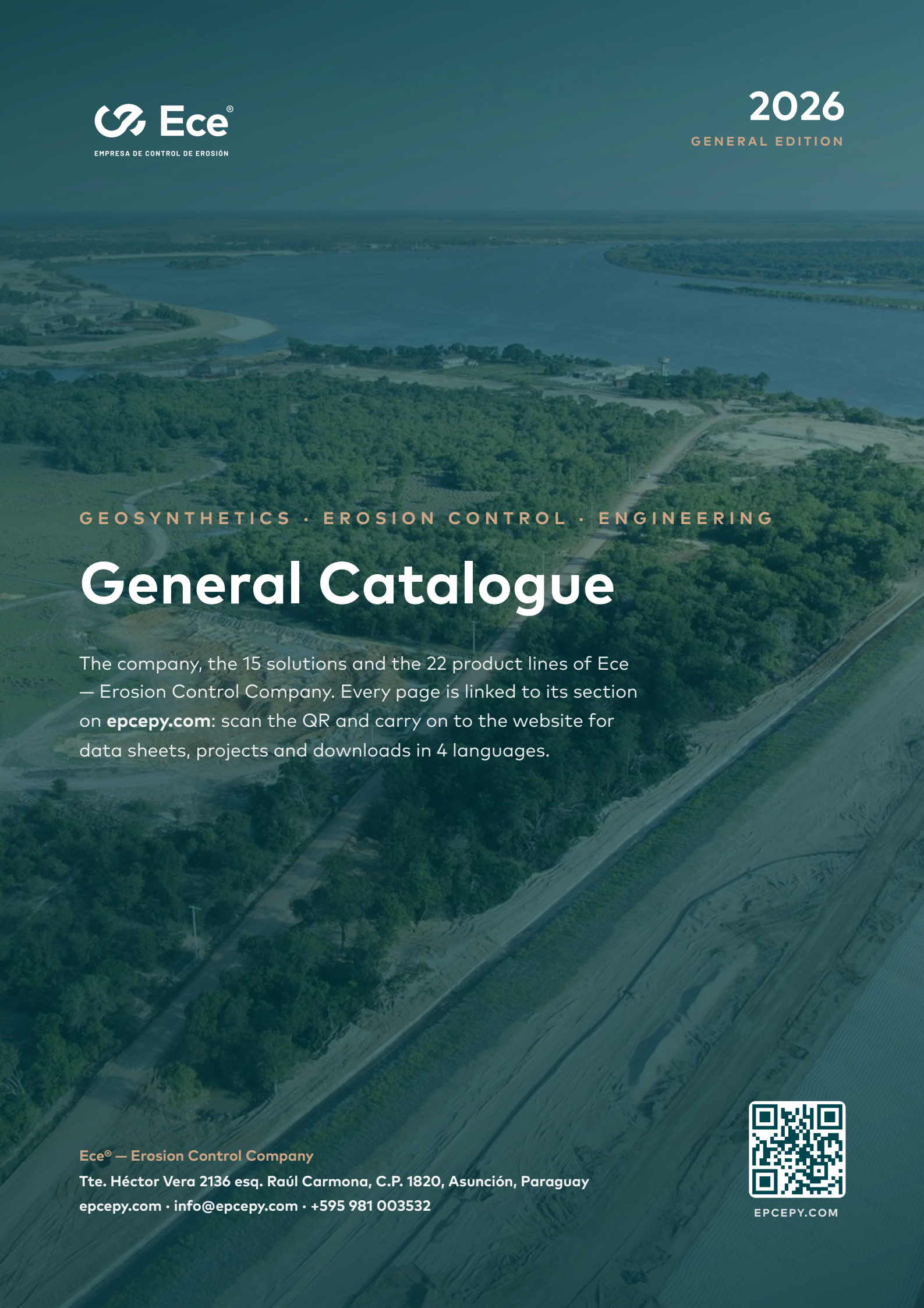
Ece®
EMPRESA DE CONTROL DE EROSIÓN

2026
GENERAL EDITION



GEOSYNTHETICS · EROSION CONTROL · ENGINEERING

General Catalogue

The company, the 15 solutions and the 22 product lines of Ece — Erosion Control Company. Every page is linked to its section on **epcepy.com**: scan the QR and carry on to the website for data sheets, projects and downloads in 4 languages.

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EPCEPY.COM

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01 THE COMPANY

WHO WE ARE



Pozo Hondo Wall — HYDROTEX® concrete mattresses, 20,000 m² (an Ece project)

24
PROJECTS COMPLETED · 23 IN PARAGUAY

172,000
M² ON A SINGLE PROJECT (PILAR)

6
LINES: 5 BRANDS + THE CE OWN LINE

4
COUNTRIES WITH PROJECTS AND TECHNICAL SUPPORT

EPCE S.A. — Ece, Erosion Control Company — is a Paraguayan company specialising in the supply and installation of geosynthetics and engineering solutions for erosion control, soil stabilisation and hydraulic works.

Incorporated in 2018, from the start it invested in innovative products and services for the Paraguayan market: today it is **exclusive representative in Paraguay** of Synthetex, Profile Products, Strata and Pietrucha, with distribution rights in Latin America, and in Brazil it keeps a commercial alliance with **Geo Soluções**, a pioneer in StrataSlope and Lock+Load walls.

We support the designer and the contractor during **the whole life of the project**: technical advice on the design, supply of certified materials, installation with our own plant and quality supervision in the field. Our solutions protect roads, bridges, riverbanks and industrial plants across the country.

WHAT WE DO

Engineering	Sizing and verification with the manufacturers' backing
Supply	Direct import of the 6 lines in the catalogue
Installation	Hydroseeders, geomembrane welding and our own crews
Supervision	Quality control in the field, project by project

One party responsible: from the calculation to delivery, the same company designs, supplies and installs — with no intermediary between the manufacturer and your project.

02 THE COMPANY

WHY ECE



An Ece crew hydroseeding — Itá–Pirayú link, Paraguay

We do not sell rolls: we deliver solutions that work. Every product in this catalogue reaches the site with its engineering verified, its installation specification and a crew that knows how to lay it — because they have already done so on more than twenty-four projects in the country.

Engineering support

Sizing and technical verification of every solution alongside the designer, with the manufacturers' direct backing and their design software — at no charge.

Our own installation

A fleet of hydroseeders, geomembrane welding equipment and specialist crews under permanent supervision. Our own technical installation specifications, approved by the MOPC.

Certified materials

Products with international certifications (GRI, ASTM, CE, GAI-LAP) and batch conformity testing, direct from the factory.

One party responsible

Design, supply and installation in a single contract: when the functions combine on one work front, a single company answers for them.

Synergy between lines

A Lock+Load wall with StrataDrain drainage, Profile hydroseeding on the crest and HYDROTEX mattresses at the toe: the brands in the catalogue working together in a single piece of engineering.

Reply within 48 hours

Send us the ground profile, the loads and a photo of the site: we send back the sized solution with a quotation for supply and installation.

INTERNATIONAL EXPERIENCE



Pilar Coastal Defence — the project international consortia travel to visit

International manufacturers call on Ece as their regional technical arm. When Synthetex or its partners need design, supervision or site support outside Paraguay, ours is the team they call.

COUNTRY	PROJECT	ECE'S ROLE
United Arab Emirates Abu Dhabi	Slope protection for a whole neighbourhood in Al Khatm — 75,000 m² of FP400 mattress	**Design and site supervision**, engaged by Geoquest Group, the owner of Synthetex — the commission of the highest technical standing.
Peru Tumbes River	Bank protection	Technical support at the request of Synthetex and of the Besalco–Stracon consortium, whose engineers travelled to Paraguay to see the Pilar project before proceeding.
Colombia Dique Canal	Major hydraulic project	Technical support and a visit to Sacyr's offices, at the request of Synthetex and of Sacyr itself.
Ecuador Guayaquil	Port protections	A technical visit with Sacyr executives to a port protection installation project, to assess design options.

The Pilar project as a calling card: 172,000 m² of concrete mattresses on the Paraguay river, visitable three hours from Asunción. The group also handles costing, importing and regional logistics from Paraguay, with distribution rights across Latin America.

04 THE COMPANY

THE BRANDS IN THIS CATALOGUE

Five leading manufacturers and one own line. For each function Ece picks the world leader in its category and backs it with local installation and technical service. The brand **CE — Erosion Control** groups the lines we supply and install ourselves.

Synthetex

ATLANTA, USA · OFFICIAL REPRESENTATIVE

HYDROTEX® concrete mattresses, pile jackets and textile formwork. Founded by a geosynthetics pioneer with 11 patents; own manufacturing in Toccoa, Georgia.

Profile Products

BUFFALO GROVE, USA · OFFICIAL REPRESENTATIVE

The world reference in hydroseeding and soil health: Flexterra®, ProMatrix™, ProGanics®, Futerra® mattings and DustRX™ dust suppressants.

Strata

USA / INDIA · OFFICIAL REPRESENTATIVE

StrataWeb® geocells, StrataGrid™ and StrataBase® geogrids, StrataTex™ nonwoven geotextiles and StrataDrain™ geocomposites.

