JINSEED

GEOSYNTHETIC SOLUTIONS

PET Non-Woven Geotextiles

CONTINUOUS FILAMENT

Manufactured by thermally bonding, chemically bonding, or mechanically needle-punching continuous polyester filaments into a felt-like, highly permeable fabric — engineered for separation, filtration, drainage, and protection.

CONTINUOUS FILAMENT PET | TRI VERIFIED | IGS MEMBER

PRODUCT OVERVIEW

The Versatile Foundation of Modern Geotechnical Engineering

Jinseed PET Non-Woven Geotextiles are manufactured from continuous polyester (PET) filaments bonded together through thermal, chemical, or mechanical needle-punching processes. The result is a durable, felt-like fabric with high in-plane and cross-plane permeability.

Continuous filament technology produces significantly longer, more uniform fibers than staple fiber alternatives, delivering superior tensile strength, consistent pore size distribution, and greater resistance to deformation under load — making Jinseed non-wovens the preferred choice for demanding civil and environmental applications.

> *"The continuous filament structure provides a three-dimensional interlocked fiber matrix, combining high permeability with the mechanical strength needed for long-term in-ground performance."*

MASS PER UNIT AREA

100 – 800 g/m²

Wide range to suit varied project specifications and load requirements

FIBER TYPE

Continuous Filament PET

Superior uniformity and strength vs. staple fiber non-wovens

PERMEABILITY

Highly Permeable

Allows free water passage while retaining fine soil particles effectively

MANUFACTURING

Three Bonding Technologies. One Superior Fabric.

Jinseed PET Non-Woven Geotextiles are produced by laying continuous polyester filaments onto a moving conveyor to form a uniform web, which is then bonded using one or more of the following processes — each optimised for a specific set of engineering performance requirements.

Thermal Bonding

Fibers are bonded by applying heat and pressure, fusing the PET filaments at their contact points. Produces a strong, dimensionally stable fabric with consistent mechanical properties.

Chemical Bonding

A polymer binder is applied to the fiber web and cured to lock fibers together. Provides flexibility in product density and stiffness for specialist filtration and drainage applications.

Needle-Punching

Barbed needles mechanically entangle the fibers, creating a three-dimensional interlocked matrix. Delivers the highest in-plane permeability and excellent puncture and tear resistance.

> *"The continuous filament process, combined with needle-punching, produces a felt-like fabric structure with outstanding hydraulic and mechanical performance for in-ground applications."*

PRODUCT FEATURES

Engineering Performance at Every Layer

High In-Plane & Cross-Plane Permeability

The three-dimensional fiber matrix allows high rates of water flow both through and along the fabric plane, making Jinseed non-wovens ideal for filtration and drainage applications.

Continuous Filament Advantage

Longer, more uniform PET filaments deliver superior tensile strength, consistent aperture size distribution, and greater resistance to creep under sustained load compared to staple fiber fabrics.

Excellent Filtration Efficiency

Controlled apparent opening size (AOS) retains fine soil particles while maintaining high hydraulic conductivity — preventing piping and migration without impeding drainage flow.

UV & Chemical Resistance

PET fibers offer inherently good resistance to UV radiation and a wide range of chemicals encountered in civil, mining, and environmental containment applications — supporting extended service life.

High Puncture & Tear Resistance

The needle-punched interlocked fiber structure provides excellent resistance to puncture during installation and tear propagation under dynamic loading — protecting integrity in demanding site conditions.

Wide Weight Range & Customisation

Available from 100 to 800 g/m², with tailored thickness, grab strength, and AOS — enabling precise matching of fabric properties to project geotechnical and hydraulic design requirements.

QUALITY ASSURANCE

Tested to International Standards. Certified for Global Projects.

EU / UK

BTTG — CE Certification

Jinseed PET Non-Woven Geotextiles hold CE certification issued by BTTG (British Textile Technology Group), a UKAS-accredited notified body — confirming compliance with European harmonised standards for use in civil engineering projects.

INTERNATIONAL

IGS — International Geosynthetics Society Member

As a corporate member of the IGS, Jinseed is committed to the highest standards of technical practice and geosynthetics engineering across all product lines, including our PET non-woven geotextile range.

