, geogrids and preformed geocomposites, will outpace demand for less costly geosynthetics. These high-performance geosynthetics can provide a better long-term value. This favorable change in product mix will help spur value gains. In 2007, geotextiles accounted for more than 70 percent of area demand, due to their low cost and their drainage and structural support properties. In value demand, however, geomembranes accounted for the largest share of the market, comprising 47 percent, as geomembranes are significantly more expensive per square yard than other



geosynthetics. Geomembranes will continue to hold the leading share of value demand in 2012, although gains will be restrained by petroleum prices, which are forecast to advance at a less rapid pace than in the 2002-2007 period.

Construction to remain largest market

Construction will remain the leading market for geosynthetics in area terms, primarily due to the application of geotextiles to provide support, drainage and erosion control in construction projects. The transportation infrastructure market will offer the strongest gains for geosynthetics through 2012, as geosynthetics will be used to make

roads more durable, to improve drainage and to construct structures that prevent erosion. The landfill market accounted for the largest share of geosynthetics value demand in 2007, due to the frequent use of high-cost geomembranes in landfills to seal off leachate pits and waste containment areas. Through 2012, gains in the landfill market will advance at a below-average pace, restrained by waste recycling and reduction and the durability of landfill geosynthetics. Demand will advance most rapidly in the transportation infrastructure market, due to increased construction expenditures, and in other markets, especially agriculture -- due to interest in increasing crop yields to make biofuels -- and mining.

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Sample Text, Table & Chart

MARKETS

Construction

Demand for geosynthetics in the construction market is to rise to 17.2 million square yards in 2012. This increase will be driven by rebounding residential construction. In commercial construction, geotextiles will be used to provide support for building foundations, to provide surface drainage, while geomembranes will be used to prevent sediments out of job sites. Construction will also drive long-term maintenance costs at the lifespan of structures.

**SAMPLE
TEXT**

Gains for geosynthetics in the construction market will be supported by the passage of environmental regulations -- from state and local agencies -- concerning sedimentary runoff from construction sites. Aggressive building practices can encourage sediment erosion, contaminating water streams with materials that are costly to remove. Not only is removing these sediments costly, but these materials can still enter the water cycle. To help prevent this, the US Environmental Protection Agency (EPA) requires the management of stormwater runoff in new developments that disturb at least one acre of land. Furthermore, redevelopment projects must be retrofitted for stormwater management. Thus, such geosynthetics as geomembranes and geotextiles will be installed to control the drainage of water from job sites.

Further advances in demand will be derived from continued spending in nonbuilding construction applications (excluding transportation infrastructure). Concerns about the availability of electric power will spur the construction of generation and distribution sites. Geosynthetics will be used to provide ground stabilization, reinforcement and drainage to such facilities as power plants, transformer and distribution sites, and power line towers.

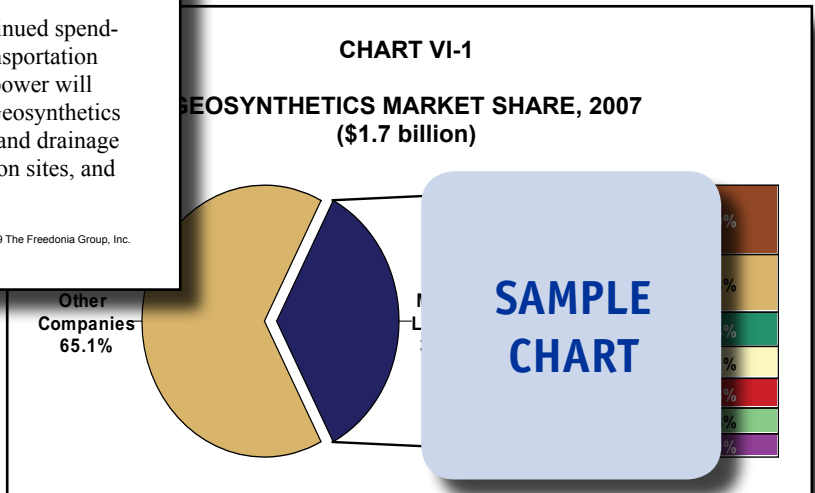
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TABLE V-5
NORTHEAST GEOSYNTHETICS DEMAND
 (million square yards)

Item	1997	2002	2007	2012	2017
Northeast Construction (bil 2000\$)	17.0	17.0	17.0	17.0	17.0
sq yd/000\$ construction	12.0	12.0	12.0	12.0	12.0
Northeast Geosynthetics Demand	10.0	10.0	10.0	10.0	10.0
By Subregion:					
New England	5.0	5.0	5.0	5.0	5.0
Middle Atlantic	5.0	5.0	5.0	5.0	5.0
By Market:					
Construction	10.0	10.0	10.0	10.0	10.0
Transportation Infrastructure	0.0	0.0	0.0	0.0	0.0
Landfills	6.0	6.0	6.0	6.0	6.0
Liquid Containment	3.0	3.0	3.0	3.0	3.0
Other Markets	1.0	1.0	1.0	1.0	1.0
% Northeast Geosynthetics Demand	8.0	8.0	8.0	8.0	8.0