Geo Soluções

SÃO PAULO, BRAZIL · COMMERCIAL ALLIANCE

Brazilian geotechnical engineering: StrataSlope™ and Lock+Load™ walls, AcquaPex® geomembranes, GeoPex geotextiles, displacement embankment and BlindaSolo®.

Pietrucha

POLAND · REPRESENTATIVE

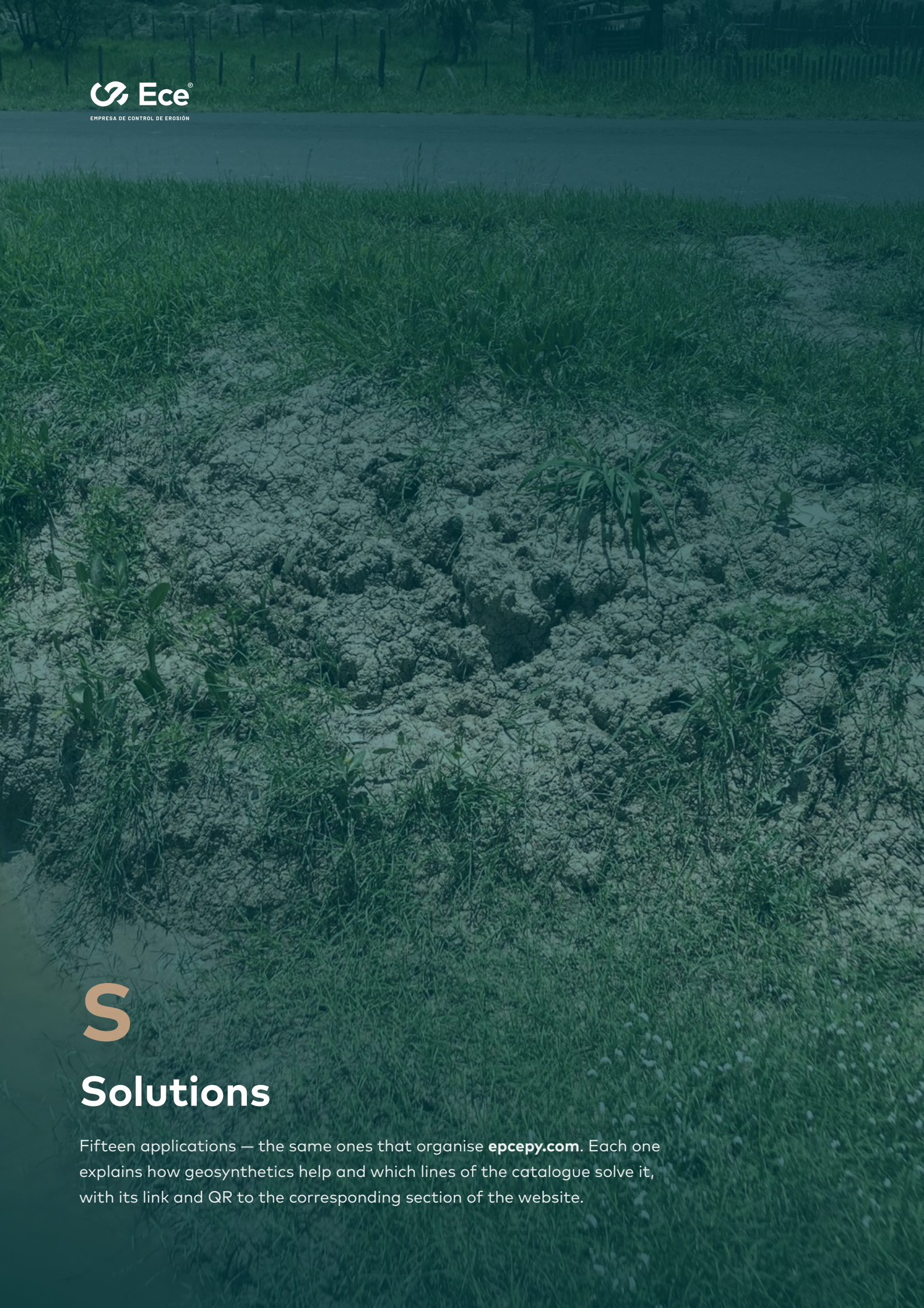
EcoLock synthetic sheet piles in structural PVC: retention and cut-off curtains that do not corrode, five times lighter than steel.

CE — Own line

PARAGUAY · SUPPLY AND INSTALLATION

Hexone® gabions and mattresses, rigid geogrids, dewatering geotubes (Tubone®) and Bentone® bentonite liners.

> **On the web:** every brand has its brochure and data sheets at epcepy.com/catalogos.html, in Spanish, English, Chinese and Portuguese.



S

Solutions

Fifteen applications — the same ones that organise **epcepy.com**. Each one explains how geosynthetics help and which lines of the catalogue solve it, with its link and QR to the corresponding section of the website.

S·01 SOLUTIONS

EROSION CONTROL



Eastern Metropolitan Corridor — slopes protected by Ece hydroseeding

Protect the soil surface against loss to the action of water and wind. Hydraulic mulches form a crust that fixes seed and holds moisture; three-dimensional mattings anchor the soil and let the vegetation root; and where the current exceeds what green can take, concrete mattresses and confined stone armour the channel without losing flexibility.

Hydroseeding and hydraulic mulches

From Wood with Tack to CocoFlex: immediate protection and revegetation in one pass.

P·01 · EPCEPY.COM/PRODUCTOS/HIDROSIEMBRA.HTML

Futerra® mattings

Rolled control: 99.9% effectiveness, with no netting to trap wildlife.

P·03 · EPCEPY.COM/PRODUCTOS/MANTOS-CONTROL-EROSION.HTML

Raíz Ece System

TRM + Flexterra: the green alternative to concrete in channels and spillways.

P·04 · EPCEPY.COM/PRODUCTOS/MANTOS-CONTROL-EROSION.HTML

HYDROTEX® concrete mattresses

When the flow calls for concrete: articulated lining cast in situ.

P·06 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

StrataWeb® geocells

Cellular confinement of the soil on slopes and channels.

P·10 · EPCEPY.COM/PRODUCTOS/GEOCELDAS.HTML

Hexone® — gabions and mattresses

Confined stone: the classic protection for banks and slope toes.

P·08 · EPCEPY.COM/PRODUCTOS/GAVIONES.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#control-erosion · PDF technical data sheets for every product: epcepy.com/catalogos.html

S·02 SOLUTIONS

SLOPE PROTECTION



Back slopes of the Itá–Pirayú link — hydroseeding on a freshly shaped slope

From the gentle slope to the near-vertical cut, there is a solution for every step. Moderate gradients are solved with hydraulic mulches and mattings; demanding ones add a TRM or geocells; and when the gradient exceeds what vegetation can hold, the slope is reinforced with geogrids and a green face — or armoured with concrete mattresses if the water rules.

Hydroseeding and hydraulic mulches

Immediate protection and grass established twice as fast.

P·01 · EPCEPY.COM/PRODUCTOS/HIDROSIEMBRA.HTML

Futerra® mattings

Permanent turf reinforcement on slopes up to 2H:1V.

P·03 · EPCEPY.COM/PRODUCTOS/MANTOS-CONTROL-EROSION.HTML

StrataWeb® geocells

Confines topsoil or gravel on the slope; takes built-in irrigation.

P·10 · EPCEPY.COM/PRODUCTOS/GEOCELDAS.HTML

StrataSlope™ reinforced slopes

Up to 70° with geogrids and a vegetated or stone face.

P·19 · EPCEPY.COM/PRODUCTOS/MUROS-SUELO-REFORZADO.HTML

Raíz Ece System

Reinforced turf for steep gradients with concentrated flow.

P·04 · EPCEPY.COM/PRODUCTOS/MANTOS-CONTROL-EROSION.HTML

HYDROTEX® concrete mattresses

Slope underwater or under wave action: articulated blocks that follow the ground.

P·06 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#taludes · Technical data sheets PDF: epcepy.com/catalogos.html

S·03 SOLUTIONS

COASTAL AND RIVER DEFENCES



Pilar Coastal Defence — 172,000 m² of HYDROTEX® mattresses on the Paraguay river

The river scours; the defence articulates. Against the current, the wave action and the flood cycles, the protection has to be continuous, flexible and permeable: concrete mattresses are filled even underwater and follow the settlement of the bed; gabions and sheet piles complete the system where the geometry or the logistics call for it.

HYDROTEX® concrete mattresses

Articulated Block with cables: the choice at Pilar and Pozo Hondo.

P·06 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

Pile jackets

They rehabilitate scoured piles of bridges and wharves, underwater and in service.

P·07 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

EcoLock synthetic sheet piles

Retaining curtains that do not corrode — urban waterfronts and riverbanks.

P·09 · EPCEPY.COM/PRODUCTOS/TABLESTACAS.HTML

Hexone® — gabions and mattresses

Groynes, gravity walls and flexible bank revetment.

P·08 · EPCEPY.COM/PRODUCTOS/GAVIONES.HTML

Geotubes (marine version)

Sand fills form groynes and coastal defence cores.

P·22 · EPCEPY.COM/PRODUCTOS/GEOTUBOS.HTML

Raíz Ece System

Vegetated riverbanks with structural strength, at a fraction of the rigid cost.