TESTING

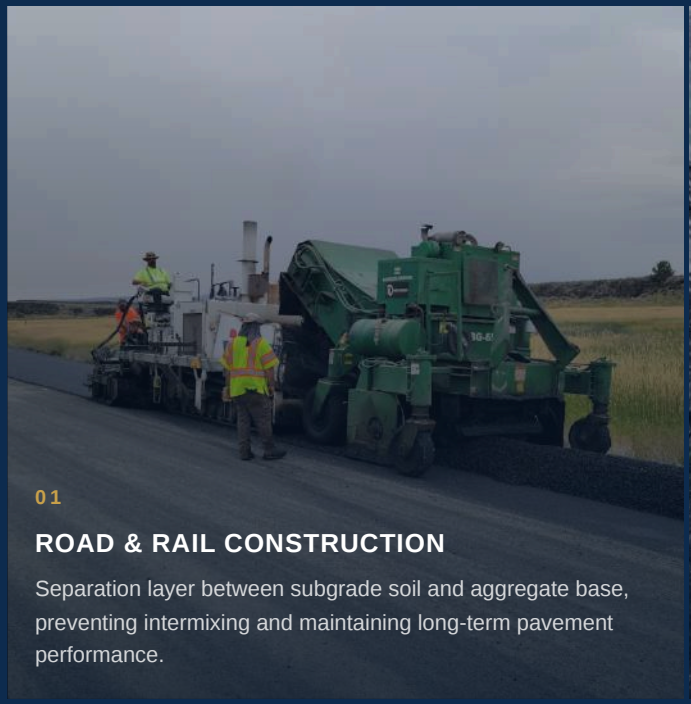
ASTM & EN Test Methods

All Jinseed non-woven geotextiles are tested in accordance with internationally recognised ASTM and EN standards, covering tensile properties, hydraulic performance, filtration efficiency, and durability.

Property	Test Method	Typical Range	Application Relevance
Mass per Unit Area	**EN ISO 9864 / ASTM D5261**	**100 – 800 g/m²**	**Structural and hydraulic design selection**
Tensile Strength (Grab)	ASTM D4632	Per weight grade	Installation and in-service loading
Elongation at Break	ASTM D4595	40 – 80%	Conformity to uneven subgrade
Apparent Opening Size (AOS / O90)	ASTM D4751 / EN ISO 12956	0.06 – 0.30 mm	Soil retention and filtration
Permittivity	ASTM D4491	Per weight grade	Drainage and filtration performance
UV Resistance (retained strength)	ASTM D4355	≥ 70% after 500 hrs	Exposed or delayed installation

APPLICATIONS

Built for the Full Spectrum of Geotechnical Challenges



01

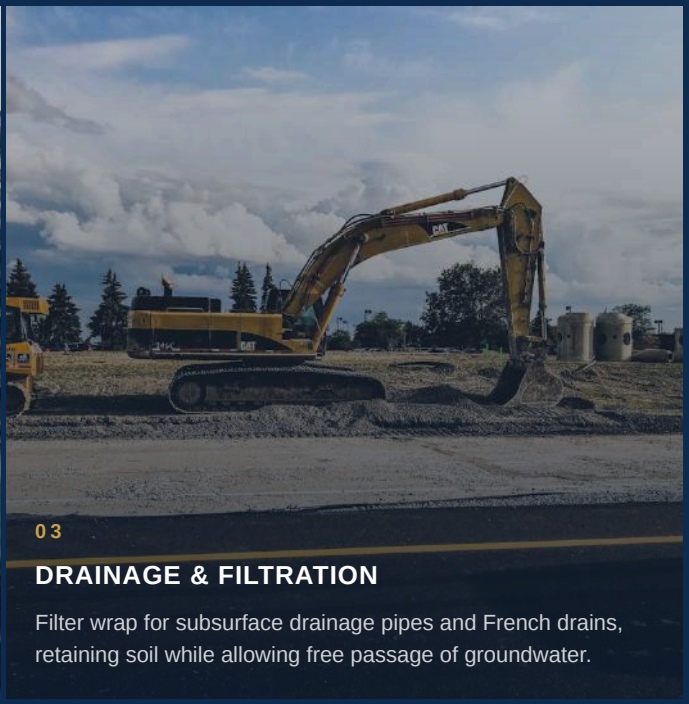
ROAD & RAIL CONSTRUCTION

Separation layer between subgrade soil and aggregate base, preventing intermixing and maintaining long-term pavement performance.

