

# PROPEX Armormax

Engineered earth armoring system





The most advanced and resilient technology for preventing severe erosion and stabilizing surficial slopes is **PROPEX**® Armormax®.





**PROPEX Armormax is composed of High Performance Turf Reinforcement Mat (HPTRM) and Engineered Earth Anchors that work together to lock soil in place and protect against hydraulic stresses.**

#### **High performance turf reinforcement mat**

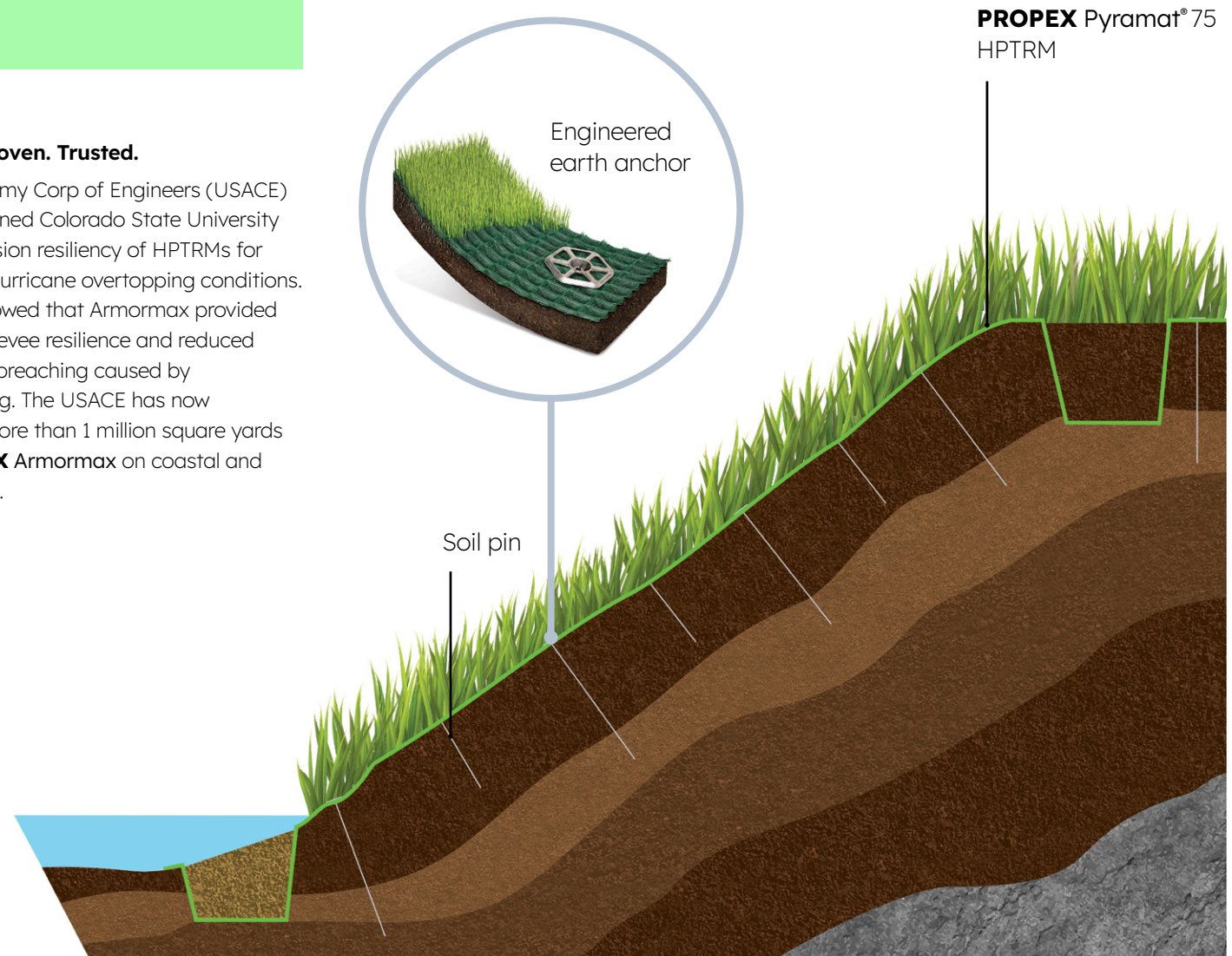
Solmax's HPTRM technology features patented ultraviolet stabilization and high tensile strength to provide up to 75 years of slope protection and erosion mitigation, even in environments with direct exposure to sunlight. Additionally, the HPTRM is designed to accelerate vegetative growth, exhibit high resiliency, and feature strength and elongation properties to limit stretching in saturated conditions.