P·04 · EPCEPY.COM/PRODUCTOS/MANTOS-CONTROL-EROSION.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#defensas · Technical data sheets PDF: epcepy.com/catalogos.html

LINING



Lined agricultural reservoir — geomembrane welded by an Ece crew

A continuous barrier that lets neither liquids nor gases through. Reinforced geomembranes hold the water of reservoirs and ponds with no seepage loss; bentonite geosynthetics replace a metre of compacted clay with a self-healing roll; and where the barrier has to be vertical, the synthetic sheet pile cuts the flow in the ground.

AcquaPex® geomembranes

Reinforced HDPE+LDPE: 40 kN/m tensile, with our own hot-wedge welding.

P·17 · EPCEPY.COM/PRODUCTOS/GEOMEMBRANAS.HTML

Bentone® — bentonite (GCL)

A flux of 8×10^{-9}: the clay that comes in rolls and is installed by overlap.

P·18 · EPCEPY.COM/PRODUCTOS/BENTONITA.HTML

Uniform Section mattress (US)

Impermeable, rigid lining with maximum hydraulic efficiency.

P·06 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

EcoLock sheet piles (curtain)

A driven vertical cut-off barrier, immune to aggressive soils.

P·09 · EPCEPY.COM/PRODUCTOS/TABLESTACAS.HTML

Nonwoven geotextiles

Anti-puncture protection of the geomembrane, above and below.

P·15 · EPCEPY.COM/PRODUCTOS/GEOTEXTILES-NO-TEJIDOS.HTML

StrataDrain™ geocomposites

Detection and conveyance of leaks under the barrier in landfills.

P·16 · EPCEPY.COM/PRODUCTOS/GEOCOMPUESTOS-DRENANTES.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#impermeabilizacion · Technical data sheets PDF: epcepy.com/catalogos.html

S·05 SOLUTIONS

SOIL AND PAVEMENT REINFORCEMENT



Soil reinforcement with Strata geosynthetics — road project in Paraguay

Increase the bearing capacity of soft or unstable ground, spreading the loads and reducing settlement. Geogrids provide uniaxial or biaxial reinforcement in walls, embankments and foundations; geocells confine the soil in three dimensions creating a slab that carries heavy loads; and chemical stabilisation turns the site's own soil into base.

StrataGrid™ SGU·SGB geogrids

High tenacity polyester, 20–180 kN/m and 100+ years of design life.

P·11 · EPCEPY.COM/PRODUCTOS/GEOGRILLAS.HTML

StrataBase® rigid geogrids

Mechanical interlock of the aggregate: up to half the granular thickness.

P·13 · EPCEPY.COM/PRODUCTOS/GEOGRILLAS-RIGIDAS.HTML

StrataWeb® geocells

A cellular slab with local material — roads without a quarry.

P·10 · EPCEPY.COM/PRODUCTOS/GEOCELDAS.HTML

GeoPex woven geotextiles

Reinforcement and separation in a single fabric, 2,778 N/5cm in both directions.

P·14 · EPCEPY.COM/PRODUCTOS/GEOTEXTILES-TEJIDOS.HTML

BlindaSolo® stabiliser

Cation exchange: the soil already there turned into base, even in the rain.

P·21 · EPCEPY.COM/CATALOGOS.HTML

Reinforced walls and slopes

StrataSlope™ and Lock+Load™: the retention that turns the level difference to account.

P·19 · EPCEPY.COM/PRODUCTOS/MUROS-SUELO-REFORZADO.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#refuerzo · Technical data sheets PDF: epcepy.com/catalogos.html

S·06 SOLUTIONS

REVEGETATION AND HYDROSEEDING



Héroes del Chaco Bridge approaches — slopes revegetated by Ece hydroseeding

Establish stable vegetation where the natural soil is not enough. Biotic substrates build soil where there is none; hydraulic mulches fix seed and moisture in a single pass of the hydroseeder; and mattings and geocells hold the green until the roots take over. Ece is the only turnkey professional hydroseeding service in the country.

Hydroseeding and hydraulic mulches

Our own fleet and MOPC-approved specifications — material and application together.

P·01 · EPCEPY.COM/PRODUCTOS/HIDROSIEMBRA.HTML

ProGanics® BSM organic mulches

The alternative to the topsoil layer: it builds fertile soil on poor slopes.

P·02 · EPCEPY.COM/PRODUCTOS/HIDROSIEMBRA.HTML

Futerra® mattings

Protection while it germinates and permanent turf reinforcement.

P·03 · EPCEPY.COM/PRODUCTOS/MANTOS-CONTROL-EROSION.HTML

Enviromat FX mattress

Concrete that disappears under the green: 30% of the area open to vegetation.

P·06 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

StrataWeb® geocells

Substrate confinement on slopes and green-faced walls.

P·10 · EPCEPY.COM/PRODUCTOS/GEOCELDAS.HTML

Raíz Ece System

Structural turf in channels — engineering and agronomy together.

P·04 · EPCEPY.COM/PRODUCTOS/MANTOS-CONTROL-EROSION.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#revegetacion · Technical data sheets PDF: epcepy.com/catalogos.html

S·07 SOLUTIONS

PORT PROTECTION



Port infrastructure — protection against scour and wave action

A port project cannot be taken out of service. That is why Ece solutions are installed underwater and with the structure operating: jackets that rehabilitate corroded piles without diverting traffic, mattresses that armour berthing faces against the propeller and the wave action, and synthetic curtains that know nothing of marine corrosion.

Pile jackets

Textile formwork + pumped concrete: piles rehabilitated while in service.

P·07 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

HYDROTEX® concrete mattresses

Port Canaveral armoured its cruise terminal with US1200 filled underwater.

P·06 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

EcoLock synthetic sheet piles

Wharves and defences that salt water cannot rust.

P·09 · EPCEPY.COM/PRODUCTOS/TABLESTACAS.HTML

Geotubes (marine version)

Groynes and breakwaters of confined sand, as on the Matinhos seafront.

P·22 · EPCEPY.COM/PRODUCTOS/GEOTUBOS.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#puertos · Technical data sheets PDF: epcepy.com/catalogos.html

CHANNEL LINING



Conveyance channel lined with a Uniform Section mattress · Synthetex®

Every channel calls for a different lining. Efficient conveyance? A low-Manning Uniform Section. High water table? A Filter Point that relieves the uplift. Environmental requirements? Enviromat, which covers itself in green, or the Raíz Ece System where only concrete used to be specified. Curves and drops? Hexone mattresses and gabions.

HYDROTEX® mattresses (US · FP · FB)

Impermeable, draining or energy-dissipating — the textile formwork adapts to the design.

P·06 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

Enviromat FX mattress

Revegetable lining: the armoured channel keeps its natural look.

P·06 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

Raíz Ece System

Vegetated channels that carry high flows at ⅓–½ the cost of a rigid solution.

P·04 · EPCEPY.COM/PRODUCTOS/MANTOS-CONTROL-EROSION.HTML

Hexone® — gabions and mattresses

Flexible, permeable revetment; energy dissipators and drops of confined stone.

P·08 · EPCEPY.COM/PRODUCTOS/GAVIONES.HTML

StrataWeb® geocells

Protection of linings and shoulders with local fill.

P·10 · EPCEPY.COM/PRODUCTOS/GEOCELDAS.HTML

AcquaPex® geomembranes

Irrigation channels with no seepage loss.

P·17 · EPCEPY.COM/PRODUCTOS/GEOMEMBRANAS.HTML

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epcepy.com/aplicaciones.html#canales · Technical data sheets PDF: epcepy.com/catalogos.html

S·09 SOLUTIONS

DUST CONTROL



Unpaved road — fugitive dust costs maintenance, health and complaints

Dust costs money and health. On construction sites, service roads, mines and energy parks, fugitive dust increases maintenance and generates complaints from the community — and watering with a tanker truck evaporates within hours. The agronomic answer: bind the fines at the surface with biodegradable suppressants, or remove the problem at its root by stabilising or revegetating the surface.

DustRX™ Hydro dust suppressants

100% biodegradable, USDA Biobased: it lasts far longer than watering, with no salts or chlorides to corrode plant.

P·05 · EPCEPY.COM/APLICACIONES.HTML#POLVO

BlindaSolo® stabiliser

A chemically stabilised surface stops giving off fines — a permanent solution for service roads.

P·21 · EPCEPY.COM/CATALOGOS.HTML

Profile hydroseeding

Plant cover is the definitive dust suppressant on surfaces that can be revegetated.

P·01 · EPCEPY.COM/PRODUCTOS/HIDROSIEMBRA.HTML

Applied with our own plant

The same Ece hydroseeder fleet applies mulches, seeding and dust control — a single supplier.

EPCEPY.COM/CONTACTO.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#polvo · Technical data sheets PDF: epcepy.com/catalogos.html

RETAINING WALLS



Reinforced soil wall on a road project — Lock+Load™ system with StrataGrid geogrids

The difference in level becomes an asset, not a problem. Mechanically stabilised earth walls use the ground itself as structural material: up to 30% cheaper than reinforced concrete, with no formwork or heavy cranes, with a face of textured concrete, stone or vegetation — and always with the drainage solved behind the face.

