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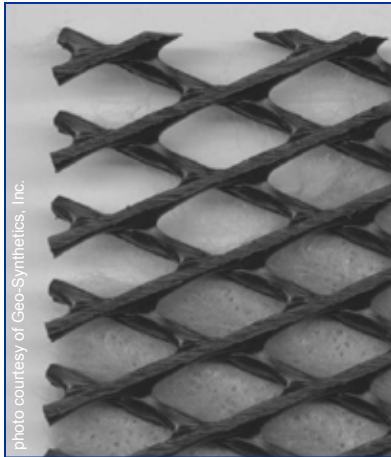
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# Geosynthetics

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## US Industry Study with Forecasts to 2010 & 2015

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Study #2153 | January 2007 | \$4300 | 249 pages

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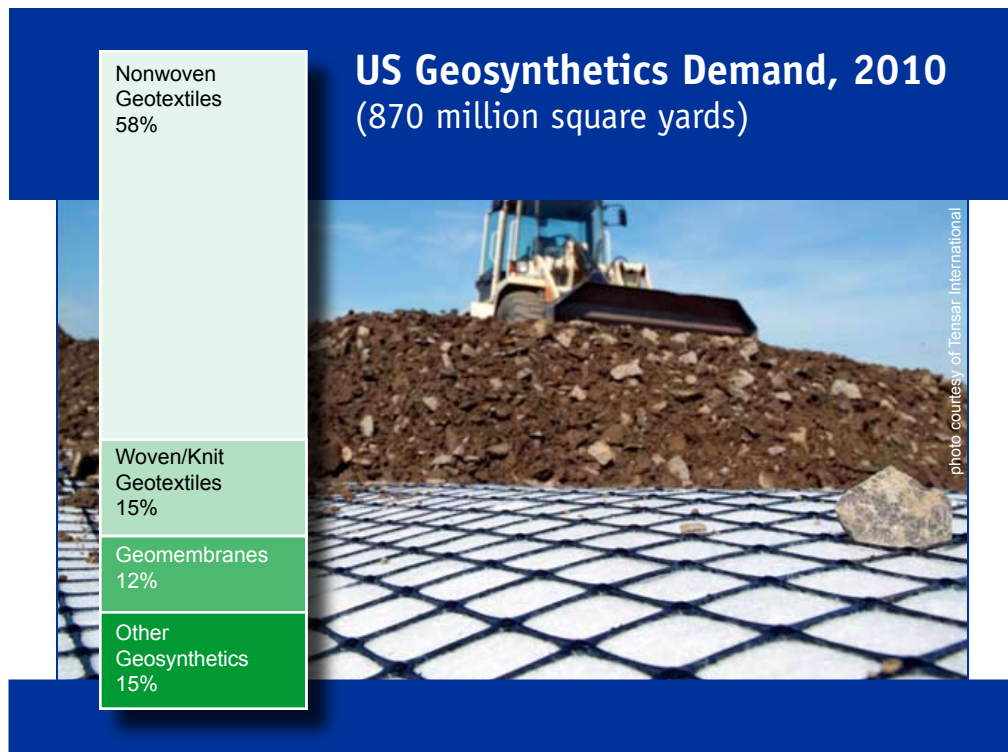
*A recovery in nonbuilding construction, a wider range of applications (e.g., building construction, mining), and ongoing industry efforts to sell the benefits of geosynthetics to engineers will help support demand.*

## US demand to grow 4.4% annually through 2010

Geosynthetics demand is projected to increase 4.4 percent per year through 2010 to 870 million square yards. Geosynthetics include geotextiles, geomembranes, geonets, geogrids, geosynthetic clay liners, preformed geocomposites, geocells and geofoams. Advances will be fueled by a recovery in nonbuilding construction. Additionally, geosynthetics will continue to increase their use in a wider range of applications, such as building construction and mining. Ongoing industry efforts to increase awareness among engineers and other specifiers of the benefits of geosynthetics in various markets will also support demand.

## Smaller volume products to achieve strong growth

In 2005, geotextiles accounted for the largest share of demand (in area terms), with approximately three-quarters of the total. However, in value terms, geomembranes accounted for the largest share of the market, with about half of the total. Smaller volume geosynthetic products such as geogrids, geonets and geocomposites are expected to achieve strong growth through 2010, benefitting from the ongoing development of new applications and new composite combinations. Nonwoven geotextiles will see above-average gains over the forecast period, driven by solid nonbuilding construction activity.