02

EROSION CONTROL & SLOPE PROTECTION

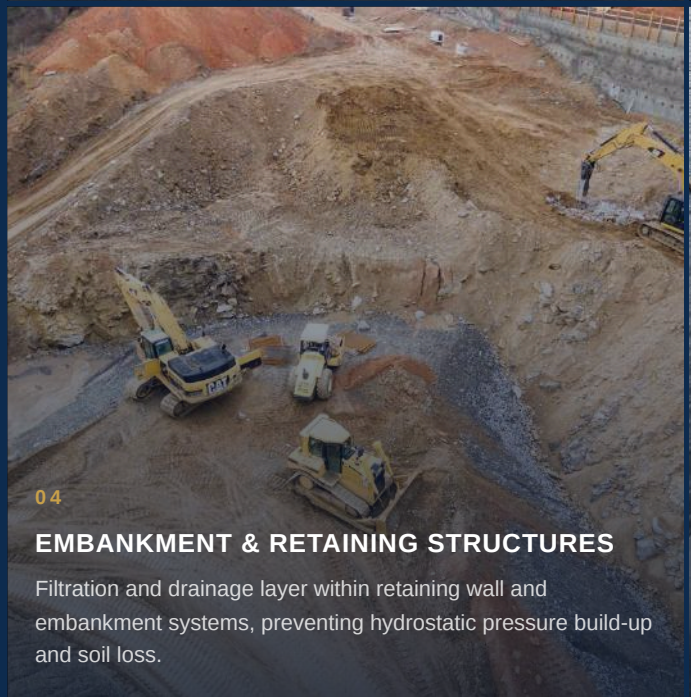
Stabilises embankment slopes and cut faces against surface erosion from rainfall and runoff, while supporting vegetation establishment.



03

DRAINAGE & FILTRATION

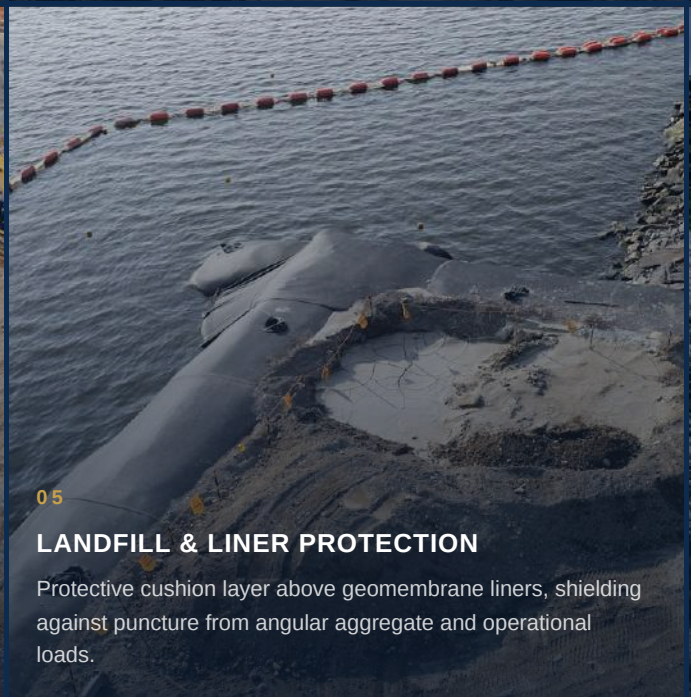
Filter wrap for subsurface drainage pipes and French drains, retaining soil while allowing free passage of groundwater.



04

EMBANKMENT & RETAINING STRUCTURES

Filtration and drainage layer within retaining wall and embankment systems, preventing hydrostatic pressure build-up and soil loss.



05

LANDFILL & LINER PROTECTION

Protective cushion layer above geomembrane liners, shielding against puncture from angular aggregate and operational loads.

06

COASTAL & RIVER BANK PROTECTION

Filter layer beneath riprap and gabion revetments, preventing scour of underlying material while maintaining hydraulic stability.

JINSEED

About Jinseed

Jinseed is a specialist geosynthetics manufacturer delivering high-performance PET non-woven geotextiles and HDPE geomembrane liner systems for critical civil, environmental, and geotechnical applications worldwide. Our products are manufactured using precision continuous filament technology and verified through comprehensive third-party testing.

As a corporate member of the International Geosynthetics Society (IGS) and holder of BTTG CE certification, Jinseed is committed to supplying projects to the highest international quality standards — combining technical excellence with reliable global supply.

CERTIFICATION

TRI-Certificated

European harmonised standard

MEMBERSHIP

IGS International

Geosynthetics Society

All performance data cited herein is based on independent laboratory testing. Jinseed has not performed design or engineering services to determine whether its products comply with any specific project requirements. For project-specific technical advice, please consult a qualified geotechnical engineer. Specifications are subject to change without notice.