Lock+Load™ — panel and counterfort

MSE walls with FHWA/AASHTO design; units can be made locally under licence.

P·19 · EPCEPY.COM/PRODUCTOS/MUROS-SUELO-REFORZADO.HTML

StrataSlope™ — green face

Reinforced slopes up to 70° that disappear into the landscape.

P·19 · EPCEPY.COM/PRODUCTOS/MUROS-SUELO-REFORZADO.HTML

StrataGrid™ geogrids

The reinforcement of the fill: 40–180 kN/m with 100+ years of design life.

P·11 · EPCEPY.COM/PRODUCTOS/GEOGRILLAS.HTML

StrataDrain™ geocomposites

The drained wall back without gravel: the water never pushes on the wall.

P·16 · EPCEPY.COM/PRODUCTOS/GEOCOMPUESTOS-DRENANTES.HTML

Box gabions

Gravity walls of local stone, flexible and permeable.

P·08 · EPCEPY.COM/PRODUCTOS/GAVIONES.HTML

EcoLock sheet piles (anchored)

Driven vertical retention where there is no room to excavate.

P·09 · EPCEPY.COM/PRODUCTOS/TABLESTACAS.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#muros · Technical data sheets PDF: epcepy.com/catalogos.html

LANDFILLS



Landfill base lining with geosynthetics

Isolate the waste from the natural ground — for good. The complete package of the modern landfill is geosynthetic: bentonite barrier and geomembrane at the base, geotextiles that protect the barrier from puncture, planar drains that capture leachate, geotubes that dewater the sludge and hydraulic revegetation on the closure slopes.

Bentone® — bentonite (GCL)

Base and cap: the CL version with geofilm records no measurable flux.

P·18 · EPCEPY.COM/PRODUCTOS/BENTONITA.HTML

AcquaPex® geomembranes

The primary polyethylene barrier, welded and verified on site.

P·17 · EPCEPY.COM/PRODUCTOS/GEOMEMBRANAS.HTML

StrataDrain™ geocomposites

Leachate and biogas collection without gravel layers.

P·16 · EPCEPY.COM/PRODUCTOS/GEOCOMPUESTOS-DRENANTES.HTML

Nonwoven geotextiles

An anti-puncture cushion between the drainage stone and the geomembrane.

P·15 · EPCEPY.COM/PRODUCTOS/GEOTEXTILES-NO-TEJIDOS.HTML

Tubone® — geotubes

Process sludge and slurry, dewatered at low cost.

P·22 · EPCEPY.COM/PRODUCTOS/GEOTUBOS.HTML

Hydroseeding and ProGanics®

The revegetated closure: soil and plant cover on the final slopes.

P·01 · EPCEPY.COM/PRODUCTOS/HIDROSIEMBRA.HTML

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epcepy.com/aplicaciones.html#rellenos · Technical data sheets PDF: epcepy.com/catalogos.html

S·12 SOLUTIONS

LOAD SUPPORT AND ROADS



All-weather road over soft ground — confinement and reinforcement geosynthetics

Let heavy plant run where the ground would not allow it. Geocells turn local fill into a load-bearing slab; rigid geogrids save up to half the stone; the mats of the displacement embankment go into the marsh and are recovered at the end; and chemical stabilisation makes base out of the site's own soil.

StrataWeb® geocells

All-weather rural roads with local material — no quarry.

P·10 · EPCEPY.COM/PRODUCTOS/GEOCELDAS.HTML

StrataBase® rigid geogrids

Subgrades with CBR<3, loading yards and crane platforms.

P·13 · EPCEPY.COM/PRODUCTOS/GEOGRILLAS-RIGIDAS.HTML

Displacement embankment

Recoverable modular mats: the works advance over the wetland.

P·20 · EPCEPY.COM/CATALOGOS.HTML

GeoPex woven geotextiles

Structural separation and working platforms over soft soils.

P·14 · EPCEPY.COM/PRODUCTOS/GEOTEXTILES-TEJIDOS.HTML

BlindaSolo® stabiliser

Bases and sub-bases from the soil already there, with less stone to haul.

P·21 · EPCEPY.COM/CATALOGOS.HTML

StrataGrid™ SGB geogrids

Biaxial reinforcement of embankments and piled platforms.

P·11 · EPCEPY.COM/PRODUCTOS/GEOGRILLAS.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#caminos · Technical data sheets PDF: epcepy.com/catalogos.html

DRAINAGE



Drainage geocomposite laid out — the drain that replaces layers of gravel

Drain the water fast, with no gravel and no over-excavation. Geosynthetic drainage systems replace thick granular layers: the geotextile filters, the core conveys and the water is collected at the foot — in walls, road platforms, landfills and reinforced slopes. Where groundwater pushes on a lining, draining mattresses relieve the uplift.

StrataDrain™ geocomposites

Up to 1.75 l/m·s in-plane: wall backs, landfills and platforms.

P·16 · EPCEPY.COM/PRODUCTOS/GEOCOMPUESTOS-DRENANTES.HTML

Nonwoven geotextiles

The universal filter: it lets the water through and holds the fines, for 50+ years.

P·15 · EPCEPY.COM/PRODUCTOS/GEOTEXTILES-NO-TEJIDOS.HTML

Filter Point · Filter Band mattresses

Linings that drain: the uplift never lifts the channel.

P·06 · EPCEPY.COM/PRODUCTOS/COLCHONES-CONCRETO.HTML

Woven geotextiles (wrapping)

Drain wrapping and protection of conveyance systems.

P·14 · EPCEPY.COM/PRODUCTOS/GEOTEXTILES-TEJIDOS.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#drenaje · Technical data sheets PDF: epcepy.com/catalogos.html

S·14 SOLUTIONS

PAVEMENT REHABILITATION AND REINFORCEMENT



Asphalt overlay on fibreglass geogrid — the crack does not reflect through

Let the pavement reach its design life — with regulatory backing. Reinforcement of the granular layer with geosynthetics is approved by **AASHTO R 50** and enters the design **AASHTO 93** by TBR, BCR or LCR: either you gain service life, or you save thickness. Vitrone® also delays reflective cracking in overlays, and chemical stabilisation improves the subgrade that holds the whole package up.

Vitrone® — fibreglass

4 types to EN 15381: a modulus of 73 GPa and elongation of only 2.5%.

P·12 · EPCEPY.COM/PRODUCTOS/GEOGRILLAS-FIBRA-VIDRIO.HTML

StrataBase® rigid geogrids

Confined bases that neither pump fines nor deform.

P·13 · EPCEPY.COM/PRODUCTOS/GEOGRILLAS-RIGIDAS.HTML

BlindaSolo® stabiliser

Subgrades with a higher CBR and less swelling — even in the rainy season.

P·21 · EPCEPY.COM/CATALOGOS.HTML

StrataGrid™ SGB geogrids

Biaxial reinforcement of bases and sub-bases, flexible and rigid pavements, and railways. Supplied by Ece on Route PY12: 60,000 m².

P·11 · EPCEPY.COM/PRODUCTOS/GEOGRILLAS.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#pavimento · Technical data sheets PDF: epcepy.com/catalogos.html

DEWATERING SYSTEMS



Geotubes in operation — the solids stay confined, the water comes out clarified

Separate the water from the problem, with no presses and no belts. The sludge is pumped into the geotube with environmentally safe polymers: the solids flocculate and stay confined, the water drains out clean through the textile and the residue is removed dry with an excavator — up to 90% less volume than disposing of wet sludge.

Tubone® — geotubes

Tubone®: >99% solids capture, made-to-measure sizes and mobile containers.

P·22 · EPCEPY.COM/PRODUCTOS/GEOTUBOS.HTML

Testing and sizing

CE runs the sludge flocculation test and the engineering of the system at no charge.

EPCEPY.COM/CONTACTO.HTML

Nonwoven geotextiles

Complementary filtration in drying beds and system drains.

P·15 · EPCEPY.COM/PRODUCTOS/GEOTEXTILES-NO-TEJIDOS.HTML

Typical applications

Treatment plants · dredging · industrial and mining sludge · agro-industry · environmental remediation.

P·22 · EPCEPY.COM/PRODUCTOS/GEOTUBOS.HTML

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#deshidratacion · Technical data sheets PDF: epcepy.com/catalogos.html



P

Products

Twenty-two lines from the six brands in the catalogue: Synthetex, Strata, Profile Products, Geo Soluções, Pietrucha and the CE own line. One page per line; the complete technical data sheet for each is downloaded at **epcepy.com/catalogos.html**.

HYDROSEEDING AND HYDRAULIC MULCHES

PROFILE · USA



Applied with a hydroseeder — mulch, seed and fertiliser in a single pass

>99%
FLEXTERRA · COCOFLEX EFFECTIVENESS

0 h
OF CURING (FLEXTERRA)

600%
MORE GERMINATION VS. THE ORIGINAL FGM

Technical specifications
MOPC-APPROVED SPECIFICATIONS

Every slope has its matting. The Profile line forms a performance ladder: **Wood with Tack** for gentle slopes, **ProMatrix™ EFM** which replaces mattings, BFM and SMM, **Flexterra® HP-FGM®** — effective immediately, with grass growing twice as fast — and **CocoFlex™ ET-FGM™**, coir and wood for slopes up to 0.25H:1V and 2 years of protection.