**SAMPLE
TABLE**



Sample Profile, Table & Forecast

TABLE III-1
GEOSYNTHETICS AREA DEMAND
(million square yards)

Item	1997	2002	2007	2012	2017
Nonbuilding Construction (bil 2000\$) 130					20.0
sq yd/000\$ construction					3
Geosynthetics Demand					10
Geotextiles:					20
Nonwoven					50
Woven/Knit					50
Geomembranes					10
Geogrids					2
Geonets					40
Other Geosynthetics					48
\$/sq yd					52
Geosynthetics Demand (mil \$)	92				645



COMPANY PROFILES

Raven Industries Incorporated
 205 East Sixth Street
 Sioux Falls, SD 57117
 605-336-2750
<http://www.ravenind.com>

Sales: \$2
 Employe

Key Pro... vers

Rav... products for industrial,
 military, ... The Company oper-
 ates thro... lectronic Systems,
 Flow Co... ated.



The Company participates in the US geosynthetics industry through the Engineered Films segment, which generated sales of \$85 million and employed 170 in FY 2008. The segment makes and markets reinforced and ultra-thin polyethylene films for agricultural, construction and industrial end uses. Specific products include geosynthetics that are utilized as liners and covers for ponds, oil pits, lagoons, canals, landfills and earthen areas requiring protection against erosion. Raven Industries sells these geosynthetics under such brand names as CANVEX, DURA-SKIRM and RUFECO. In FY 2008, sales of pit lining and geomembrane films totaled \$33 million.

Raven Industries' CANVEX geosynthetics are made from reinforced woven high-density polyethylene sheeting, which is coated with ultraviolet (UV) light inhibitors, thermal stabilizers and other compounds that provide long-term protection against degradation. DURA-

“Value demand for geomembranes is forecast to advance 3.7 percent annually to \$960 million in 2012. Value gains will be promoted by the continuing efforts of geomembrane manufacturers to improve the quality and durability of these materials. While geomembranes are more costly than other geosynthetics, their resistance to most forms of damage and ability to withstand difficult operating environments can reduce repair and maintenance costs in the long term. Producers of geosynthetics can charge more for their products because of these long-term benefits. Advances in value demand will be restrained by ...”
 --Section III, pg. 76

OTHER STUDIES

Coated Fabrics

This study analyzes the US coated fabric industry. It presents historical demand data for 1998, 2003 and 2008 and forecasts for 2013 and 2018 by coating (e.g., vinyl, acrylic, polyurethane, pyroxylin, polychloroprene, silicone), substrate (e.g., polyester, nylon, cotton, fiberglass, nonwovens) and market (e.g., motor vehicles, marine, furniture, protective clothing, industrial, wallcoverings). The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry players.

#2448 01/2009..... \$4800

World Textile Fibers

Global demand for manufactured fibers will rise 4.7% annually through 2012. Polyester will continue to dominate output while specialty products such as spandex, aramid and carbon fibers grow the fastest. The industry will remain concentrated in Asia, where the fastest growth is also expected. This study analyzes the 46 million metric ton world textile fiber industry, with forecasts for 2012 and 2017 by fiber type, world region and major country. It also evaluates company market share and profiles industry players.

#2402 10/2008..... \$5700

Cement & Concrete Additives

US cement and concrete additive demand will grow 6.4% annually through 2012, as construction activity rebounds from a low 2007 base. Chemical additives will stay the top segment, led by water reducers such as superplasticizers. Mineral additives will grow faster, paced by waste materials such as fly ash and blast furnace slag. This study analyzes the \$2.3 billion US cement and concrete additive industry, with forecasts for 2012 and 2017 by product and market. It also evaluates market share and profiles industry competitors.

#2382 08/2008..... \$4600

Biodegradable Plastic

US demand for biodegradable plastic will grow 15.5% yearly through 2012. Gains will be driven by escalating costs for petroleum-based resins and growing initiatives that favor renewable resources. Polyester-based and polylactic acid resins will grow the fastest, while starch-based types remain the largest segment. This study analyzes the 350 million pound US biodegradable plastic industry, with forecasts for 2012 and 2017 by type and market. It also details market share and profiles industry players.

#2387 08/2008..... \$4600

Waste Management & Remediation Services

Demand for US waste management and remediation services will rise 5.3% annually through 2012. Waste collection will remain dominant while remediation and material recovery grow the fastest based on more interest in public/environmental safety, brownfield development, waste recycling and material reuse. This study analyzes the \$84.6 billion US waste management and remediation industry, with forecasts for 2012 and 2017 by service, market and region. It also evaluates company market share and profiles major players.

#2327 05/2008..... \$4500

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