#### **Engineering earth anchors**

Corrosion resistant Engineered Earth Anchors™ (EEA) secure the HPTRM to the ground. EEAs are designed to provide resistance to shear and lateral forces, and embed beyond the predicted plane of failure. The **PROPEX Armormax** system uses either a B1, B2, or B3 anchor depending on the application and environment.

#### **Tested. Proven. Trusted.**

The U.S. Army Corp of Engineers (USACE) commissioned Colorado State University to test erosion resiliency of HPTRMs for 500-year hurricane overtopping conditions. Testing showed that Armormax provided increased levee resiliency and reduced the risk of breaching caused by overtopping. The USACE has now installed more than 1 million square yards of **PROPEX Armormax** on coastal and river levees.





# FEATURES AND BENEFITS

## Design and performance

- Provides permanent erosion protection for up to 75 years
- Withstands extreme hydraulic stresses
- Provides temporary shoring and stabilization for constructed slopes
- Resistant to non-hydraulic stresses from debris and mowing and maintenance equipment
- Resistant to fire using non-halogen fire retardant technology
- Highly UV stabilized for applications with little or no vegetation
- Outlasts other slope reinforcement methods yielding significant cost savings
- Ease of installation reduces time and labor costs
- Lightweight and easily transported into areas with access challenges
- Reduces the amount of space needed for a right-of-way

## Environmental

- Recognized by the EPA as Best Management Practice (BMP) for improving water quality
- Verified carbon footprint is up to 30 times smaller than traditional hard armor
- Recognized by FEMA as a nature-based solution
- Filters sediment and pollutants to improve water quality
- Encourages infiltration of water back into the ground water table
- Proven to reduce erosion and reinforce vegetation for low-impact, sustainable design
- Yields a vegetated solution that is more aesthetically pleasing than traditional hard armoring solutions
- Maintains cooler water temperature than traditional hard armoring, which is healthier for aquatic habitats







## APPLICATIONS

- Arid and semi-arid environments where vegetation densities of <30% are anticipated
- Earthen dams and spillways
- Roadway embankments
- Canals/stream banks
- Steepened slopes
- Channels
- Levees
- Areas prone to wild fires
- Defensible spaces



## INSTALLATION COMPARISON: PROPEX Armormax VS. RIPRAP

Typical placement of 1 acre,  
or approximately 5,000 SY,  
of erosion protection

### PROPEX Armormax

**5**  
days



Based on a 4-person crew with  
equipment operator, working 8hrs per day

**1/2**  
container van



Based on 6" stone size at 18" depth  
and 15 tons per dump truck

**\$28**  
dollar per SY



Assuming \$25/ton for material, average fuel  
and equipment costs, and labor as specified above

### RIPRAP

**11**  
days

**250**  
dump trucks

**\$65**  
dollar per SY



# PROPEX Armormax INSTALLATION DETAILS



## Step 1: Site preparation

Grade and compact the failed slope and remove objects that would prevent **PROPEX Armormax** from making direct contact with the soil. Excavate a trench at the crest and toe of the slope.



## Step 2: HPTRM laydown

Unroll the HPTRM on the prepared soil ensuring material has intimate contact the soil.



## Step 3: Anchor installation

Anchors should be installed in locations specified for the project.



## Step 4: Vegetation establishment

Vegetation can be established by broadcast seeding, hydraulic seed application (hydroseeding), or sodding.