Everything is applied with hydraulic equipment, with no machinery entering the slope, and Ece combines it with seed, fertiliser and additives in a single pass — **a fleet of hydroseeders and our own crews**, the only turnkey service in the country.

How to choose: the selection is sized with the manufacturer's PS3 software from the gradient, the soil and the design rainfall. Ece surveys the site and delivers the specification with the rate per hectare, at no charge.

THE PROFILE LADDER

Wood w/ Tack	Fibre + tackifier · gentle slopes
ProMatrix™	EFM · replaces ECB, BFM and SMM
Flexterra®	HP-FGM · >99% immediate effectiveness
CocoFlex™	ET-FGM · up to 0.25H:1V, 2 years
Applications	Road and railway slopes · mine closures · landfills · housing developments

Ece projects: Bioceanic Highway (+1,000,000 m²), Metropolitan Corridor, Itá–Pirayú link, Héroes del Chaco approaches.

THIS PRODUCT ON THE WEB

epcepy.com/productos/hidrosiembra.html · Technical data sheet PDF: epcepy.com/catalogos.html

SOIL AMENDMENTS — PROGANICS®

PROFILE · USA



ProGanics BSM applied — building soil where there is none

<5%
ORGANIC MATTER: THE TARGET SOIL

100%
RECYCLED, PHYTOSANITISED FIBRES

0
PLASTIC — BIODEGRADABLE, NON-TOXIC

2 in 1
DUAL: SOIL + EROSION CONTROL

The alternative to the topsoil layer. ProGanics® BSM™ speeds up the development of impoverished soils by combining recycled fibres with biochar, seaweed extract, humic acid, endomycorrhizae and beneficial bacteria. **It replaces topsoil, compost and peat** where getting hold of them is expensive or impossible.

ProGanics® DUAL™ adds a BFM-class erosion control in the same application: a continuous, porous and flexible blanket bonded to the soil (curing 12–24 h), ideal for large projects with short programmes and slopes up to 2H:1V.

How it is used: BSM goes under the hydraulic mulches, or in roll form as a growth medium; DUAL solves soil and erosion in a single pass — it costs less than installing BSM + BFM separately.

THE RANGE

BSM™	Builds soil · goes under HECP or RECP
DUAL™	Soil + BFM erosion control in one pass
Components	Biochar · seaweed · humic acid · mycorrhizae
Fibres	100% recycled wood and bark
Applications	Mine and quarry closures · stripped soils · environmental restoration · projects with no topsoil

THIS PRODUCT ON THE WEB

epcepy.com/productos/hidrosiembra.html · Technical data sheet PDF: epcepy.com/catalogos.html

FUTERRA® MATTINGS

PROFILE · USA



Futerra F4 Netless® — shoots through the matting, with no netting to trap wildlife

99.9%	6	0	1700%
EROSION CONTROL EFFECTIVENESS	PRODUCTS: FROM F4 NETLESS TO R45 HP	NETTING OR LOOSE THREADS (F4)	WATER RETENTION OF THE MATRIX

The matting that germinates faster. The Futerra® family uses Thermally Refined® wood fibres interwoven in a dimensionally stable matrix that moulds to the soil, absorbs water and holds it where the seed needs it — **without the loose netting and stitching** than traditional straw or coir mattings.

The range covers everything from fine turf and environmentally sensitive sites (**F4 Netless®**, **EnviroNet™**) through to permanent turf reinforcement with the **TRM 7003 / 7010 / 7020** and the **R45 HP-TRM** with Anchor Armor™ anchorage for demanding channels and slopes.

> **Fact:** TRM 7020 is also the basis of the Raíz Ece System (P·04) — the reinforced turf that competes with concrete.

THE RANGE

F4 Netless®	Fine turf and sensitive sites
EnviroNet™	Slopes with wind
TRM 7003/7010/7020	Permanent turf reinforcement
R45 HP-TRM	High duty · Anchor Armor™
Applications	Slopes · vegetated channels · riverbanks · parks · environmentally sensitive sites



The Futerra matrix — interwoven fibres, no netting

THIS PRODUCT ON THE WEB

epcepy.com/productos/mantos-control-erosion.html · Technical data sheet PDF: epcepy.com/catalogos.html

RAÍZ ECE SYSTEM

PROFILE · USA



Applying the system — Flexterra HP-FGM sprayed into the Futerra TRM

99%
EROSION CONTROL EFFECTIVENESS

95%
OPEN SPACE FOR VEGETATION

2×
FASTER ESTABLISHMENT

⅓–½
OF THE COST OF A RIGID STRUCTURE

Engineering + agronomy in a single system. The Raíz Ece System combines the TRM **Futerra® 7020** — UV stabilised nylon filaments, thermally fused, that neither unravel nor flatten — with the hydraulic infill of **Flexterra® HP-FGM®** sprayed into its matrix: immediate protection and ideal growing conditions in the same operation.

The result is a **permanent reinforced turf** which protects high-flow waterways, dykes, embankments and steep gradients with the effectiveness of a rigid structure — at a third or half of its cost, and green.

Where it competes with concrete: channels and spillways, riverbanks and drainage outfalls where only a rigid lining or rip-rap used to be specified. Ece sizes the system with the project's hydraulics at no charge.

THE SYSTEM

Components	Futerra TRM 7020 + Flexterra HP-FGM
Filaments	UV nylon, thermally fused
Protection	Immediate + root reinforcement
Hydraulics	3.6 m/s · 290 N/m² vegetated
Applications	High-flow channels · dykes · steep gradients · drainage outfalls · riverbanks

THIS PRODUCT ON THE WEB

epcepy.com/productos/mantos-control-erosion.html · Technical data sheet PDF: epcepy.com/catalogos.html

DUSTRX™ HYDRO DUST SUPPRESSANTS

PROFILE · USA



The green dye marks the coverage during application and disappears on drying

112	PM2.5/10	100%	0
KG/HA — APPLICATION RATE	REGULATORY COMPLIANCE	BIODEGRADABLE · USDA BIOBASED	SALTS, SOLVENTS AND CHLORIDES

Dust costs money and health. On construction sites, unpaved roads, mines and energy parks, fugitive dust increases maintenance, reduces productivity and generates complaints from the community. Watering with a tanker truck evaporates within hours.

DustRX™ Hydro is Profile's agronomic answer: a 100% biodegradable suppressant applied with a water truck or hydroseeder, **binds the fines at the surface** and it lasts far longer than watering — less water, less fuel, fewer passes. Unlike salts and synthetic polymers, **it does not degrade the soil or corrode plant**.

> **Visible application:** the temporary green dye shows where it has already been applied — even coverage with no waste — and disappears on drying.

TECHNICAL DATA

Rate	112 kg/ha depending on the soil
Mix	22.7 kg / 3,790 L of water
Supply form	22.7 kg bag · 40 per pallet
Standard	USDA Biobased 100% · PM2.5/PM10
Applications	Construction sites and diversions · ranch roads · mining · solar and wind farms · equestrian arenas

THIS SOLUTION ON THE WEB

epcepy.com/aplicaciones.html#polvo · Technical data sheet PDF: epcepy.com/catalogos.html

HYDROTEX® CONCRETE MATTRESSES

SYNTHETEX · USA



150 mm Articulated Block — Pilar Coastal Defence, 172,000 m² (an Ece project)

6
CONFIGURATIONS: AB·US·FP·FB·ENVIROMAT·FX

75–610
MM THICK DEPENDING ON THE LINE

Underwater
CAST IN SITU, EVEN SUBMERGED

Made to measure
PANELS PER PROJECT, WITH CABLES

Textile forms filled with concrete in situ — even underwater. Two layers of high tenacity geotextile set the thickness, adapt to the topography and are pumped with fine aggregate concrete (mortar): better strength than a traditional rigid lining, with faster, safer and cheaper installation.

The family covers the whole spectrum: **Articulated Block (AB)** — articulated and permeable, the choice at Pilar and Pozo Hondo —, **Uniform Section (US)** impermeable, of maximum hydraulic efficiency, **Filter Point (FP)** draining, paver-type, **Filter Band (FB)** of maximum permeability and **Enviromat / FX** revegetable ones that disappear under the green.

Ece projects: Pilar (AB600 · 172,000 m²) · Waterfront channels (US300 · 3,000 m²) · Pozo Hondo (AB600 · 20,000 m²) · Aquaterra (FX300 · 5,600 m²) · AquaDelta (AB400 · 1,300 m²) · Gasory Bridge (AB400 · 860 m²) · **Al Khatm, Abu Dhabi (FP400 · 75,000 m²)**.