## Construction market to remain dominant, lead gains

Among the various markets for geosynthetics, in terms of square yards the construction market was the largest in 2005, with one-third of the total. In addition, total penetration of geosynthetics into building and some nonbuilding applications remains low, providing growth opportunities. In fact, the construction market will see the strongest gains through 2010 among the major geosynthetics markets. Although the construction market requires the largest quantity of geosynthetics, value demand is limited because a large share of product used in this market is lower-priced geotextiles. In contrast, although the landfill market

is projected to see below-average gains through 2010, because of the extensive use of higher-priced geomembranes, it will remain an important market, with demand exceeding \$600 million.

The road and other transportation construction market will also see above-average gains. Prospects for highway and street construction will be buoyed by the implementation of projects financed by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which secures funding for projects through the 2010 fiscal year. Liquid containment and mining and other markets are expected to see a recovery from the 2000 to 2005 period, but will see growth below the industry average through 2010.

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## Sample Text, Table & Chart

### MARKETS

#### Construction

Geosynthetics demand in the construction market, which passes both nonbuilding (nontransportation) and building construction applications, is expected to grow through 2015. Demand is expected to about 1.5 billion square yards in 2015. Advanced construction techniques, such as precast concrete and precast concrete construction, are expected to drive growth in construction. Each of the building segments represents a small and growing geosynthetics demand in the overall construction market. Additional growth in all construction applications will be spurred by increased awareness of the benefits of geosynthetics (e.g., reduced material costs and increased lifespan) in construction projects.

Gains for geosynthetics in the construction market will also be supported by increased regulations from state and local agencies concerning sedimentary runoff from construction sites, and other types of erosion that fill streams, lakes and other waterways with silt. In fact, the 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. Geosynthetics will also benefit from the increasing development of more land that is less suitable for conventional construction methods.

Nevertheless, several end uses for geosynthetics in the construction market -- such as ground stabilization and reinforcement and drainage -- are fairly established applications, limiting further gains. Additionally, geosynthetics compete against natural products such as sand or gravel or clay liners in some applications, hampering growth.

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TABLE V-5

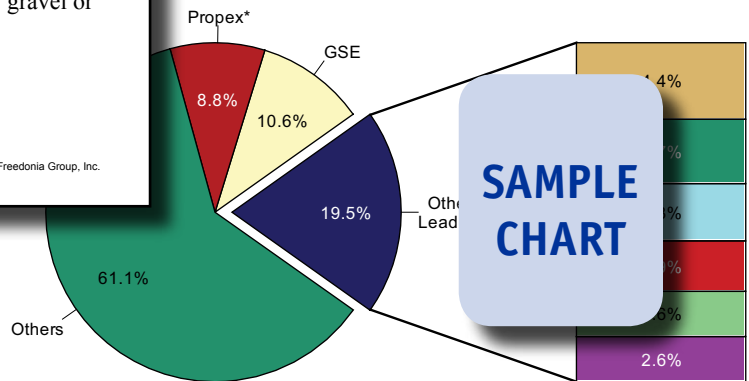
NORTHEAST GEOSYNTHETICS DEMAND  
 BY SUBREGION & MARKET  
 (million square yards)

Item	1995	2000	2005	2010	2015
Northeast Construction (bil 2000\$)	120.4	148.0	162.9	174.0	188.0
sq yd/000\$ construction	0.91	0.88	0.80	0.91	0.94
Northeast Geosynthetics Demand					77
By Subregion:					
New England					0
Middle Atlantic					7
By Market:					
Construction					1
Roads & Other Transportation					6
Landfills					7
Liquid Containment					3
Mining & Other Markets					0
% northeast Geosynthetics Demand					6
					5

SAMPLE TABLE

TABLE VI-1

GEOSYNTHETICS MARKET SHARE, 2005  
 (\$1.4 billion)



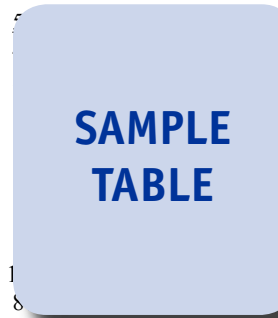
SAMPLE CHART

\*includes the February 2006 acquisition of SI Corporation.  
 \*\*acquired by Low & Bonar from Acordis in July 2006.

