Nonwoven Geotextiles

- Subsurface Drainage
- Roadway Separation
- Railroad Stabilization
- Hard Armor Underlayment
- Asphalt Overlay
- Geomembrane Protection
- Gas Venting
- Drainage Systems
State-of-the-Art, ISO 9002 Production

Synthetic Industries (SI) manufactures and markets the broadest range of geosynthetic products in the industry today. Backed by the resources and experience of a world renowned producer of polypropylene textile fibers, our ISO 9002 certified, fully automated nonwoven plant is dedicated to produce only high quality, needlepunched, staple fiber geotextiles. Continuous filaments of polypropylene are extruded on the world’s largest fiber extrusion line. Fibers are then cut, opened, laid into a web, needled, inspected, tested and rolled. Geotex® nonwovens are then ready for shipment to job sites all over the world.

Located in Ringgold, Georgia, our fully automated plant is the largest needlepunch nonwoven manufacturing facility in the world and prides itself in producing high quality nonwoven geotextiles.

Civil Engineering Applications

Whether constructing a roadway, designing an erosion control plan or planning a subsurface drainage system, Geotex needlepunched nonwoven geotextiles are a proven benefit to your project.

▲ Subsurface Drainage – Our lightweight to mediumweight nonwoven geotextiles prove to be excellent filters, allowing subsurface water to pass into the drainage core while preventing adjacent soil from clogging the system. When properly selected, nonwoven geotextiles are effective in most all soils, particularly in environments where silt and clay are prominent.

▲ Roadway Separation/Railroad Stabilization – Deploying a Geotex nonwoven geotextile directly on a soft, saturated subgrade extends road and railway life by preventing aggregate and ballast from punching into the subgrade and intermixing. Geotex 401 meets American Association of State Highway Transportation Officials (AASHTO) M288-99 Class 3 standards and 801 exceeds the requirements for Class 1 textiles used in roadways. Several of our heavyweight nonwovens meet American Railway Engineering & Maintenance Association (AREMA) requirements for railroad stabilization.

▲ Hard Armor Underlayment – A Geotex nonwoven geotextile can help to relieve hydrostatic pressure beneath hard armor and prevent subsurface soils from migrating through the erosion control system. Geotex 801 and 401 meet the requirements for Class 1 and Class 3 erosion control geotextiles, respectively, as outlined in AASHTO M288-99.
Environmental Engineering Applications

Many properties of nonwoven geotextiles are utilized, in one location or another, at waste disposal facilities. Demonstrating excellent chemical compatibility with various leachates, Synthetic Industries has completed EPA 9090 testing on our Geotex® nonwoven polypropylene geotextiles.

▲ Geomembrane Protection – Heavyweight nonwovens, such as Geotex 1001, 1201, and 1601 cushion and protect geomembranes from damage by sharp objects, elevating puncture, impact and abrasion resistance. Nonwovens up to 1100 gr/m² (32 oz/yd²) are also available for the most challenging applications.

▲ Drainage Systems – When placed in intimate contact with a geonet or drainage stone, mediumweight Geotex nonwoven geotextiles can filter soil and waste while allowing water and leachate to pass. An efficient design utilizing recommended Geotex nonwoven geotextiles can lead to proper leachate management in new cells and rapid surface water collection and removal in closure plans.

▲ Gas Venting – Heavyweight Geotex nonwoven geotextiles provide collection and lateral transmission of liquids and gases that may build up beneath flexible geomembranes used in the closure and capping of waste facilities.

Nonwoven Selection Guide

A complete design analysis considering the hydraulic, geotechnical and loading conditions of each site should be performed before final selection can be made. However, shown below are the typical Geotex styles used for the various applications described. Properties of standard styles are listed on the enclosed spreadsheet. Call SI for details on other special styles available.

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<th>APPLICATIONS</th>
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▲ = Primary Application ▲ = Secondary Application
Asphalt Overlays

Pave-Dry® nonwovens are specifically engineered for asphalt overlays. Pave-Dry geotextiles are installed during rehabilitation as a fabric interlayer between the old and new asphalt layers in flexible pavement systems. Because polypropylene has an affinity for petroleum products, tack coats easily migrate into the fibers. This creates an inert, laminated composite that has proven to extend roadway life an average of 3 to 7 years. For more details, contact SI and request our Pave-Dry brochure.

SMART SOLUTIONS®

Analyzing and solving civil and environmental problems is our focus. We want to work with you on your next project.

FOR ADDITIONAL INFORMATION, PLEASE CALL:

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GPD-NW-103

Construction and Civil Engineering Products

• GEOTEX® woven and nonwoven geotextiles
• GEOTEX® structural soil reinforcement geotextiles and geotextile tubes
• PAVE-DRY® asphalt overlay fabrics
• LANDLOK® turf reinforcement mats, erosion control blankets and fiber roving systems
• BONTERRA® natural erosion control blankets
• PYRAMAT® high performance turf reinforcement mat
• GEOFIBERS® 3-dimensional soil reinforcement fibers
• FIBERMESH® synthetic fibers for concrete reinforcement
• NOVOCON® steel fibers for concrete reinforcement

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