THE FAMILY

AB	75–610 mm · articulated, cables in 1–2 directions
US	50–400 mm · impermeable, low Manning
FP	55–300 mm · draining, paved surface
FB	100 mm · maximum permeability
Enviromat/FX	25–100 mm · up to 30% revegetable
Applications	Defences, channels, slopes, abutments, stormwater outfalls, pipeline protection

THIS PRODUCT ON THE WEB

epcepy.com/productos/colchones-concreto.html · Data sheets for the 6 configurations: epcepy.com/catalogos.html

HYDROTEX® PILE JACKETS

SYNTHETEX · USA



Pile jackets installed on bridge piles · Synthetex®

Made to measure
FOR EVERY PILE DIAMETER

3
SUBSTRATES: STEEL, CONCRETE, TIMBER

Underwater
WITHOUT DIVERTING TRAFFIC

+50
YEARS OF EXTENDED SERVICE LIFE

Rehabilitate without replacing. Pile jackets are cylindrical textile forms that wrap the deteriorated pile and are pumped with concrete or structural mortar: the textile forms a continuous sleeve that **restores the section and isolates the pile from water and oxygen** — stopping steel corrosion, concrete washout or biological attack on timber.

Installation is **underwater and without interrupting service** of the bridge or wharf: divers position the jacket, it is closed with integrated zips and pumped from the surface.

Where it pays off most: bridges with scoured piers, wharves with corroded piles and port structures that cannot be taken out of service.

SPECIFICATIONS

Format	Cylindrical, made to measure
Substrates	Steel · concrete · timber
Fill	Pumped concrete or mortar
Closure	Integrated zips
Installation	Underwater, in service
Applications	Bridge piers · wharves · river structures · submerged foundations

THIS PRODUCT ON THE WEB

epcepy.com/productos/colchones-concreto.html · Technical data sheet PDF: epcepy.com/catalogos.html

HEXONE® — GABIONS AND MATTRESSES

CE LINE



Gabion wall under construction — San Lorenzo WWTP, Paraguay (a CE project)

3
FORMATS: BOX · MATTRESS · SACK

8×10
DOUBLE-TWISTED HEXAGONAL MESH

Flexible
FOLLOWS SETTLEMENT WITHOUT CRACKING

100%
PERMEABLE — NO UPLIFT PRESSURE

Classic retention, properly done. Structures of stone confined in hexagonal galvanised wire mesh (with the option of a polymer coating): the **box gabions** form gravity walls, the **Hexone M mattresses** line banks, channels and slope toes, and the **sack gabions** solve submerged foundations.

Its structure is flexible and monolithic: it follows ground movement without losing integrity, it drains naturally and over time traps sediment and vegetation, blending into the landscape. It is combined with a filter geotextile behind the wall and with geogrids when the wall calls for it.

Reference CE project: gabion wall protecting the San Lorenzo WWTP — retention and channel defence in a single system, with our own crew.

TYPICAL SPECIFICATIONS

Hexone C · box	1.0×1.0×1.5–4.0 m · h 0.5–1.0 m
Hexone M · mattress	Thicknesses 0.17 / 0.23 / 0.30 m
Hexone S · sack	Ø 0.65 m · length 1–4 m
Wire	Heavy Zn/Al galvanising · PVC option
Applications	Gravity walls · banks · channels · energy dissipators · submerged foundations

THIS PRODUCT ON THE WEB

epcepy.com/productos/gaviones.html · Technical data sheet PDF: epcepy.com/catalogos.html

ECOLOCK SYNTHETIC SHEET PILES

PIETRUCHA · POLAND



Railway embankment stabilisation with EcoLock sheet piles — Poland

5×
LIGHTER THAN STEEL

1.9–37.8
KNM/M OF ALLOWABLE MOMENT

44 MPa
TENSILE STRENGTH OF STRUCTURAL PVC

0
CORROSION — IMMUNE TO WATER AND SOILS

Everything steel does, where steel rusts. EcoLock sheet piles are monolithic extruded profiles of modified structural PVC that interlock with each other forming **continuous retaining or cut-off curtains**: they do not corrode, need no maintenance and resist sea water, aggressive soils and biological attack.

They are driven with conventional plant (vibratory hammer, excavator, mandrel, trenching or jetting) and their weight, five times lower, **cuts freight and makes it possible to work where a heavy crane cannot reach**. Profile range GW-270 to GW-610 and hybrid SuperLock combination for higher moments.

Quick selection: GW-300 (7.0 kNm/m) light curtains · GW-610 (13.5–24.4) medium retention · GW-458 (33.9–37.8) demanding defences. Calculation with the manufacturer's Designer 3.0 software.

ECOLOCK MATERIAL

Density	1.44 g/cm³ (steel: 7.86)
Tensile strength	44 MPa · modulus ≥2,300 MPa
Impact	Charpy ≥30 kJ/m²
Profiles	GW-270 → GW-610
Quality	ISO 9001:2015
Applications	Bank defences · waterfronts · cut-off curtains · dykes · sensitive areas

THIS PRODUCT ON THE WEB

epcepy.com/productos/tablestacas.html · Technical data sheet PDF: epcepy.com/catalogos.html

STRATAWEB® HD · LT GEOCELLS

STRATA



StrataWeb® protecting the slopes of the Alberdi approach — 57,000 m² (an Ece project)

75–300	5	>5,000 h	35 m²
MM CELL HEIGHT	CELL SIZES (SW330–712)	ESCR RESISTANCE (HD SERIES)	PER EXPANDED SECTION

The honeycomb that turns loose fill into structure.
StrataWeb® is a three-dimensional cellular confinement system of textured, perforated polyethylene strips welded together. Expanded and filled with local material, the cell **confines the soil and spreads the loads** — roads over soft soils, slopes, channels and green-faced walls.

Two series, by duty: **HD** (1.65 mm sheet, ESCR >5,000 h — the heavy specification for load and exposure) and **LT** (1.25 mm sheet — the light option for standard confinement). Drainage perforations and rhomboid texturing across the whole range.

Ece projects: approaches to the city of Alberdi (57,000 m²) · Paraguayan Navy, Remanso Bridge (23,000 m²) · forestry roads in Concepción with 100 mm StrataWeb · all-weather rural roads with local fill.

SPECIFICATIONS

Cells	SW 330 · 356 · 445 · 660 · 712
Heights	75–300 mm
HD	1.65 mm · peel 1,065–4,260 N
LT	1.25 mm · peel 750–3,000 N
Test methods	GAI-LAP · CE · TÜV
Applications	Unpaved roads · slopes · channels · green walls · platforms

THIS PRODUCT ON THE WEB

epcepy.com/productos/geoceldas.html · Technical data sheet PDF: epcepy.com/catalogos.html

STRATAGRID™ POLYESTER GEOGRIDS

STRATA



StrataGrid™ — high tenacity polyester with a patented coating · photo: Strata

40–180	20–150	10%	+100
KN/M UNIAXIAL (SGU)	KN/M BIAXIAL (SGB)	ELONGATION AT NOMINAL STRENGTH	YEARS OF DESIGN LIFE

The backbone of reinforced soil. StrataGrid™ are geogrids of **reinforced polyester (PET)**, woven from high molecular weight, high tenacity yarn with a patented polymer coating. The **SGU (uniaxial)** reinforces in the main direction of stress — MSE walls, reinforced slopes —; the **SGB (biaxial)** spreads the load in both directions for pavement bases, embankments and platforms.

Creep reduction factor of 1.39 (114-year design life), tests in accredited laboratories **GAI-LAP** and certification **CE**. Standards: ASTM D6637 (SGU) · EN ISO 10319 (SGB).

> **Synergy:** StrataGrid is the reinforcement of the StrataSlope™ and Lock+Load™ walls (P·19) — a single supplier for the whole system.

THE SERIES

SGU uniaxial	Grades 40–180 · rolls 1.9–5.7 × 100 m
SGB biaxial	Grades 20–150 (MD = CMD) · 5.0 m
Creep	Factor 1.39 · 28.8–129.5 kN/m limited
StrataBase®	Rigid biaxial PP · SB11 · SB12 · SB30 · 12–30 kN/m
Certification	CE · GAI-LAP · GRI GG7/GG8
Applications	MSE walls · reinforced slopes · embankments · pavements · piled platforms

THIS PRODUCT ON THE WEB

epcepy.com/productos/geogrillas.html · Technical data sheet PDF: epcepy.com/catalogos.html

VITRONE® — FIBREGLASS GEOGRIDS

CE LINE



Asphalt course being laid over the fibreglass geogrid

4
TYPES: CG 50L · 100L · 120L · 200L

55–215
KN/M BY TYPE (EN ISO 10319)

2.5%
ULTIMATE ELONGATION

73 GPa
YOUNG'S MODULUS OF THE GLASS

Stiffness exactly where the asphalt needs it. The Vitrone® fibreglass geogrids of the CE own line have an elastomeric polymer coating and are made in four types for reinforcing asphalt courses to **EN 15381**: its very high modulus and elongation of just 2.5% **take up the stresses before the pavement cracks**.

They delay reflective cracking in overlays over existing or milled pavements, withstand hot-mix asphalt temperatures and allow **composite version with geotextile** which adds a moisture barrier and optimum retention of the tack coat.

The four types: CG 50L (55×55 kN/m) · CG 100L (115×115) · CG 120L (135×135) · CG 200L (115×215). Ece picks the type from the traffic and the condition of the pavement at no charge.