## Sample Profile, Table & Forecast

**TABLE III-2**  
**GEOSYNTHETICS DEMAND BY AREA**  
 (million square yards)

Item	1995	2000	2005	2010	2015
Nonbuilding Construction (bil 2000\$)	123.6	149.0	141.3	179.0	203.0
sq yds/000\$ construction	4.55	4.61	4.95	4.86	4.95
Geosynthetics Demand					95
Geotextiles:					86
Nonwoven					81
Woven/Knit					5
Geomembranes					9
Geonets					8
Geogrids					4
Other Geosynthetics					8
\$/sq yd	1				9
Geosynthetics Demand (mil \$)	8				00



### COMPANY PROFILES

#### Cooley Group Holdings

50 Esten Avenue  
 Pawtucket, RI  
 401-724-9000  
<http://www.cooley.com>

Annual Sales: \$1.2 billion (2006)  
 Employment: 200

#### Key Products:

Cooley Group manufactures polymer coatings, polymer-coated fabrics, engineered membranes and related industrial products. The Company, which is privately held by the Siener family, operates through five segments: Cooley Engineered Membranes, Cooley Building Products, Cooley Digital Products, Cooley Sign & Awning Products and Cooley Specialty Products.

The Company participates in the US geosynthetics industry through the Cooley Engineered Membranes segment (Pawtucket, Rhode Island), which makes and sells geomembranes for a wide range of end uses. The segment's membranes are marketed under the COOLGUARD HR, COOLTHANE and COOLPRO brand names.

COOLGUARD HR geomembranes are made from ELVALOY resins (DuPont) and other polymers bonded together, and then backed with a high-strength scrim. These membranes feature tensile and tear strength, puncture resistance, dimensional stability, imperviousness to ultraviolet radiation and freeze/thaw crack resistance. COOLGUARD HR geomembranes are durable yet flexible, and can be thermally or radio-frequency welded to line and cover large expanses. Applications for COOLGUARD HR geomembranes include lining ponds,



"In area terms, geosynthetics demand is projected to increase 4.4 percent annually through 2010 to 870 million square yards. Growth will be driven by a rebound in nonbuilding and transportation construction spending, key markets for geosynthetics, from a weak 2005 base. Furthermore, advances will be fueled by ongoing industry efforts to educate engineers and other specifiers about the benefits of geosynthetics in a broad range of markets."  
 --Section III, pg. 43

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**OTHER STUDIES**

**Nonwovens**

US demand for nonwoven roll goods will grow 4.5% annually through 2011, driven by healthy gains in key markets such as filtration, construction and wipes. Spunbonded nonwovens will remain the dominant product based on performance advantages, new applications and more demand for composite nonwovens featuring spunbonded webs. This study analyzes the \$4.7 billion US nonwovens industry, with forecasts for 2011 and 2016 by material, product and market. It also details market share and profiles major firms.

#2271 ..... 11/2007..... \$4600

**Specialty Films**

US specialty film demand will grow 4.8% annually through 2010. Gains will be driven by the use of higher value materials, the rapid adoption of new technologies and improved film coating and metallization. Barrier films will remain dominant while biodegradable and water soluble films will grow the fastest from a small base. The study analyzes the \$5.8 billion US specialty film industry to 2010 and 2015 by product and market. It also evaluates company market share and profiles leading industry players.

#2158 ..... 02/2007..... \$4400

**Coated Fabrics**

US demand for coated fabrics will grow 3.2% annually through 2010. Gains will be helped by a recovery in nonresidential wallcoverings, awnings and canopies, and by continued strength in protective clothing and motor vehicle airbags. Nonrubber coated fabrics will stay dominant while fabric-backed wallcoverings will grow the fastest. This study analyzes the \$2.7 billion US coated fabric industry to 2010 and 2015 by product, substrate and market. It also evaluates company market share and profiles major producers.

#2143 ..... 02/2007..... \$4400

**Roofing in China**

Demand for roofing materials in China will rise 4.4% annually, outpacing all other major economies in the world. Concrete and clay tiles and bituminous roofing will remain the dominant types, while elastomeric and plastic membranes lead gains. The nonresidential building market will grow more rapidly than the residential segment. This study analyzes the ¥40 billion Chinese roofing industry to 2010 and 2015 by product, market and region. It also evaluates company market share and profiles major producers.

#2148 ..... 12/2006..... \$4900

**Degradable Plastic**

US degradable plastic demand will grow 16.8% annually through 2010 as these products become more price competitive and continue to benefit from various sustainable resource initiatives. Biodegradable/compostable plastic will remain dominant and grow the fastest, led by polyactic acid (PLA). Packaging will lead market gains. This study analyzes the \$335 million US degradable plastic industry to 2010 and 2015 by type and market. It also evaluates company market share and profiles leading industry players.

#2107 ..... 09/2006..... \$4400

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