## About us

Solmax is a world leader in sustainable construction solutions, for civil and environmental infrastructure. Its pioneering products separate, contain, filter, drain and reinforce essential applications in a more sustainable way – making the world a better place. The company was founded in 1981, and has grown through the acquisition of GSE, TenCate and Propex. It is now the largest geosynthetics company in the world, empowered by more than 2,000 talented people. Solmax is headquartered in the province of Quebec, Canada, with subsidiaries and operations across the globe.

## Uncompromised quality

Our products are manufactured to strict international quality standards. All our products are tested and verified at our dedicated and comprehensive laboratories which maintain numerous accreditations. We offer our partners a wide scope of testing according to published standards to ensure products delivered to sites meet specified quality requirements.

# Let's build infrastructure better

Solmax is not a design or engineering professional and has not performed any such design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation, or specification.

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Construction  
Supply Inc.



**Quick**  
Supply Co.



**Cascade**  
GEOSYNTHETICS

## LOCATIONS & CONTACT INFO

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## SOLUTIONS WE SUPPLY

### GEOSYNTHETICS

Filter Fabrics

Stabilization Fabrics

Geogrids

- Road Grids
- Wall Grids
- Slope Stabilization

Specialty Fabrics

Composite Geomembranes

- GCLs, PVC, HDPE, LLDPE, EPDM, Granular Bentonite

### SEDIMENT CONTROL

Inlet Protection

- Grated Inlet, Curb Inlet, Area Inlet Protection

Ditch Checks

- Triangle Silt Dike
- GeoRidge

Perimeter Protection

- High and Low-Porosity Silt Fence, Straw Wattles, Silt Socks
- Safety Fence

Flocculants & Water Treatment

- Polymer-Based & Natural Flocculants

Sediment Basin Skimmers

Dewatering Bags

Trackout Control

- FODS
- Rumble Grates

Turbidity Curtains

### EROSION CONTROL

Basic Hydraulically Applied Mulches

- Wood
- Paper
- Blends
- Straw

High-Performance Hydraulically

Applied Products

- BFM
- FGM
- Additives & Tackifiers

Temporary Erosion Control Blankets

- Coir & Jute Mat/Nettings
- Short-Term ECBs
- Extended-Term ECBs

Permanent Erosion Control Blankets

- Turf Reinforcement Mats
- HP-TRMs
- Anchor Reinforced Vegetation System

Structural BMPs

- Transition Mats
- Geoweb Cellular Confinement
- Composite Vegetated Armor System
- Flex MSE Vegetated Wall System
- Articulated Concrete Block
- Gabions
- Grout-Filled Geotextile Mats

Vegetation Establishment

- Native Seed & Turf Seed
- Fertilizers
- Organic Soil Additives
- Stratavault Soil Cells

### STORMWATER MANAGEMENT

Water Quality

- Inlet Filter Boxes
- Pre-Treatment Chamber
- Nutrient Separating Baffle Boxes
- High-Flow Biofiltration Media
- Hydrodynamic Separators
- Stratavault

Water Quantity

- Modular Underground Storage Systems
- Chamber Detention Systems

Drainage

- HDPE Swale Liner
- Pipe & Fittings
- Drainage Composites
- Strip Drain

Inlet Structures

- PVC
- Drain Basins, In-Line Drains
- Landscape

Permeable Pavers

- Permeable Articulating Concrete Block
- Grass Pavers
- Gravel Pavers
- Concrete Pavers

### SPECIALTY

Natural & Synthetic Coir Fiber Logs

Vegetated Reinforced Soil Slopes

Soil Anchors

Root Barrier System

AquaBlok

Muscle Wall

We are full line distributors of construction materials for all project types. Contact us for assistance with a project. From specification and development to installation and completion, we're here to help with all of your site solution needs.

**GEOSYNTHETICS | EROSION CONTROL | STORMWATER MANAGEMENT**  
**SEDIMENT CONTROL | REVEGETATION & SOIL AMENDMENTS**