COMMON SPECIFICATIONS

Material	Fibreglass + elastomer
Grid	25×25 mm or 38×38 mm
Coating	Stable >232 °C (ASTM D276)
Rolls	1.0–3.0 m × 70–150 m
Standard	EN 15381 · EN ISO 10319
Applications	Overlays · roads and airports · widenings · milled surfaces

THIS PRODUCT ON THE WEB

epcepy.com/productos/geogrillas-fibra-vidrio.html · Technical data sheet PDF: epcepy.com/catalogos.html

STRATABASE® RIGID GEOGRIDS

STRATA



Rigid geogrid laid out before the granular fill

3	12–30	93%	–50%
GRADES: SB11 · SB12 · SB30	KN/M ULTIMATE STRENGTH	JUNCTION EFFICIENCY (GRI-GG2)	OF AGGREGATE THICKNESS

Less stone, more road. StrataBase® is a geogrid **rigid biaxial extruded polypropylene**: integral ribs and junctions that confine the granular material and introduce tensile elements. The aggregate penetrates the apertures and is **mechanically interlocked**, creating a platform that spreads the loads and stops lateral deformation of the layer.

Lateral spreading of the base aggregate is the most common failure of pavement structures: StrataBase reduces it, and with that **saves up to half the aggregate thickness** or it multiplies the service life of the package. It is the economical alternative to excavating and replacing the soft soil.

When to use it: subgrades with CBR < 3, loading yards, unpaved roads, crane platforms, runways and pavement base reinforcement. Its use is standardised by **AASHTO R 50**.

THE RANGE (ASTM D6637)

SB11	12.4 / 19.0 kN/m · aperture 25 × 36 mm
SB12	19.1 / 28.7 kN/m · aperture 25 × 36 mm
SB30	30.0 / 30.0 kN/m · aperture 36 × 33 mm
Seam	93% efficiency (GRI-GG2)
Quality	ISO 9001 · CE marking · GAI-LAP

Ece project: 60,000 m² of biaxial geogrids supplied for the reinforcement of at-grade transitions at sub-base level on the **Route PY12**.

THIS PRODUCT ON THE WEB

epcepy.com/productos/geogrillas-rigidas.html · Technical data sheet PDF: epcepy.com/catalogos.html

GEOPEX WOVEN GEOTEXTILES

GEO SOLUÇÕES · BRAZIL



Woven reinforcement geotextile laid on site

2,778 N/5CM IN WARP AND WEFT

265 G/M² WEIGHT

UV STABILISED FOR EXPOSURE

1.5 L/S/M² OF PERMEABILITY

Balanced reinforcement in both directions. The **GeoPex Style 50x50** from Rafitec/Propex (Curitiba, Brazil) is a woven polypropylene geotextile with identical strength in warp and weft (2,778 N/5cm typical, 2,400 minimum): the workhorse fabric for **soil reinforcement, structural separation and sediment containment** where real tensile strength is needed at a low cost per m².

UV stabilised to stay exposed during construction, with controlled elongation (19% warp / 13% weft) and permeability that lets water drain without losing fines. Produced by Propex do Brasil — the same maker as the AcquaPex geomembrane.

Typical uses on our projects: working platforms over soft soils, reinforcement of displacement embankments, drain wrapping and temporary bank defences. On the **Route PY12** it was specified over the subgrade to double the structural coefficient of the upper layer.

TECHNICAL DATA (TYPICAL / MINIMUM)

Weight	265 g/m² ±5% (ASTM D-3776)
Strip tensile	2,778 / 2,400 N/5cm (ASTM D-5035)
Elongation	19% warp · 13% weft
Permeability	1.5 L/s/m² (ASTM D-4491)
Colour	White/white · width ±2 cm

For filtration and protection — not reinforcement — the answer is the StrataTex™ nonwoven geotextile (P·15).

THIS PRODUCT ON THE WEB

epcepy.com/productos/geotextiles-tejidos.html · Technical data sheet PDF: epcepy.com/catalogos.html

STRATATEX™ NONWOVEN GEOTEXTILES

STRATA



Nonwoven geotextile in a filtration and separation role

100–600
G/M² AS REQUIRED

4
FUNCTIONS: FILTER · SEPARATE · DRAIN · PROTECT

pH 2–13
CHEMICAL RESISTANCE

+50
YEARS OF SERVICE LIFE

The universal filter on site. Permeable sheets made by needle punching from polypropylene or polyester fibres: they let water through while retaining the solid particles, **without clogging**. Its main function is filtration, the separation of layers of different materials and the protection of geomembranes against puncture.

They resist aggressive chemical environments and UV radiation; on roads they prevent contamination of the granular layer by fine soils and in landfills they **protect the impermeable barrier** from the rocks of the drainage material. Supplied with Strata's technical backing, in weights from 100 to 600 g/m².

> **Rule of thumb:** every drain needs a filter and every geomembrane needs a cushion — the nonwoven is both, at the lowest cost in the catalogue.

SPECIFICATIONS

Fibres	Staple PP · continuous PET
Process	Needle punching
Weights	100 – 600 g/m²
Chemistry	pH 2–13 · UV stabilised
Applications	Drain filtration · layer separation · geomembrane protection · roads

THIS PRODUCT ON THE WEB

epcepy.com/productos/geotextiles-no-tejidos.html · Technical data sheet PDF: epcepy.com/catalogos.html

STRATADRAIN™ DRAINAGE GEOCOMPOSITES

STRATA



Geocomposite laid over a platform, ready for the fill · Strata

5	1.75	3.8 m	pH 2–10
GRADES: SD 40·45·50 · TD 50 · HF 55	L/M·S IN-PLANE FLOW (HF)	OF ROLL WIDTH	DURABLE IN AGGRESSIVE SOILS

The drain that rolls out like a blanket. StrataDrain™ combines an HDPE drainage geonet — biplanar (SD series) or triplanar (TD and HF) — with nonwoven geotextiles laminated on one or both faces: water enters filtered through the textile, runs along the channels of the core and is collected at the foot of the system — **no gravel, no perforated pipe, no over-excavation**.

It is the standard solution for **drainage behind retaining walls**, landfills, road and railway platforms, and reinforced slopes. Ece integrates it with StrataGrid and StrataWeb to solve stability and water in a single piece of engineering.

> **The 2024 range:** SD 40 / SD 45 / SD 50 (biplanar, 4.8–6.2 mm) · TD 50 (triplanar) · HF 55 (high-flow triplanar). Ece sizes the grade to the load and gradient at no charge.

SPECIFICATIONS

Structure	HDPE geonet + PP geotextiles
Configuration	Laminated on 1 or 2 faces
Thickness	4.8–6.2 mm (ISO 9863-1)
Tensile strength	19–21.5 kN/m (ISO 10319)
Applications	Wall backs · landfills · platforms · reinforced slopes · tunnels

THIS PRODUCT ON THE WEB

epcepy.com/productos/geocompuestos-drenantes.html · Technical data sheet PDF: epcepy.com/catalogos.html

ACQUAPEX® GEOMEMBRANES

GEO SOLUÇÕES · BRAZIL



Agricultural reservoir lined with AcquaPex HD · photo: Rafitec

700 µ	40/40	5,275 N	7
OF THICKNESS (ACQUAPEX HD)	KN/M MD/TD TENSILE	CBR PUNCTURE	YEARS OF WARRANTY

Waterproofing with muscle. AcquaPex® HD is a geomembrane **reinforced HDPE + LDPE**: the internal weave gives it tensile and puncture resistance far above a plain membrane of the same thickness, with excellent UV stability (OIT 850 min) for exposed use.

Lighter and faster to install than conventional thick geomembranes: wide panels, fewer welds, suited to irregular ground. The range is completed by **AcquaPex Pro** for higher requirements. Specification reference: GRI-GM30.

Ece installation: deployment, hot-wedge welding and quality control on site with our own crews — the same proven technique as in our lining projects across the country.

ACQUAPEX HD — DATA

Thickness	0.70 mm (ASTM D-751)
Tear strength	405/355 N (ASTM D5884)
UV / OIT	>50% retention · 850 min
Colours	Green/black · black/white
Applications	Reservoirs and aquaculture · effluent ponds · channels · landfills · floating covers

THIS PRODUCT ON THE WEB

epcepy.com/productos/geomembranas.html · Technical data sheet PDF: epcepy.com/catalogos.html

BENTONE® — BENTONITE BARRIERS

CE LINE



Rolling out Bentone® over the area to be lined

3	8×10^{-9}	≥25 ml	1 m
TYPES: AS2500 · AS3500 · CL	$(M^3/M^2)/S$ FLUX — AS3500	FREE SWELL / 2 G	OF COMPACTED CLAY REPLACED

Clay that comes in rolls. Bentone® encapsulates natural sodium bentonite between a woven and a nonwoven geotextile needle-punched together: the internal reinforcement keeps the clay from migrating and holds permeability extremely low under any site condition. On hydration the bentonite swells and seals — **it even self-heals small punctures**.

The range: **AS2500** for general lining, **AS3500** where more is demanded, and **CL** laminated with geofilm — no measurable flux — for landfill caps and liquid containment. It is installed by simple overlap, **with no welding and no special equipment**.

The replacement for compacted clay: a 5 m wide roll replaces up to 1 m of clay — no borrow pits, no layer-by-layer testing. CE sizes the type for your project at no charge.

THE RANGE

AS2500	≥2.5 kg/m² · rolls 60×5 m
AS3500	≥3.5 kg/m² · rolls 50×5 m
CL	LDPE geofilm · no measurable flux
Bentonite	Natural sodium · ≥80% montmorillonite
Applications	Landfills · ponds · channels · tank bunds · mining

THIS PRODUCT ON THE WEB

epcepy.com/productos/bentonita.html · Technical data sheet PDF: epcepy.com/catalogos.html

STRATASLOPE® · LOCK+LOAD® MECHANICALLY STABILISED EARTH WALLS

GEO SOLUÇÕES · BRAZIL



Lock+Load wall on a road project — textured concrete face

≤70°	FS>2.0	–20/30%	Local
STRATASLOPE: GREEN OR STONE FACE	LOCK+LOAD: OVERTURNING AND BEARING (FHWA)	VS. TRADITIONAL RIGID RETENTION	MANUFACTURE UNDER LICENCE ON SITE

The difference in level, solved with the soil on site. **StrataSlope™** builds reinforced slopes and walls up to 70°: layers of compacted fill reinforced with StrataGrid geogrids, recoverable front formwork and a face finished in vegetation or stone — the retaining structure disappears into the landscape.

Lock+Load™ is the panel-and-counterfort MSE wall: concrete modules stacked with no formwork or heavy cranes, geogrid perpendicular to the face, a stone drain and pipework behind the facing. Design to **FHWA-NHI-00-043 (AASHTO)**; the units can be made locally under licence.

Total synergy: a Lock+Load wall + StrataDrain drainage + Profile hydroseeding on the crest + HYDROTEX mattresses at the toe — the brands in the catalogue working together on one project.

THE TWO SYSTEMS

StrataSlope™	Slopes 45–70° · vegetated or stone face
Lock+Load™	MSE walls · panel + counterfort
Reinforcement	StrataGrid SGU to calculation
Safety	SF: sliding >1.5 · overturning >2.0
Applications	Road widenings · abutments · landslide recovery · developments on sloping ground

THIS PRODUCT ON THE WEB

epcepy.com/productos/muros-suelo-reforzado.html · Technical data sheet PDF: epcepy.com/catalogos.html

DISPLACEMENT EMBANKMENT

GEO SOLUÇÕES · BRAZIL



Modular mat road advancing over soft ground

0
SETTLEMENT — THE LOAD IS SPREAD

Modular
BOLTED LAP JOINTS

100%
RECOVERABLE AT THE END OF THE WORKS

2
FACES WITH A NON-SLIP SURFACE

The displacement embankment, brought up to date. Where fill and logs used to be sacrificed to get into a marsh, today you lay a road of **high-strength composite mats** that spreads the load over the soft soil: the works advance, heavy plant circulates and the ground does not fail.

The mats are joined by bolted overlap forming a continuous, non-slip surface; the solid core and the lifting inserts make it possible to place and recover them with a crane, one by one, ahead of the work front — and **remove them at the end without leaving any environmental liability**.

Where it pays off: site access roads in marshes and wetlands, crane and drilling platforms, crossings of watercourses and temporary helipads. Ece sizes the arrangement to the plant and the soil at no charge.

SPECIFICATIONS

System	High-strength composite mats
Joints	Bolted over-lap/under-lap joint
Lifting	Threaded inserts + pockets
Reuse	Recoverable and reusable
Applications	Access over soft soils · crane platforms · marshes · temporary crossings



Placed with a crane — the road advances with the works

TECHNICAL DATA SHEET ON THE WEB

epcepy.com/catalogos.html — Geo Soluções brochure with the complete system.

BLINDASOLO® SOIL STABILISER

GEO SOLUÇÕES · BRAZIL



Base stabilised with BS Plus during compaction

+CBR
INCREASES THE BEARING CAPACITY

1:1000
AT 1:2000 — DOSAGE BY WEIGHT

0
HARDCORE OR HAULED AGGREGATES

Rain
IT WORKS EVEN IN THE WET SEASON

The soil already there, turned into base. BlindaSolo® BS Plus is a chemical stabiliser that **reverses the polarity of the soil particles**: by cation exchange it increases cohesion and reduces the adsorbed water layer — the site's own soil becomes base, sub-base or subgrade reinforcement, with no stone to haul.

The "armoured" base reduces water absorption, capillary rise and swelling, and **increases the CBR**. In sandy soils it is dosed with aluminium sulphate; in clayey or silty soils, with hydrated lime or cement. Environmentally sound: it does not pollute and avoids quarrying.

Where it pays off: roads, highways and railways, industrial and logistics yards — especially where granular material is expensive or far away. Ece sets the dosage from the soil test at no charge.

SPECIFICATIONS

Product	BS Plus — concentrated liquid
Action	Cation exchange
Dosage	1:1000–1:2000 + additive to suit the soil
Soils	Sandy · silty · clayey
Applications	Roads and highways · railways · industrial yards · bases and subgrades

TECHNICAL DATA SHEET ON THE WEB

epcepy.com/catalogos.html — BlindaSolo data sheet in the Geo Soluções library.

TUBONE® — DEWATERING GEOTUBES

CE LINE



Filled geotubes in a dewatering operation

–90%
OF DEWATERED SLUDGE VOLUME

>99%
OF SOLIDS CAPTURE

3
STEPS: FILLING · DEWATERING · CONSOLIDATION

Made to measure
CIRCUMFERENCE AND LENGTH TO PROJECT

Low-cost, high-volume dewatering. The sludge is pumped into the geotube with environmentally safe polymers: the solids flocculate and stay confined, and the water drains out clean through the textile — **no belts, no gears, no presses**. The filtrate can be collected and recirculated.

The units come in made-to-measure sizes and can be assembled in **mobile containers**. With over 99% capture and up to 90% less volume, the residue is removed dry with an excavator. In the marine version, filled with sand, it builds groynes and coastal defences.

World reference: on the Fox River (USA) 570,000–765,000 m³ of contaminated sediment are dewatered behind dredges of more than 450 m³/h, with final solids >50%.

SPECIFICATIONS

Functions	Confine · contain · filter
Capture	>99% of solids
Filling	Successive cycles with polymers
Format	Made to measure · mobile containers
Applications	Treatment plants · dredging · industrial and mining sludge · agro-industry · groynes



The result: clarified water at the foot of the tube

THIS PRODUCT ON THE WEB

epcepy.com/productos/geotubos.html · Technical data sheet PDF: epcepy.com/catalogos.html

O·1 FEATURED PROJECTS

WHAT WE HAVE ALREADY BUILT

More than twenty-four projects in Paraguay and technical support in four countries. These are some of the references you can visit — and all of them are documented with full case studies at **epcepy.com/obras.html**.



Pilar Coastal Defence

The largest concrete mattress project in the country: protection of the river frontage on the Paraguay river with AB600 Articulated Block.

HYDROTEX AB600 · 172,000 M²



Pozo Hondo Wall

Bank protection on the Pilcomayo river in the Chaco: mattresses filled at 650 m² a day in extreme conditions.

HYDROTEX AB600 · 20,000 M²



Bioceanic Highway

Revegetation by hydroseeding of slopes and back slopes on the sections of the corridor that cross the Paraguayan Chaco.

PROFILE HYDROSEEDING · +1,000,000 M² · 11 OF 21 SECTIONS



Eastern Metropolitan Corridor

Immediate slope protection with a load of organic soil and seeding by hydroseeding system.

HYDROSEEDING · MOPC

O·2 FEATURED PROJECTS

EVERY FUNCTION, PROVEN ON SITE



Paso Carreta Stream — Aquaterra Condominium

Revegetable protection of the channel with an Enviromat FX300 mattress: the concrete disappears under the green of the condominium.

ENVIROMAT FX300 · 5,600 M²



Gasory Stream Bridge

Abutment and channel protection with AB400 Articulated Block — the standard solution for bridges with scour.

HYDROTEX AB400 · 860 M²



Héroes del Chaco Bridge Approaches

Revegetation by hydroseeding of the approach slopes of the new Asunción–Chaco'i bridge.

PROFILE HYDROSEEDING



San Lorenzo WWTP

Gabion wall protecting the treatment plant: slope retention and channel defence in a single system (a CE project).

BOX GABIONS · OUR OWN CREW

Also: Al Khatm, Abu Dhabi (FP400, 75,000 m² — design and site supervision) · Pilar Waterfront channels (US300, 3,000 m²) · Itá–Pirayú connection (cut slopes) · AquaDelta stormwater outfalls (AB400 double articulation, 1,300 m²) · Export Corridor (hydroseeding) · revegetation of the Pilar Defence (15 km + 14 km channel) · industrial and agricultural waterproofing projects.

EVERY PROJECT, WITH PHOTOS AND DATA SHEETS

epcepy.com/obras.html — full case studies, before and after, and the PDF of every case at epcepy.com/catalogos.html

W

EVERYTHING CORRELATED

THIS CATALOGUE LIVES ON THE WEB



Pilar Coastal Defence — the project can also be toured at epcepy.com/obras.html

200+
DOWNLOADABLE PDF DATA SHEETS AND BROCHURES

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LANGUAGES: ES · EN · 中文 · PT

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CONTROL DE EROSIÓN

Let's talk about your project

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